



State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS
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JON S. CORZINE
Governor

CHARLES A. RICHMAN
Acting Commissioner

November 6, 2009

The Honorable Austin Carew
Mayor, Township of Vernon
P.O. Box 340
Vernon, New Jersey 07462

**RE: Township of Vernon Plan Endorsement
State Agency Opportunities and Constraints Analysis**

Dear Mayor Carew:

The Office of Smart Growth (OSG) and our State agency partners have reviewed the Municipal Self Assessment Report submitted by the Township of Vernon and would like to commend the Township for its active participation and dedication to the Plan Endorsement process. Please find enclosed the State Agency Opportunities and Constraints Analysis. This analysis is intended to guide the Township's community visioning process and to provide the Township with preliminary consistency issues with the State Plan and relevant State regulations. This document can be found on the OSG website at the following link: <http://nj.gov/dca/divisions/osg/plan/pe.html>.

The Office of Smart Growth and its State agency partners remain committed to working with the Township of Vernon. Should you have any questions regarding the Plan Endorsement process or the enclosed Opportunities and Constraints Analysis, please feel free to contact Kate Meade, OSG Planner for Sussex County at (609) 633-8573 or via email at kmeade@dca.state.nj.us.

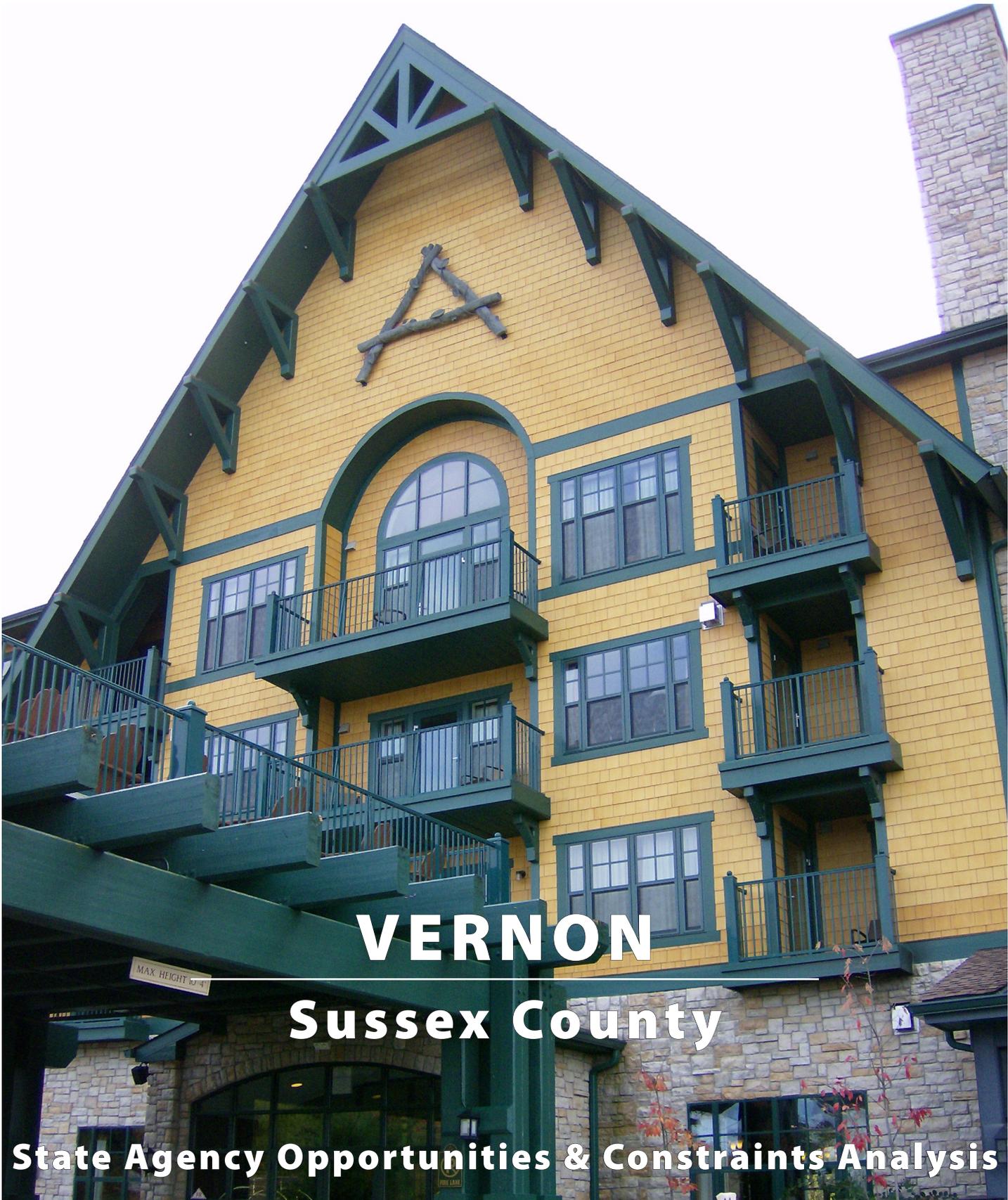
Sincerely,

Donna Rendeiro
Acting Executive Director

DR/km

- c: Robin Kline, Vernon Township Municipal Clerk/Registrar (*via email*)
Melinda Carlton, Vernon Township Manager and PEAC Member (*via email*)
Lou Kneip, PEAC Member Vernon Director of Planning and Development
Jessica Caldwell, P.P., A.I.C.P. Harold E. Pellow and Associates
Eric Snyder, Planning Director, Sussex County Planning Department (*via email*)
Alan Miller, Plan Endorsement Coordinator, OSG (*via email*)
Karl Hartkopf, PP/AICP, Planning Director, OSG (*via email*)
OSG Interested Parties (*via email*)
State Agency Partners (*via email*)
Vernon Township Plan Endorsement File





VERNON

Sussex County

State Agency Opportunities & Constraints Analysis



November 6, 2009
Office of Smart Growth
Department of Community Affairs
State of New Jersey

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*On the cover: Mountain Creek Ski Resort in Vernon.
In this report: Vernon roadside scenes.*

Introduction

On February 5th 2009, Vernon Township of Sussex County submitted a Municipal Self-Assessment Report to the New Jersey Office of Smart Growth (OSG). As such, OSG and our partner State Agencies have preliminarily assessed local opportunities and constraints, as it relates to existing development, current zoning regulations, infrastructure and natural resources. This report provides for a comparison of information within the Municipal Self-Assessment Report with the most up-to-date regional and statewide data to determine whether TREND growth, or the continuance of existing development patterns, is sustainable and viable based on the information provided. TREND growth can then be compared to PLAN growth, or that which is aligned with the New Jersey State Development and Redevelopment Plan (State Plan) and is based on the principles of smart growth. This information is intended to guide and direct the community visioning process such that residents and other stakeholders can develop a vision for the future with a twenty-year planning horizon based on an understanding of how current land use regulations and policies will result within the context of existing infrastructure and environmental and agricultural resources. The vision



Office of Smart Growth

shall provide for sustainable growth, recognize fiscal constraints, plan for housing needs, and call for the preservation of natural, historic and agricultural resources. By taking into consideration the findings of the Municipal Self-Assessment Report and the Opportunities and Constraints Analysis, communities can envision a both desirable and realizable future.

Background

The Township of Vernon initiated the Plan Endorsement process by attending a pre-petition meeting with OSG and our partner State agencies on December 9th 2008. On July 9th 2009, the Township of Vernon passed a resolution authorizing the creation of their Plan Endorsement Advisory Committee (PEAC), in which eight members were designated.

The Township submitted their Municipal Self Assessment Report to OSG for review in February 2009. However, the zoning and parcel information submitted with the MSA was not sufficient. OSG was able to gather and reconcile the mapping and zoning information needed for the trend analysis by September 24th 2009. This information initiated the 45-day State Agency Opportunities and Constraints Analysis; due October 15th. OSG staff utilized an extension and the report was provided to the Township on November 6th 2009.

Request for a Visioning Waiver

The Municipal Self Assessment (page 37) requests a waiver for visioning. The MSA notes that a waiver is justified because Vernon's center plans were created in 2003 after visioning had occurred. Please resubmit Looney Ricks Kiss's 2003 center plans and note any modifications that have occurred. Please submit proof of notice for the meetings as well as any minutes or notes that were taken. OSG will consider this request once all of the visioning materials have been submitted. OSG would also like to review the Supplemental Redevelopment Studies from 2005. These studies were mentioned in the MSA, but not submitted.

Request for State Agency Assistance

The Municipal Self Assessment (page 79) requests State Agency Assistance for many items. Many of these requests are reasonable and can be coordinated with action plan items that may be required in order for Vernon

Township to qualify for funding. Additional information will be needed to move forward with these requests. Prior to providing this additional information please check the Plan Endorsement Benefits chart and identify which programs best suit the particular projects needs.

Transportation, Streetscape, Pedestrian and Alternative Transportation Improvements

The Municipal Self Assessment (page 79) requests State Agency Assistance. Many of these requests are reasonable and can be coordinated with action plan items that may be required in order for Vernon Township to qualify for funding.

- Public transportation which ties into existing county and state mass transit systems.

Additional information about the potential for public transit will be available in Vernon's Transit score provided by NJ Transit in this report.

- Create a walking mall within the Town Center Main Street area with a shuttle going to and from parking lots.

OSG would like Vernon to provide additional information. Would this involve any part of Route 94? If this request pertains only to local streets, Vernon Township could discuss this request with NJDOT's District 1 office in Mount Arlington whether such a project would be funded, and what program would be best to apply under.

- Create a bike path traversing the entire Township.

NJDOT's division of local aid has provided funding for bike paths in the past. Vernon should continue to apply for these funds.

- Further development and promotion of a canoe trail and launch sites.

OSG would like Vernon to provide additional information. Is the Township seeking planning grants or funds to cover construction costs? It does not appear that any of NJDOT's Local Aid programs would cover canoe trail and launch sites. The Township may be able to apply for Transportation Enhancements funding, but there really has to be a transportation relationship. This project would be more likely to qualify for funding if it were part of a larger eligible project. This project should be discussed with District 1 office.

- Provide funding to complete streetscape projects in the Town Center, i.e. street furniture, lighting, sidewalks, etc.

NJDOT Centers of place grants cover these costs. The Township will be available to apply for these funds once the centers are designated. NJDOT's has funded streetscape work with Transportation Enhancement funds. Vernon Township should apply for these funds.

- Provide funding to increase pedestrian connections throughout the Town Center.

NJDOT Centers of place grants cover these costs. The Township will be available to apply for these funds once the centers are designated. The Township can also apply for Transportation Enhancement funds or Safe Routes to School if the project meets the criteria for these programs

- Provide coordinated review of proposed parking area for the Appalachian Trail boardwalk.

OSG would like Vernon to provide additional information. Does the Township want NJDOT's staff to review the parking scenario to ensure permits would be granted? Would this parking lot front on Route 94? Is the Township requesting NJDEP review the parking plans to ensure the plans are consistent with environmental regulations?

- Provide funding for gateway beautification.

The Township might be able to apply for Enhancement funds for this, but the proposal must meet the program criteria.

Water & Sewer Improvements

- Provide assistance in maintaining sewer service areas in the Town Center.

NJDEP's response on page 33 of their O&C states "The Plan Endorsement process is one route by which modification of sewer service area can be accomplished, per the Water Quality Management Planning rule (N.J.A.C. 7:15). It should be understood that DEP will not "rubber stamp" a modified sewer service area simply because the municipality is involved in the Plan Endorsement process. In order to extend sewer service area into environmentally sensitive areas, off-setting protections of environmentally sensitive areas, above and beyond that of basic regulatory and planning limitations, will be required."

- Provide assistance in water allocation issues related to the Center.

NJDEP's response on page 33 of their O&C states "The updated State Water Supply Plan will be released



in the near future. Water allocation issues consistent with the Water Supply Plan, Wastewater Management Plan, and Plan Endorsement will be supported.”

- Provide Vernon access to the NJDEP Small Water System Technical Assistance Program for the proposed water system in the Town Center.

NJDEP’s response on page 33 of their O&C states “Frequently Asked Questions for the Small Water System Technical Assistance Program may be found at <http://tinyurl.com/depswsfaq>

The Small Water System Technical Assistance program is designed to provide hands on assistance for public water systems which are having difficulty supplying potable water because of some short term technical need. DEP is unclear which United Water Resources is the public water system entity in Vernon Township. Since Vernon Township is not itself the owner/operator of a public water system, the Township is not eligible for this assistance.

Economic Development

- Construction of a Performing Arts Center.

OSG would like Vernon to provide additional information. Is the Township requesting funding to develop plans, hard costs, land etc? OSG will coordinate a response with the relevant State Agencies once the Township provides the necessary additional specifics.

- Higher visibility in state tourism advertising campaigns.

OSG will coordinate a response with the relevant State Agencies once the Township provides the necessary details.

- Development of Historic Sub-District within the Town Center Redevelopment Area to include a self-guided walking tour.

NJDEP’s response on page 33 of their O&C states “The steps to expand the historic district by the Town should be consistent with, if not mirror, those steps taken in the original process, and outlined in ordinance.”

- Promotion of special events which will bring people to Vernon and consequently fill now vacant hotel rooms.

OSG will coordinate a response with the relevant State Agencies once the Township provides the necessary details.

- Construction of a Welcome Center.

Is the Township requesting funding to develop plans, hard costs, land etc? OSG will coordinate a response with the relevant State Agencies once the Township provides the necessary details.

- Provide funding and technical assistance to increase access to state parks, publicly preserved open space and wildlife management areas for recreation activities.

NJDEP’s response on page 33 of their O&C states “DEP is unclear as to what is being requested here. Please provide further information. Vernon Township may apply for Green Acres funding for both land preservation and park and recreation projects. All NJ municipalities are notified by the Green Acres program when funding applications are being accepted. Green Acres will provide technical assistance on open space and recreation planning to Vernon upon request.

Regarding access to state parks and wildlife management areas, these public open space lands are already accessible with parking areas for public conservation and recreation uses. Any project on these lands would need to be coordinated with either the DEP Division of Parks and Forestry, the Division of Fish and Wildlife, and/or the United States Fish and Wildlife Service, as these agencies are responsible for the operation and management of these lands.

- Provide funding and technical assistance to provide way finding signage throughout the Township.

NJDOT Local Aid programs cover these costs. The Township will be available to apply for these funds once the centers are designated. Comment: Specifically, Centers of Place provides for this type of project.

- Provide funding and technical assistance for creation of scenic routes through the Township.

Please provide additional detail. Have the scenic routes already been identified? Is the Township seeking design grants to enhance views or funds to cover construction costs or signage? Comment: Specifically, Enhancements covers scenic or historic highway programs. In addition, the Township could look into the state Scenic Byway program, which highlights transportation corridors that have outstanding scenic, natural, recreational, cultural, historic or archaeological significance. In order to be designated, such byways need to have a local sponsor and usually involve more than one town. The guidelines are on our Web site at <http://tinyurl.com/njscenic>

- Provide funding and program assistance for creating a façade, signage and landscaping improvement program.

This seems like multiple requests. Please provide additional detail. Is the Township requesting funds from a specific state program in order to design a program at the local level or is the Township requesting state funds for individual property owners? OSG will coordinate a response with the relevant State Agencies once the Township provides the necessary details.

- Provide assistance in obtaining a Main Street designation.

Main Street New Jersey’s program has specific criteria that must be met. OSG will provide guidance while the Township prepares the application.

Grants and Planning Assistance

- Provide Smart Growth Grants to Assist with Plan Endorsement Action Plan Items.

There are no Smart Future grants at this time. OSG staff will work with the Township to identify other grant opportunities.

- Provide funding and/or technical assistance for the visioning process.

Technical assistance will be granted. There are no Smart Future grants at this time. OSG staff will work with the Township to identify other grant opportunities.

- Provide funding and technical assistance for open space acquisition and farmland preservation.

OSG will work with the Township and the department of agriculture to identify opportunities.

- Provide funding and technical assistance to create a website for promotion of tourism in Vernon with links to other tourism related websites in the state.

There are no Smart Future grants at this time. OSG staff will work with the Township to identify other grant opportunities.

- Provide funding and technical assistance for web marketing of Vernon as a tourist destination. Provide assistance in coordinating reviews with state and federal park agencies for amenities in the parks in Vernon, i.e. access points and parking areas, etc.

NJDEP’s response on page 33 of their O&C states “DEP is unclear as to what is being requested here. Please provide further information. Vernon Township may apply for Green Acres funding for both land preservation and park and recreation projects. All NJ municipalities are notified by the Green Acres program when funding applications are being accepted. Green Acres will provide technical assistance on open space and recreation planning to Vernon upon request.

Regarding access to state parks and wildlife management areas, these public open space lands are already accessible with parking areas for public conservation and recreation uses. Any project on these lands would need to be coordinated with either the DEP Division of Parks and Forestry, the Division of Fish and Wildlife, and/or the United States Fish and Wildlife Service, as these agencies are responsible for the operation and management of these lands.

Relation to the State Development and Redevelopment Plan (State Plan)

Parts of New Jersey still exhibit a predominately rural landscape, with compact towns and village centers surrounded by farms and woodlands. Farmland and open space forms a continuous, productive landscape that enhances habitat protection and maintains natural resources. The character of the rural landscape is an important asset for New Jersey, yet much of it is zoned for large-lot suburban sprawl. Current TREND development destroys farmland, open space and natural features. Inflexible zoning codes and individual septic systems create homogenous tracts of single-family homes on large lots, pollute groundwater and contaminate wells. This TREND also contributes to road congestion, damage to local economies and the

elimination of rural character. PLAN development provides for prosperous, mixed use development in compact centers. This compact form provides for the maintenance and enhancement of contiguous farmland and open space, therefore protecting headwaters and groundwater recharge areas. Ultimately, PLAN development provides for the protection of rural character, while preserving and improving the local economy.

In the past several changes have been made to Vernon's development regulations to ensure greater consistency with the State Plan. For example, Vernon has added an overlay zone for stream buffer conservation. The Township has focused on redeveloping land instead of developing on greenfields. Vernon has also recognized and protected the Appalachian Trail with cluster zoning techniques and maintained low density zoning in that area adjacent to the Wallkill National Wildlife Refuge.

The current State Plan Policy Map, adopted in 2001, depicts Rural Planning Area 4, Rural & Environmentally Sensitive Planning Area 4B, Environmentally Sensitive Planning Area 5 and Parks and Natural Areas. As such, the Highlands Planning Area includes 8171 acres of Rural Planning Area 4 and 4B, 4229 acres of Environmentally Sensitive Planning Area 5 and 3017 acres of Parks and Natural Areas. As noted below under Cross-acceptance, the 2004 Preliminary State Development and Redevelopment Plan (State Plan) and the Preliminary State Plan Policy Map have been released for review.

Highlands and OSG Buildout Methods

The Highlands Build-Out and OSG's Build-Out are both parcel-based analyses that evaluate developable lands using two different methods and data verification approaches. The following is a summary of each build-out model and how they best work together to inform the Plan Endorsement process.

The Highlands Build-Out is a utility and resource capacity analysis that evaluates the nature and extent of the developable lands to be built based on the Highlands Regional Master Plan. The Highlands Build-Out process includes a municipal verification process to confirm developable lands, wastewater and public water utility areas, preserved lands, and local municipal zoning. Based on the municipally verified information, the Highlands Municipal Build-Out Report for utility served areas projects the number of additional residential units and jobs that could occur based upon



1) existing municipal zoning (only used in sewered areas), 2) environmental constraints, and 3) the ability to be served by existing water and wastewater utility capacity. The Highlands Build-Out utility capacity analysis for water and wastewater is determined for those areas eligible for utility service based on approved Wastewater Management Plans and in accordance with the Highlands Regional Master Plan. All areas not considered eligible for utility connection in accordance with the Regional Master Plan are evaluated as septic system units based on thresholds that are protective of Highlands's resources. The combined utility and septic system unit build-out results are also evaluated to ensure that the water demands do not exceed water availability conditions. In the Planning Area, the Highlands Municipal Build-Out Report serves as a measure of sustainable growth to evaluate and plan for development that does not exceed utility and resource capacity constraints of the Regional Master Plan.

The Office of Smart Growth's Build-Out process is a parcel based zoning analysis. OSG's Build-Out determines how many units could be built based on Vernon's existing zoning regulations and environmental constraints.

The two analyses can be used together to inform comprehensive capacity based planning. Vernon should consider the numbers provided by OSG and use a multi-pronged approach including open space preservation, farmland preservation, non-contiguous parcel development clustering, Transfer of Development Rights options, redevelopment and infill opportunities, and contiguous parcel development clustering to reconcile the difference between the two numbers to develop regulations that produce sustainable, center based development that is both capacity based and protective of sensitive resources. However, only the Highlands Build-Out Report will determine sustainable growth in the Preservation Area as OSG cannot endorse any lands in the Preservation Area, which Area is under the Highlands Council’s jurisdiction.

New Jersey Office of Smart Growth (OSG) Trend Analysis

To perform this task, OSG developed a spreadsheet tool that uses a series of worksheets in which relevant zoning information, land capacity and constraints data, and standard multipliers are used as inputs to determine residential and commercial buildout in the Highlands

Planning Area. OSG used the most recent U.S. Census Bureau data to determine Vernon’s average household size, which was identified as 2.86 persons per household (U.S. Census Bureau, 2006-2008 American Community Survey 3-Year Estimates). Tables used in calculating the results of the TREND Analysis are included as Figures 1 through 3 below; Figure 1 provides a summary of the findings. At the end of the report, Appendix B presents the results of the TREND analysis as a map.

The TREND Analysis performed by OSG was conducted based on the current zoning information that was provided in the Municipal Self-Assessment Report. OSG took into account known environmental constraints and impediments to development. These constraints included identified State Plan parkland; State Agriculture Development Committee (SADC) preserved farms, wetlands (with a 25 foot buffer), the presence of Category 1 (C1) streams, (with 300 foot buffer) and identified surface water. OSG used Sussex County’s developed lands layer which also included steep slopes over 25%. The net result from the TREND Analysis will determine the amount of housing and commercial space that can potentially be built given current zoning regulations. Ultimately, the information provided throughout this document shall be utilized to inform the Community Visioning Process. However, the objective of this TREND Analysis is to determine what the Highlands Planning Area in Vernon may resemble at full buildout based on current land use and zoning regulations. This series of worksheets represents a basic methodology for the TREND Analysis. Based on mapping data and zoning regulations, OSG inserted relevant data, transferred from the Township’s zoning language, into the Residential Buildout Method and Commercial Buildout –Building Cover Method.

As reference, OSG used year 2000 Census data to determine average household size, which was identified as 2.95 persons per household (median) from (U.S. Census Bureau (2000). American FactFinder: Vernon Township, N.J. Retrieved October 22, 2009 <http://tinyurl.com/vernonprofile>

The zoning schedule for the Township has been attached as Appendix A for reference to definitions of the various zones considered in this analysis. A brief summary of the findings is provided below and is intended to be used as a guide during the visioning process.

| Figure 1 - Summary Table | |
|---|----------------|
| category | totals* |
| land consumption | |
| total acreage | 45,314 |
| currently developed or constrained | 37,345 |
| acres to be developed | 7,959 |
| buildings | |
| current housing units (2000) | 10,222 |
| residential units to be developed | 1,331 |
| total residential at buildout | 11,553 |
| current commercial sq ft | 825,919 |
| commercial sq ft to be developed | 14,404,604 |
| commercial at buildout | 15,230,523 |
| people | |
| current residents (2000) | 27,052 |
| additional residents at buildout | 3,317 |
| total residents at buildout | 30,369 |
| current jobs | |
| additional jobs at buildout | 33,258 |
| total jobs at buildout | 33,258 |
| * formulas total all commercial worksheets on the basis that only one would be selected and the other two would remain zero | |
| ** per the NOTE above, the petitioner should make sure that they are not double-counting acreage for a mixed use zone | |

Figure 2 - Residential Trend

| residential zone | total land in residential zone (acres) | total constrained land in residential zone (acres) | total developable land (acres) | total developable residential land (acres) | maximum residential density permitted (units per acre) | potential number of units | average household size (persons per unit) | number of total residents upon buildout |
|--|--|--|--------------------------------|--|--|---------------------------|---|---|
| | a | b | c=a-b | d=c*0.8 | e | f=d*e | g | h=f*g |
| R-1 (Rural Residential) | 408 | 390 | 19 | 15 | 0.2 | 3 | 2.9 | 866 |
| R-2 (Residential Low Density) | 3646 | 2564 | 1,082 | 865 | 0.33 | 286 | 2.9 | 828,07 |
| R-3 (Residential Medium Density) | 1371 | 1036 | 336 | 268 | 1.45 | 389 | 2.9 | 1128,89 |
| R-4 (Residential High Density) | 172 | 141 | 31 | 25 | 4.4 | 108 | 2.9 | 313,69 |
| PPLC (Private Leasehold Lake Community) | 249 | 147 | 102 | 81 | 4.4 | 358 | 2.9 | 1038,15 |
| Private Lake Community | 912 | 736 | 176 | 141 | 0.22 | 31 | 2.9 | 89,82 |
| Vernon Town Center | 180 | 134 | 45 | 36 | | 156 | 2.9 | 452,40 |
| total | 5,847 | 4,279 | 1,568 | 1,255 | 11 | 1331 | | 3,317 |
| | | | land consumption | | | buildings | | people |
| NOTES | | | | | | | | |
| b: constrained lands include conserved land, public ownership, conservation easements (deed restrictions), utility easements, or natural factors such as wetlands, floodplains & steep slopes) | | | | | | | | |
| d: 0.8 figure is based on 20% take up of land for right of ways (i.e. roads) | | | | | | | | |
| e: data based on current zoning | | | | | | | | |

Residential Projections

According to the 2000 Census, Vernon has 27,052 citizens residing in 10,222 dwelling units. The North Jersey Transportation Planning Authority (NJTPA), the Township’s designated Metropolitan Planning Organization (MPO), estimates 9,170 Households as of 2005. The MPO projections suggest that 32,700 people could be residing in Vernon Township by 2030. These 32,700 people would comprise 11,820 households. COAH’s third round housing rules project an increase of 1,428 units.

Residential Buildout Method

The Residential Buildout Method (Figure 2) assumes buildout of existing residential zones at the maximum density permitted by the Township’s current zoning ordinance. Dependent upon future development pressure, the information provided in the Residential Buildout Method will come to fruition as existing zoning allows and provides for such development. The Residential Buildout Method forecasts that if the Township continues utilizing and enforcing its current zoning ordinance, an additional 1,331 units could be built in the Township. These potential units could sprawl over 1,255 acres of developable land. These units would accommodate 3,317 residents based on the census average household size of 2.9.

• R-1

The R-1 zone is the Rural Residential Zone. Properties are zoned Rural Residential in 12 non contiguous areas.

The R-1 zone includes 408 acres of Highlands Planning area. 390 of these acres are environmentally constrained. 15 developable acres remain. The Township’s zoning ordinance indicates that, over time, 3 homes could be developed in the R-1 zone. The Highlands Preservation Area includes 4,848 acres of the R-1 zone.

• R-2

The R-2 zone is the Rural Low Density zone. Properties are zoned Rural Low Density in 12 non contiguous areas. This zone contains 3,646 acres of Highlands Planning Area. 2,564 of these acres are environmentally constrained. 865 developable acres remain. The Township’s zoning ordinance indicates that, over time, 286 could be developed in the R-2 zone. The Highlands Preservation area includes 3,044 acres of the R-2 zone.

• R-3

The R-3 zone is the Residential Medium Density zone. Properties are zoned Residential Medium Density in 7 non contiguous areas. The R-3 zone contains 1,371 acres of Highlands Planning Area. 1,036 acres are environmentally constrained. 268 developable acres remain. The Township’s zoning ordinance indicates that, over time, 389 units could be developed in the R-3 zone. The Highlands Preservation Area includes 325 acres of the R-3 zone.

• R-4

The R-4 zone is the residential High Density Zone. Properties are zoned Residential High Density 9

non contiguous areas. 6 of these areas are in or around the expired center boundary. This zone contains 172 acres of Highlands Planning area. 141 of these acres are environmentally constrained. 25 developable acres remain. The Township's zoning ordinance indicates that, over time, 108 units could be developed in the R-4 zone. The Highlands Preservation Area includes 18 acres of the R-4 zone.

- PLC

The PLC zone is Private Lake Community Zone. Properties are zoned PLC in 8 non contiguous areas. The PLC zone contains 912 acres of the Highlands Planning Area. 736 acres are environmentally constrained. 141 developable acres remain. The Township's zoning ordinance indicates that, over time, 31 homes could be developed in the PLC zone. The Highlands Preservation Area includes 2,873 acres of the PLC zone.

- PLLC

The PLLC zone is the Private Leasehold Lake Community zone. The PLLC zone consists of 2 non con-

tiguous areas. One portion of this zone is within the Highlands Preservation Area and the other is within the Highlands Planning Area. This zone contains 249 acres of Highlands Planning Area. 147 of these acres are environmentally constrained. 81 developable acres remain. The Township's zoning ordinance indicates that, over time, 358 units could be developed in the PLLC zone. The Highlands Preservation Area includes 363 acres of in the PLLC zone.

- VTC

The VTC zone is the Vernon Town Center Zone. This zone is mixed use. The Vernon Town Center zone consists of two noncontiguous areas located within the expired town center and entirely within the Highlands Planning Area. The VTC zone contains 180 acres of Highlands Planning Area. 134 of these acres are environmentally constrained. 36 developable acres remain. The Township's zoning ordinance indicates that, over time, 156 units could be developed in the VTC zone. OSG calculated the number of units using figures from Vernon's redevelopment ordinance. According to the

Figure 3 - Commercial Trend - Building Cover Method

| commercial zone | total land in commercial zone (acres) | total constrained land in commercial zone (acres) | total developable land (acres) | percentage of land allowed to be covered by building (%) | maximum amount of land to be covered by building (acres) | maximum number of stories allowed | maximum amount of floorspace (sq ft) | floorspace per job (sq ft) | number of jobs |
|--------------------------------------|---------------------------------------|---|--------------------------------|--|--|-----------------------------------|--------------------------------------|----------------------------|----------------|
| | a | b | c=a-b | d | e=c*d/100 | f | g=e*f*43560 | h | i=g/h |
| RETAIL | | | | | | | | | |
| Neighborhood Commercial | 11 | 9 | 2 | 35% | 1 | 2.0 | 57,325 | 357 | 161 |
| General Business Shopping Center | 131 | 103 | 29 | 30% | 9 | 2.0 | 745,137 | 357 | 2,087 |
| MIXED USE | | | | | | | | | |
| Town Center | 114 | 83 | 31 | 75% | 23 | | | 588 | |
| Vernon Town Center | 180 | 134 | 45 | | 0 | 3.0 | 202,300 | 588 | 344 |
| Mcafee Village Commercial Resort | 45 | 43 | 2 | | 0 | 9.0 | 42,000 | 588 | 71 |
| Mcafee Village Mixed Use | 593 | 339 | 254 | | 0 | | 235,000 | 588 | 400 |
| Mountain Resort | 261 | 202 | 59 | 10% | 6 | 4.5 | 2,583,913 | 588 | 4,394 |
| INDUSTRIAL | | | | | | | | | |
| Light Industrial | 495 | 293 | 202 | 30% | 61 | 2.0 | 5,279,211 | 333 | 15,853 |
| Conservation & Recreation | | | | | | | | | |
| Commerical Recreation | 1,447 | 1,151 | 296 | 10% | 30 | 2.0 | 2,578,752 | 385 | 6,698 |
| Seasonal Recreation | 225 | 179 | 46 | 10% | 5 | 2.0 | 401,710 | 385 | 1,043 |
| Agri-eco Tourism | 894 | 794 | 100 | 10% | 10 | 2.0 | 869,109 | U | NA |
| Conservation | 661 | 603 | 57 | 10% | 6 | 2.5 | 622,799 | U | NA |
| Public Land | 2,317 | 2,308 | 9 | 0% | 0 | 0.0 | 0 | U | NA |
| Mountain Conservation | 1,254 | 1,253 | 0 | 0% | 0 | 0.0 | 0 | U | NA |
| OFFICE | | | | | | | | | |
| Office Professional | 36 | 24 | 12 | 50% | 6 | 3.0 | 787,347 | 357 | 2,205 |
| total | 8,663 | 7,519 | 1,144 | | 155 | | 14,404,604 | | 33,258 |

land consumption

buildings

people

NOTES

b: constrained lands include conserved land, public ownership, conservation easements (deed restrictions), utility easements, or natural factors such as wetlands, floodplains & steep slopes)

d, f: data based on current zoning

g: data based on square footage from the Township's Redevelopment Ordinances

h: data based on COAH standards from Appendix D of COAH's 3rd round rules

Town Center Redevelopment Ordinance, the Main Street sub district allows for 30 units, the East church street sub district allows for 100 units and the West Church street sub district allows for 26 affordable units.

Commercial Buildout-Building Cover Method - Employment Projections

The NJTPA/MPO Non-Residential Projection for employment growth is 9,140 jobs in 2020 compared to 7,710 in 2005 resulting in an increase of 1,430 jobs. This increase can be compared to COAH's third round projection of 1,658 jobs for the 2004 to 2018 Round Three obligation period. The housing and employment projections create a projected growth share obligation of 389. <http://tinyurl.com/coahregs>

The Commercial Buildout Method (Figure 2) assumes buildout of currently designated commercial zones within the Highlands Planning Area at the maximum density permitted under current zoning regulations. While encouraging the growth of commercial businesses within the Township is admirable, zoning for such commercial enterprises must be realistic and planned according to the Township's vision – a vision which should include mixed use centers thus encouraging Township residents to live within close proximity to where they work and shop to minimize auto use, reduce traffic congestion and enhance pedestrian mobility.

At present time, the Township's zoning indicates that when buildout occurs, the Township would increase commercial floor space to a total of approximately 14 million square feet over a land area of approximately 155 acres creating 33,258 jobs. OSG understands that this amount of commercial growth seems unlikely, however the TREND analysis measures the full buildout potential of the Township's ordinances. Development pressure ebbs and flows over time.

- SR

The SR zone is the Seasonal Recreation zone. The Seasonal recreation zone consists of one contiguous area that is entirely within the Highlands Planning Area. This zone contains 225 acres. 179 acres in this zone are environmentally constrained. 46 developable acres remain. The Township's zoning ordinance indicates that, over time, 401,710 square feet of floorspace could be developed in the SR zone.

- MR

The MR zone is the Mountain Resort Planned Commercial District. The MR zone consists of one contiguous area that is in and around the expired center and entirely within the Highlands Planning Area. This zone contains 261 acres of Highlands Planning area. 202 of these acres are environmentally constrained. 59 developable acres remain. The Township's zoning ordinance indicates that, over time, 1,146,913 square feet of commercial space could be developed in the MR zone. Ordinance 06-35 indicates that an additional 1.437 million square feet of commercial space could be built bringing to the total square footage to 2,583,913.

- CR

The CR zone is the Commercial Recreation zone. Properties are zoned CR in 16 non contiguous areas. This zone contains 1,447 acres of Highlands Planning Area. 1,151 of these acres are environmentally constrained. 296 developable acres remain. The Township's zoning ordinance indicates that, over time, 2,758,752 square feet of commercial space could be developed in the CR zone. The Highlands Preservation Area includes 160 acres of the CR zone.

- C-1

The C-1 zone is the Neighborhood Commercial zone. Properties are zoned C-1 in 3 non contiguous areas. This zone contains 11 acres of Highlands Planning Area. 9 of these acres are environmentally constrained. 2 developable acres remain. The Township's zoning ordinance indicates that, over time, 57,325 square feet of commercial space could be developed in the C-1 zone. The Highlands Preservation Area includes 28 acres of in the C-1 zone.

- C-2

The C-2 zone is the General Business Shopping Center zone. Properties are zoned C-2 in 2 noncontiguous areas entirely within Highlands Planning Area. This zone contains 131 acres. 103 of these acres are environmentally constrained. 29 developable acres remain. The Township's zoning ordinance indicates that, over time, 745,137 square feet of commercial space could be developed in the C-2 zone.

- C-3

The C-3 zone is the Office Professional zone. This zone consists of one contiguous area that is entirely within the expired center and the Highlands Plan-

ning area. The C-3 zone is 36 acres. 24 of these acres are environmentally constrained. 12 developable remain. The Township's zoning ordinance indicates that, over time, 787,347 square feet of commercial space could be developed in the C-3 zone.

- TC

The TC zone is the Town Center Commercial Zone. The TC zone is mixed use. Properties are zoned TC in 3 non contiguous areas in and around the expired center. These areas are entirely within the Highlands Planning Area. 83 of these acres are environmentally constrained. 31 developable acres remain. The Township's zoning ordinance indicates that, over time, 202,300 square feet of commercial space could be developed in the TC zone. This figure was derived from Vernon's Town Center Redevelopment Ordinance which states that the Main Street sub district permits 172,300 square feet of commercial space and the East Church Street sub district permits 30,000 square feet of commercial space.

- LI

The LI zone is the Light Industrial zone. Properties are zoned LI zone in 8 non contiguous areas. This zone contains 495 acres of Highlands Planning Area. 293 of these acres are environmentally constrained. 202 acres of developable land remain. The Township's zoning ordinance indicates that, over time, 5,279,211 square feet of commercial space could be developed in the LI zone. The Highlands Preservation Area includes 115 acres of the Light Industrial zone.

- AET

The AET zone is the Agri-Eco Tourism zone. Properties are zoned AET in two non contiguous areas. The AET zone contains 894 acres of Highlands Planning Area. 794 of these acres are environmentally constrained. 100 developable acres remain. The Township's zoning ordinance indicates that, over time, 869,109 square feet of commercial space could be developed in the AET zone. The Highlands Preservation Area includes 1,180 acres of the AET zone.

- C

The C zone is the Conservation zone. Properties are zoned C in 5 non-contiguous areas. The Conservation zone contains 661 acres of Highlands Planning Area. 603 of these acres are environmentally constrained. 57 developable acres remain. The Town-

ship's zoning ordinance indicates that, over time, 622,799 square feet of commercial space could be developed in the C zone. The Highlands Preservation Area includes 6,456 acres of the Conservation zone.

- MTC

The MTC zone is the Mountain Conservation zone. Properties are zoned Mountain Conservation in two non contiguous areas. The MC zone is entirely within the Highlands Planning Area and contains 1,254 acres. 1,253 of these acres are environmentally constrained. One developable acre remains. Development in this zone is unlikely.

- P

The P zone is the Public Land zone. Properties are zoned Preservation in 8 non contiguous areas. There are 2,317 acres of Highlands Planning Area in the Public Land zone. 2,308 of these acres are environmentally constrained. 9 developable acres remain. Vernon Township's zoning regulations do not permit development in this zone. The Highlands Preservation Area includes 9,771 acres of the Public Lands zone.

Cross-Acceptance III

On April 28, 2004, the New Jersey State Planning Commission approved the release of the Preliminary State Development and Redevelopment Plan (State Plan) and the Preliminary State Plan Policy Map. This action launched the third round of Cross-acceptance. Cross-acceptance is a bottom-up approach to planning, designed to encourage consistency between municipal, county, regional, and state plans to create a meaningful, up-to-date and viable State Plan (N.J.S.A. 52:18A-202.b.).

This process is meant to ensure that all New Jersey residents and levels of government have the opportunity to participate and shape the goals, strategies and policies of the State Plan. Through Cross-acceptance, negotiating entities work with local governments and residents to compare their local master plans with the State Plan and to identify potential changes that could be made to achieve a greater level of consistency with statewide planning policy.

Vernon Township did not provide comments to the Sussex County Planning Board, the Negotiating Entity for Sussex County municipalities, for negotiation with OSG and the SPC. Therefore, there are no policy or map amendments that are to be reflected as part of this report.

The State Development and Redevelopment Plan Policy Map 2001 as well as the Preliminary Policy Map for the third round of Cross Acceptance have been enclosed for reference. Ultimately, the State Planning Commission will make the final determination on all amendments to the State Plan Policy Map. Additional changes proposed beyond those indicated in Preliminary Policy Map shall occur through the Plan Endorsement process.

Redevelopment

Vernon has taken advantage of the opportunities available for redevelopment throughout the Township. The following ordinances were submitted to OSG with the pre-petition materials.

- Ordinance No. 08-04

Establishing a redevelopment plan for a portion of the McAfee Village Redevelopment Area and Designating the Township of Vernon to Act as the McAfee Village Mixed Use Redevelopment Area and Establishing the McAfee Village Zoning District of the Land Developing Code of Vernon Township

- Ordinance No. 06-35

Establishing a Redevelopment Plan for the Mountain Creek Redevelopment Area, Designating the Township council of the Township of Vernon as the Redevelopment entity, and establishing land uses and requirements in the project area.

- Ordinance No. 08-02

Amending the land redevelopment code, Section 330, of the township of Vernon Code and Establishing the Vernon Towns Center Zoning District and 5 sub-districts, including the Main street sub-district in the Township of Vernon.

- Ordinance No. 09-07

Establishing a redevelopment plan for a portion of the McAfee Village Redevelopment Area and Designating the Council of the Township of Vernon to act as the Redevelopment Agency for the McAfee Village Highway Hotel Redevelopment Area Establishing the McAfee Village Highway Hotel Zoning District for Block 233, lot 9.

- Ordinance No. 07-47

Amending Ordinance 07-43 as the Town Center Redevelopment Ordinance.

OSG staff reviewed the ordinances. Vernon Township requested State Agency Assistance for the “Promotion of special events which will bring people to Vernon and consequently fill now vacant hotel rooms.” The redevelopment ordinances specify that 4,233 new hotel rooms could be built. If filling hotel rooms is a persistent problem in the Township, perhaps other redevelopment options should be considered. Hotels require many employees and Vernon should work to ensure that Hotel employees can live in town to avoid traffic on the State, County and Local roads. The Township should keep 40A:12A-6(5) in mind as Redevelopment Areas are designated.

Conclusion

When OSG engages with any of New Jersey’s municipalities, we work to ensure that municipalities have taken advantage of all the opportunities available to plan high performance places.

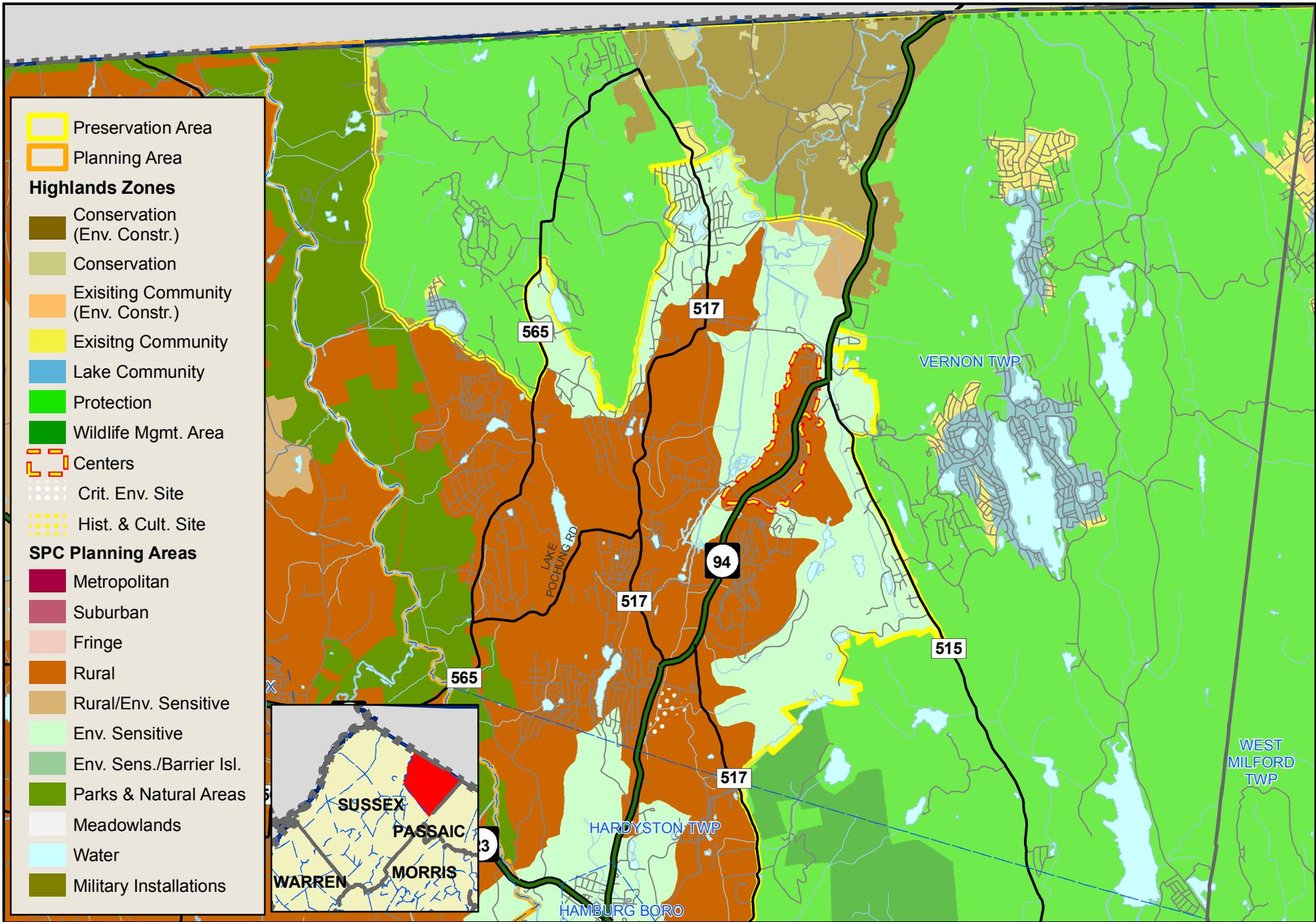
It’s crucial that the development that occurs will add sustainable economic value to the community. The development that takes place should create mixed use retail/residential/office spaces that can be adapted for a diverse mix of tenants over the next 50 years so that when a retail tenant moves out, that space will be quickly filled; ensuring the long term economic vibrancy of the community. Having a proximal consumer base that lives or works within a short walking distance will help to ensure that the buildings will retain their use and value over time.

Particular building and circulation arrangements are necessary to create high performance places. The continuity of buildings along the streets distinguishes centers from other land uses and creates a sense of place. Ideally, buildings should line both sides of the street without interruption wherever possible. Parking areas should be visually unobtrusive to avoid breaking up the streetscape. On-street parking should be provided in front of the buildings and parking lots should be hidden behind them.

The New Jersey Department of Transportation (NJDOT) developed a reference guide called the Mobility and Community Form (MCF). The MCF provides guidance on parking that is particularly helpful, “In shar-

ing parking, analyze the building space by functional type (residential, office, retail, specialty, etc.) rather than specific proposed occupants, because occupancies will change over time.” Centers plans should discourage large surface lots and disperse the surface parking that is necessary into several small parking lots.

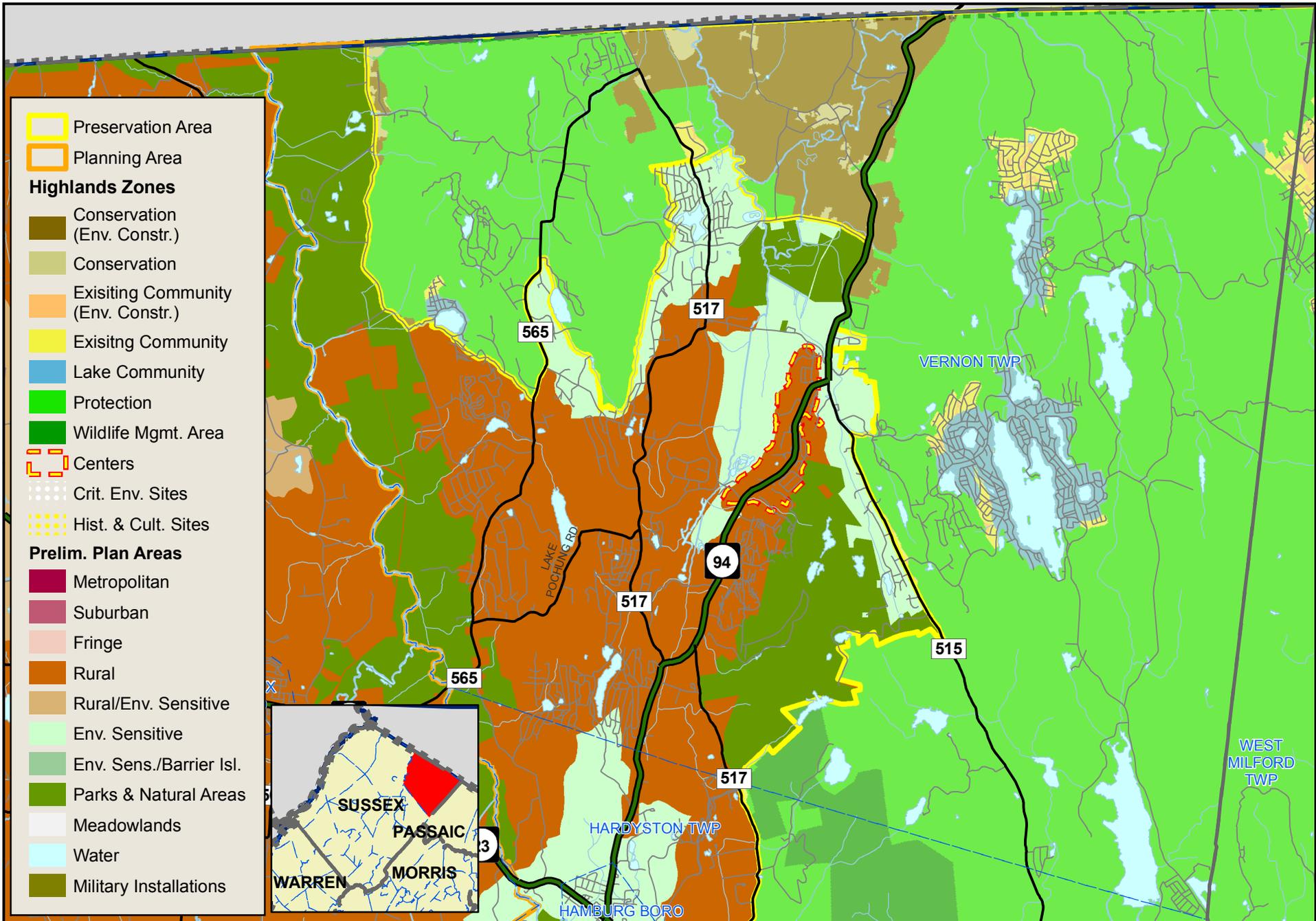
| | Zoning District | Minimum Lot Area (square feet or acre) | Minimum Lot Width (feet) | Minimum Front Yard Setback (feet) | Minimum Side Yard Setback (feet) | Minimum Rear Yard Setback (feet) | Maximum Building Height (feet/stories) | Maximum Building Coverage (percent) | Maximum Lot Coverage (percent) |
|------------------------------------|-----------------|---|-----------------------------|--------------------------------------|-------------------------------------|-------------------------------------|---|--|-----------------------------------|
| Rural Residential | R-1 | 5 ac. | 250 | 75 | 35 | 100 | 35/2½ | 10% | 15% |
| Low Density Residential | R-2 | 3 ac. | 200 | 75 | 25 | 75 | 35/2½ | 15% | 25% |
| Medium Density Residential | R-3 | 30,000 sf | 125 | 50 | 15 | 50 | 35/2½ | 20% | 30% |
| High Density Residential | R-4 | 10,000 sf | 100 | 50 | 15 | 50 | 35/2½ | 20% | 30% |
| Private Lake Community Residential | PLC | 10,000 sf | 100 | 40 | 10 | 25 | 35/2½ | 25% | 35% |
| Neighborhood Commercial | C-1 | 20,000 sf | 100 | 25 | 10 | 20 | 30/2 | 35% | 75% |
| General Business Shopping Center | C-2 | 30,000 sf | 125 | 50 | 15 | 40 | 30/2 | 30% | 60% |
| Office Professional | C-3 | 40,000 sf | 150 | 75 | 20 | 50 | 35/3 | 25% | 50% |
| Commercial Recreation | CR | 10 ac. | 250 | 100 | 100 | 100 | 30/2 | 10% | 25% |
| Seasonal Recreation | SR | 40 ac. | 250 | 100 | 50 | 60 | 30/2 | 10% | 25% |
| Light Industrial | LI | 40,000 sf | 150 | 75 | 25 | 50 | 30/2 | 30% | 60% |
| Agri-eco Tourism | AET | 5 ac. | 250 | 75 | 35 | 100 | 30/2 | 10% | 15% |
| Conservation | CON | 5 ac. | 250 | 75 | 35 | 100 | 35/2½ | 10% | 15% |
| Town Center | TC | 10,000/ 4,000 sf ₁ | 50/40 | 15 or 20 ₂ | 10 + 0 or 0 + 0 ₃ | 20 | 30 (deleted 2) | 35% | 50% |
| Mcafee Village Commercial Resort | MVCR | 40ac | 250 | 30 | 100 | 100 | 105/9 | 17% | 25% |
| Mcafee Village Mixed Use | MVMU | 585 ac. | | 15 | | | | | |
| Vernon Town Center | VTC | 256 ac. | 120 | 14 | 5 side 15 between bldgs | 5 | 40 (deleted 2) | 70% | |
| Public Land | P | Public land - no zoning requirements-- | | | | | | | |
| Mountain Conservation | MTC | Mountain Conservation - no development | | | | | | | |
| Mountain Resort | MR | 200 ac. | deleted | 10 | none | none | 65/4-1/2 | 10% | 25% |
| Private Leasehold Lake Community | PLLC | 10,000 s.f. | 100 | 40 | 10 | 25 | 35/2½ | 25% | 35% |



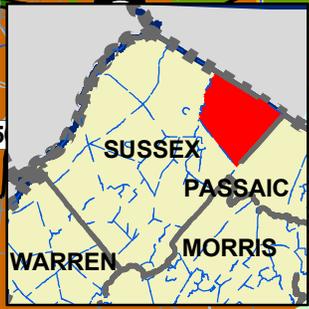
1 inch = 6,875 feet

Vernon 2001 State Plan Policy Map





- Preservation Area
- Planning Area
- Highlands Zones**
- Conservation (Env. Constr.)
- Conservation
- Existing Community (Env. Constr.)
- Existing Community
- Lake Community
- Protection
- Wildlife Mgmt. Area
- Centers
- Crit. Env. Sites
- Hist. & Cult. Sites
- Prelim. Plan Areas**
- Metropolitan
- Suburban
- Fringe
- Rural
- Rural/Env. Sensitive
- Env. Sensitive
- Env. Sens./Barrier Isl.
- Parks & Natural Areas
- Meadowlands
- Water
- Military Installations



1 inch = 6,875 feet

Vernon

Preliminary Plan Map



NJ Department of Environmental Protection



State Development & Redevelopment Plan Plan Endorsement Opportunities & Constraints Analysis

for:

Vernon Township, Sussex County

September 30, 2009

This document constitutes the Department of Environmental Protection's component of the State Opportunity and Constraints Analysis conducted as part of the Plan Endorsement process. This document should serve as a baseline to inform the rest of the Plan Endorsement process. This document provides a general overview of the Department's regulatory and policy concerns within Vernon Township. While all efforts have been made to address all major issues, the ever evolving nature of regulatory programs and natural conditions dictates that the information contained within this document will need to be updated on a regular basis. No portion of this document shall be interpreted as granting any specific regulatory or planning approvals by the Department. This document is to be used solely as guidance for municipal planning purposes.

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Introduction

The NJ Department of Environmental Protection’s Opportunity and Constraints (OCA) Report for Plan Endorsement typically includes a wide variety of information across an entire municipality. However, in this case, a significant portion of Vernon Township is located in the Highlands Preservation Area. Consistent with the Highlands Water Protection and Planning Act, the Preservation Area is not under the jurisdiction of the State Planning Commission, and, as such, is not addressed in this Report. Generally speaking, the information in this report applies to the Highlands Planning Area only.

Water & Wastewater Analysis

Sufficient water supply and the ability to treat wastewater are essential to any community. The following information on Water Availability and Wastewater Treatment should be used by the community to evaluate its ability to meet current and future demand for water and wastewater treatment. Using this information to plan for future development allows a municipality to estimate the number of people the current (and/or future systems) can sustain. It also provides a way for a municipality to determine where growth is most appropriate, taking into account where water can be treated and supplied.

Water Availability

The following information on Water Availability in Vernon Township is based upon the best data readily available to DEP at the time of this analysis. This data should be used by Vernon Township to inform its community vision and planning processes.

There are 22 Public Water Supply Systems in Vernon Township serving a portion of its population. Of these, the only Public Water Supply System located in the Planning Area in Vernon Township that serves over 1,000 people is United Water NJ – Vernon Valley.

United Water New Jersey – Vernon Valley has a monthly surplus of 4.123 mgm and 102.563 mgy of water based on their current Water Allocation Permit (#5370). Vernon Valley’s monthly allocation limit is 20.5 mgm and 246.0 mgy, last updated on September 26, 2008. Based upon population and water usage projections from the Draft 2009 New Jersey Water Supply Plan, United Water New Jersey – Vernon Valley serves 3,240 people and is projected to have a surplus of .09 mgd of water through 2020, under their current water allocation permit.

| PWSID | Water System Name | Current Population Served | Water System Surplus Deficit (Most Limiting Function of System) | Surplus/Deficit 2010 (mgd) | Surplus/Deficit 2020 (mgd) |
|---------|---------------------------------|---------------------------|---|----------------------------|----------------------------|
| 1922026 | United Water NJ – Vernon Valley | 3,240 | 0.39 | 0.21 | 0.09 |

Note that the available capacity identified above is available throughout the purveyor area and is not necessarily available to other areas of Vernon Township.

The Deficit/Surplus tables for Public Water Systems may be found on the Department of Environmental Protection, Division of Water Supply website at

<http://www.nj.gov/dep/watersupply/pws.htm>. For safe demand and firm capacity information not available on this web site please contact the Bureau of Water System and Well Permitting at 609-984-6831 or for water allocation information please contact the Bureau of Water Allocation at 609-292-2957.

Refer to [Firm Capacity and Water Allocation Analysis](#) document for a detailed description of the methodology used to calculate capacity limitations.

There are 63 Non-Community Water Systems serving specific uses in Vernon Township. A full listing of these systems may be found at:

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/categories?category=Safe+Drinking+Water

Attachments:

- Deficit/Surplus table – United Water NJ – Vernon Valley
<http://www.nj.gov/cgi-bin/dep/watersupply/pwsdetail.pl?id=1922026>
- Water Supply - Map

Wastewater Treatment

The following information on Wastewater Treatment in Vernon Township is based upon the best data readily available to DEP at the time of this analysis. This data should be used by Vernon Township Town to inform its community vision and planning processes.

There are multiple DEP-regulated wastewater facilities serving the Highlands Planning Area in Vernon Township.

Sussex County Municipal Utility Authority Upper Walkill (NJPDES permit number NJ0053350) is currently permitted for 3.0 mgd; the average of the monthly average flows reported in the NJDEP Discharge Monitoring Report (DMR) from August 2008 to June 2009 was 1.06 mgd. Based on the assumption that a residential unit uses 300 gpd, the remaining flow for this facility could accommodate approximately 6,466 new residential units. However, the SCMUA Upper Walkill facility serves areas outside of Vernon Township and not all of the remaining flow may be available to Vernon.

Legends/Seasons Resort (NJPDES permit number NJ0023949) is a private facility permitted for 0.35 mgd; the average of the monthly average flows reported in the DMR from November 2008 to March 2009 was 0.073 mgd. Based on the assumption that a residential unit uses 300 gpd, the remaining flow for this facility could accommodate approximately 923 new residential units. However, the Legends/Seasons facility serves a relatively limited area, and is not available to serve the surrounding vicinity.

There are also multiple areas identified as general Discharge to Groundwater < 20,000 GPD in the adopted Sussex County WMP. It should be noted that this general service area will be removed upon adoption of the Sussex County WMP currently under development. Areas currently designated as DGW for Facilities with flows less than 20,000 GPD will be removed. Service areas will only be replaced for a site specific Individual DGW Service Area with a specific design capacity identified in the applicable NJPDES permit for an existing Facility, or with an Individual DGW Service Area with a specific design capacity to serve a proposed specific project.

Amendments to the Groundwater Quality Standards (N.J.A.C. 7:9C) have recently been adopted. The primary amendment related to this analysis is the establishment of 2 mg/L (or parts per million, or ppm) nitrate as representative of the existing ground water quality statewide, for the purpose of evaluating compliance with the antidegradation policy at N.J.A.C. 7:9C-1.8(a). The implications of this proposal are that the Department will not approve a wastewater management plan amendment unless the existing ground water quality of 2 mg/L nitrate will be maintained on a HUC 11 watershed basis. Based on this policy, the Department has developed a "septic density" for each HUC 11 watershed in the State that identifies what the *comparable residential zoning density* would be in order to meet the groundwater quality goal. Note that the Department does not recommend uniformly zoning at these densities across the watershed. DEP intends this comparable residential zoning density to represent the total number of units that, if built, would not result in a degradation of groundwater quality by exceeding the 2 mg/L nitrate limit. Instead, the Department advocates center-based development, clustering, and protection of environmental features and agriculture land.

Vernon Township (Highlands Planning Area) falls primarily within four HUC 14 watersheds. The following table indicates the watershed and the residential density allowed under the nitrate limits.

| HUC14 | Area of Municipality (including Preservation Area) | Septic Density |
|--|--|----------------|
| 02020007010 – Walkill River (above road to Martins) | 3.6% | 4.8 acres/home |
| 02020007030 – Wallkill River (below road to Martins) | 16.6% | 5.0 acres/home |
| 02020007040 – Pochuck Creek | 65.2% | 4.8 acres/home |
| 02030103050 – Pequannock River | 14.6% | 4.4 acres/home |

Note that the Highlands Water Protection and Planning Act rule (N.J.A.C. 7:15) sets the septic density for the Highlands Preservation Area.

Water Quality Management Plan - Sewer Service Area Mapping

The Department has recently adopted amendments to the Water Quality Management Planning rules identifying the conditions where extension of sewer service is not appropriate. N.J.A.C. 7:15-5.24 sets forth the general policy that large contiguous areas of environmentally sensitive resources, coastal planning areas where the extension of sewers would be inconsistent with New Jersey’s Coastal Zone Management program, and special restricted areas that are prone to natural hazards such as flooding, wave action and erosion should not be included in sewer service areas. The limitations on the extension of sewer service in these areas is consistent with the Department’s mandate to protect the ecological integrity and natural resources of New Jersey, including water, threatened and endangered species, wetlands and unique and rare assemblages of plants.

Centralized wastewater is inappropriate for these areas because it subsidizes and otherwise encourages development in and around these natural resources at a density that is inconsistent with their protection and the environmental protection mandate of the Department. The Department has determined that the appropriate wastewater management alternative for these areas is individual subsurface sewage disposal systems that discharge less than 2,000 gallons per day, typically thought of as septic systems. Therefore, though excluded from the extension of sewer service, these areas have a wastewater management alternative that will promote a density of development consistent with the conservation of these resources.

In establishing the criteria for delineating a sewer service area boundary in consideration of environmentally sensitive areas, the Department identifies environmentally sensitive areas that are not appropriate for sewer service area as any contiguous area of 25 or more acres that contains any or all of the following four features: threatened and endangered species habitats, Natural Heritage Priority Sites, Category One stream buffers, and wetlands. The Department determined that 25 acres was the appropriate size threshold based on a statewide GIS analysis showing that at least 90 percent of the environmentally sensitive features would be excluded from sewer service area, but that the threshold should be large enough to permit the reasonable application of zoning.

The WQMP rule also requires that WMPs be consistent with the Highlands Regional Master Plan (RMP). To date, DEP has defined “consistent” as a general alignment of sewer service area

with the Existing Community and Lake Community Zones, as identified in the RMP, and alignment of septic density with the nitrate targets identified in the RMP on a HUC 14 watershed basis.

The Department is currently working with the County of Sussex in development of a county-wide Wastewater Management Plan based upon on the recent Water Quality Management Planning rules. Vernon Township should continue to coordinate with the County to ensure consistency between municipal planning and the County WMP.

Attachments:

- Adopted Sewer Service Area - Map

Environmental Constraints Analysis

The following section identifies those environmental constraints that should be considered by Vernon Township in its planning efforts. These environmental constraints are divided into 3 sections - Regulated Constraints, Constraints to Avoid, and Constraints to Consider.

Regulated Environmental Constraints

Wetlands, Category One Waters, Flood Hazard Areas and Total Maximum Daily Loads (TMDL) are environmental constraints currently regulated by DEP. Vernon Township should recognize these environmental constraints in its visioning and planning processes.

- Wetlands

Freshwater wetlands and transition areas (buffers) are regulated by the Freshwater Wetlands Protection Act rules (NJAC 7:7A). The Highlands rule (NJAC 7:38), which implements the Highlands Water Protection and Planning Act, prohibits nearly all disturbance within all wetlands within the Highlands Preservation Area.

Wetlands are commonly referred to as swamps, marshes, or bogs. However, many wetlands in New Jersey are forested and do not fit the classic picture of a swamp or marsh. Previously misunderstood as wastelands, wetlands are now recognized for their vital ecological and socioeconomic contributions. Wetlands contribute to the social, economic, and environmental health of our state in many ways:

- Wetlands protect drinking water by filtering out chemicals, pollutants, and sediments that would otherwise clog and contaminate our waters.
- Wetlands soak up runoff from heavy rains and snow melts, providing natural flood control.
- Wetlands release stored flood waters during droughts.
- Wetlands provide critical habitats for a major portion of the state's fish and wildlife, including endangered, commercial and recreational species.
- Wetlands provide high quality open space for recreation and tourism.

There are on-site activity limits on lands identified as wetlands. The NJ Freshwater Wetlands Protection Act requires DEP to regulate virtually all activities proposed in the wetland, including cutting of vegetation, dredging, excavation or removal of soil, drainage or disturbance of the water level, filling or discharge of any materials, driving of pilings, and placing of obstructions. The Department may also regulate activities within 150 feet of a wetland - called the transition area or buffer.

It should be noted that wetlands identified based on aerial photo interpretation are not appropriate for use in determining the true extent of wetlands on a specific site.

DEP notes significant areas of wetlands along the Black Creek, immediately north of, and adjacent to, the designated center. There are also significant areas of wetlands along the Walkill River, located within the Walkill River National Wildlife Refuge.

- Category One (C1) Waterbodies & Associated Buffers

Category One designations are established in the Surface Water Quality Standards (NJAC 7:9B) – specifically in the tables in N.J.A.C. 7:9B-1.15(c) through (g) - for purposes of implementing the antidegradation policies set forth at N.J.A.C. 7:9b-1.5(d). These waters are designated to provide for their protection from measurable changes in water quality characteristics because of their clarity, color, scenic setting, other characteristics of aesthetic value, exceptional ecological significance (habitat, water quality, and biological functions), exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resource(s).

The Stormwater Management rule (NJAC 7:8) is implemented through DEP Land Use and local regulation. The rule regulates development within 300 feet, and stormwater discharges within 150 feet, of Category One waterways and their tributaries, upstream within the same HUC14 subwatershed. The Stormwater rule establishes a 300-foot Special Water Resource Protection Area (SWRPA) along Category One (C1) waters and certain tributaries that applies only when a “major development” is proposed.

The Flood Hazard Area Control Act (FHACA) rule (N.J.A.C. 7:13) also establishes a 300-foot riparian zone along C1 waters and their upstream tributaries within the HUC-14. This FHACA rule applies to any activity that requires approval in the rule. The Riparian Zone under the FHACA rule is the land and vegetation both within a regulated waterbody and within either 50 feet, 150 feet or 300 feet from the top of bank of a regulated waterbody. Given the many important ecological functions that a healthy riparian zone provides, adequately preserving such areas is essential to protecting New Jersey's natural resources and water supply.

For the purposes of this analysis, the Department is providing generalized information and mapping of C1 waterbodies and associated buffers. This analysis should be used only as a general planning tool. Specific development proposals may be affected, consistent with the information provided above.

Portions of Black Creek, Spring Brook, and Pochuck Creek are identified as Category One streams in the Highlands Planning Area in Vernon Township.

- Total Maximum Daily Loads (TMDLs)

In accordance with Section 303(d) of the Federal Clean Water Act (CWA) (33 U.S.C. 1315(B)), the State of New Jersey is required biennially to prepare and submit to the USEPA a report that identifies waters that do not meet, or are not expected to meet SWQS, after implementation of technology-based effluent limitations or other required controls. This report is commonly referred to as the 303(d) List. In accordance with Section 305(b) of the CWA, the State of New Jersey is also required biennially to prepare and submit to the USEPA a report addressing the overall water quality of the State's waters. This report is commonly referred to as the 305(b) Report or the Water Quality Inventory Report. The Integrated Water Quality Monitoring and Assessment Report combine these two assessments and assigns waterbodies to one of five sublists on the Integrated List of Waterbodies. Sublists 1 through 4 include waterbodies that are generally unimpaired (Sublist 1 and 2), have limited assessment or data availability (Sublist 3), or are impaired due to pollution rather than pollutants or have had a TMDL or other enforceable management measure

approved by EPA (Sublist 4). Sublist 5 constitutes the traditional 303(d) list for waters impaired or threatened by one or more pollutants, for which a TMDL may be required.

Therefore, in accordance with Section 305(b) and 303(d) of the Federal Clean Water Act (CWA), the State of New Jersey, Department of Environmental Protection (Department) is required to assess the overall water quality of the State's waters and identify those waterbodies with a water quality impairment for which TMDLs may be necessary. A TMDL is developed to identify all the contributors of a pollutant of concern and the load reductions necessary to meet the Surface Water Quality Standards (SWQS) relative to that pollutant. The Department has developed over 400 TMDLs to date, several of which are identified in the table below encompassing Vernon.

The Department fulfills its assessment obligation under the CWA through the Integrated Water Quality Monitoring and Assessment Report, which includes the Integrated List of Waterbodies (303(d) list) and is issued biennially. The *Integrated List of Waterbodies* is adopted by the Department as an amendment to the Statewide Water Quality Management Plan, as part of the Department's continuing planning process pursuant to the Water Quality Planning Act at N.J.S.A.58:11A-7 and the Statewide Water Quality Management Planning rules at N.J.A.C. 7:15-6.4(a). The Department proposes and upon approval of the United States Environmental Protection Agency Region 2 subsequently adopts the TMDL to the appropriate WQMP(s). Although not all of the TMDLs listed below have been adopted to the appropriate WQMP the Department is in the process of doing so.

| TMDL Name | WMA | Parameter | Percent Reduction | Document | EPA Approved |
|--|-----|------------------|--|--|--|
| Sleepy Valley Lake HUC 14#: 02020007030010 | 2 | pathogens | | TMDL for pathogens to address 11 lakes in the Northwest Water Region | EPA Approved NJDEP Adopted Sept 2009 |
| Clinton Reservoir/Mossmans Brook HUC 14#: 02030103050040 | 3 | phosphorus | Attain seasonal average of 9.2 µg/L chlorophyll- <i>a</i> in the Wanaque Reservoir and seasonal average of 18 µg/L chlorophyll- <i>a</i> in Dundee Lake. | TMDL for the Non-tidal Passaic River Basin Addressing Phosphorus Impairments | 4/24/08 |
| Pacock Brook HUC 14#: 02030103050020 | 3 | phosphorus | Same as above | Same as above | 4/24/08 |
| Pequannock R (above Stockholm/Vernon Rd) HUC 14#: 02030103050010 | 3 | phosphorus | Same as above | Same as above | 4/24/08 |
| Black Creek at Rt. 94 and Rt. 517 in Vernon Station ID: Walkill F | 2 | Total Phosphorus | | TMDL for Total Phosphorus to address 7 stream segments in the Northwest Water Region | 9/30/2005 |
| Black Creek at Sand Hill Road in Vernon Station ID Walkill G | 2 | Total Phosphorus | | Same as above | 9/30/2005 |
| Black Creek near Vernon Station ID#s: 01368950 01367620 | 2 | Total Phosphorus | | Same as above | 9/30/2005 |
| Wawayanda/Pochuck River at Alt Rt. 515 in Maple Grange 01368900 | 2 | Total Phosphorus | | TMDL for Total Phosphorus to address 7 stream segments in the Northwest Water Region | 9/30/2005 |
| Pequannock River at Macopin Intake Dam | 3 | temperature | | TMDL to address temperature in the | 6/7/2004 |

| | | | | | |
|--|---|----------------|--|---|-----------|
| PQ1 | | | | Pequannock River in the Northeast Water Region | |
| Black Creek near Vernon Station ID#: 01368950 | 2 | Fecal coliform | | TMDL for fecal coliform to address 28 streams in the Northwest Water Region | 9/29/2003 |
| Double Kill at Waywayanda Station ID#: 01368820 | 2 | Fecal coliform | | Same as above | 9/29/2003 |
| WallKill River at Scott Rd. at Franklin Station ID#: 01367715 | 2 | Fecal coliform | | Same as above | 9/29/2003 |
| Wallkill River near Sussex Station ID#: 01367770 | 2 | Fecal coliform | | Same as above | 9/29/2003 |
| Wallkill River near Unionville Station ID#: 01368000 | 2 | Fecal coliform | | Same as above | 9/29/2003 |
| Wallkill River at Route 94 in Hamburg Station ID#: 2-WAL-3, 01367729 | 2 | arsenic | | TMDL to Address Arsenic in the Walkill River and Papakating Creek in the Northwest Water Region | 9/29/2004 |
| Wallkill River near Sussex Station ID#: 01367770, 2-WAL-4 | | | | Same as the above | 9/29/2004 |

A TMDL represents the assimilative or carrying capacity of a waterbody, taking into consideration point and nonpoint sources of pollutants of concern, natural background, and surface water withdrawals. A TMDL quantifies the amount of a pollutant a water body can assimilate without violating a state’s water quality standards and allocates that load capacity to known point and nonpoint sources in the form of waste load allocations (WLAs) for point sources, load allocations (LAs) for nonpoint sources, a margin of safety (MOS) and, as an option, a reserve capacity (RC). The TMDLs that encompasses Vernon Township, Sussex County are nonpoint source driven for fecal coliform and both point source and nonpoint source driven for phosphorus. The TMDL documents were all established as amendments to the Sussex County and Northeast Water Quality Management Plans (WQMP). The Department’s TMDL Reports may be downloaded from the Division of Watershed Management’s web site at www.state.nj.us/dep/watershedmgt/tmdl.htm.

In 2008, New Jersey established 27 TMDLs to address total phosphorus impairments throughout the Passaic River Basin. Nutrients such as phosphorus are essential to plants and animals, but too much fosters excessive algae growth, impairing water quality, diminishing recreational experiences, making treatment of drinking water more costly, and depriving water of dissolved oxygen that fish and other aquatic life need to survive. Algae growth has been problematic in the highly developed Passaic River and Pompton Lake-Ramapo River Watersheds of northeastern New Jersey. The TMDLs affect more than 50 sewage treatment plants.

Critical locations where phosphorus is causing excessive primary productivity were identified as the Wanaque Reservoir and Dundee Lake. As part of the TMDL process, the Department adopted watershed criteria in accordance with N.J.A.C. 7:9B-1.5(g)3 in these locations, as the best means to ensure protection of the designated uses. The watershed criteria are expressed

in terms of a seasonal average concentration (June 15-September 1) of the response indicator, chlorophyll-*a*. The criteria are tailored to the unique characteristics of each critical location and are expressed as a seasonal average of 9.2 µg/L chlorophyll-*a* in the Wanaque Reservoir and a seasonal average of 18 µg/L chlorophyll-*a* in Dundee Lake.

The Department recognizes that TMDLs alone are not sufficient to restore impaired stream segments. The TMDL establishes the required pollutant reduction targets while the implementation plan identifies some of the regulatory and non-regulatory tools to achieve the reductions, matches management measures with sources, and suggests responsible entities for non-regulatory tools. This provides a basis for aligning available resources to assist with implementation activities. Projects proposed by the State, local government units and other stakeholders that would implement the measures identified within the impaired watershed are a priority for available State (for example, CBT) and federal (for example, 319(h)) funds. In addition, the Department's ongoing watershed management initiative will develop detailed watershed restoration plans for impaired stream segments in a priority order that will identify more specific measures to achieve the identified load reductions. Urban and agricultural land use sources must be the focus for implementation. Urban land use will be addressed primarily by stormwater regulation. Agricultural land uses will be addressed by implementation of conservation management practices tailored to each farm. Wherein urban land use will be addressed primarily by stormwater regulation through the municipality's MS 4 permit.

Short-term and Long-term Management Strategies for Implementing Fecal TMDLs

Short term management measures include projects recently completed, underway or planned that are designed to address the targeted impairment. Whereas long term strategies include source trackdown as well as selection and implementation of specific management measures that will address the identified sources. The Department recognizes that TMDLs alone are not sufficient to restore impaired waterbodies. The TMDL establishes the required reduction target and provides the regulatory framework to effect these reductions. The TMDL implementation plan for the fecal TMDLs calls for goose management and proper maintenance of septic systems and identifies a series of implementation grants funded by the Department throughout the Whippany River Watershed.

Long-Term Management Strategies

While short-term management measures will begin to reduce sources of fecal coliform in the Northeast Water Region, additional measures will be needed to verify and further reduce or eliminate these sources. Some of these measures may be implemented now, where resources are available and sources have already been identified as causing the fecal impairment. Both short-term and long-term management strategies that address fecal reduction related to these identified sources may be eligible for future Departmental funding.

Source Categories for Long-Term Management Strategies

1) Canada Geese

Geese are migratory birds that are protected by the Migratory Bird Treaty Act of 1918 and other Federal and State Laws. Resident Canada geese are those birds that do not migrate, but are protected by this and other legislation. The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS)-Wildlife Services program reports that the 1999 estimated population of non-migratory geese in New Jersey was

83,000. Geese and other pest waterfowl have been identified as one of several primary sources of pathogen loading to impaired water bodies in the Northeast Region. Geese may produce up to 1½ pounds of fecal matter a day.

Canada Goose Damage Management Plan

Because geese are free to move about and commonly graze and rest on large grassy areas associated with schools, parks, golf courses, corporate lawns and cemeteries, solutions are best developed and conducted at the community level through a community-based goose damage management program. USDA's Wildlife Services program recommends that a community prepare a written Canada Goose Damage Management Plan that may include the following actions:

- Initiate a fact-finding and Communication Plan
- Enact and Enforce a No Feeding Ordinance
- Conduct Goose Damage Control Activities such as Habitat Modification
- Review and Update Land Use Policies
- Reduce or Eliminate Goose Reproduction (permit required)
- Hunt Geese to Reinforce Nonlethal Actions (permit required)

Procedures such as handling nests and eggs, capturing and relocating birds, and the hunting of birds require a depredation permit from either the USDA APHIS Wildlife Services or U.S. Fish and Wildlife Services. Procedures requiring permits should be a last resort after a community has exhausted the other listed measures. The Department's draft guide *Management of Canada Geese in Suburban Areas, March 2001*, which may be found at www.state.nj.us/dep/watershedmgt under publications, provides extensive guidance on how to modify habitat to serve as a deterrent to geese as well as other prevention techniques such as education through signage and ordinances.

2) Stormwater Detention Basins and Impoundments

Stormwater detention basins may act as sources of fecal coliform due to the accumulation of geese and pet waste in basins. Under certain conditions, coliform will increase in numbers in basins. As a result, significant quantities of fecal coliform can be discharged during storm events. Impoundments created by small dams across streams have been a measure commonly used for flood control by municipalities in New Jersey. In addition to flood control, the impoundments were often incorporated into public parks in order to provide recreational opportunities for residents. Many of the impoundments are surrounded by mowed turf areas, which in combination with open water serve as an ideal habitat for geese and an attraction for pet walking. Specific management measures to reduce fecal coliform inputs to these waterbodies include:

- Development of Stormwater Management Plan
- Establishment of Riparian Buffers and "no mow" zones
- No feed ordinances for all waterfowl and wildlife and signage
- Retrofit of detention/retention basins to achieve water quality control
- Conduct regularly scheduled stormwater basin cleanout and maintenance, storm sewer inlet cleanouts and street sweeping programs

3) Pet Waste

Specific management measures to reduce pet waste include:

- Adoption of pet waste disposal i.e. pooper scooper ordinances
- Signage in parks and other public recreation areas
- Provide plastic bags dispensers in public recreation areas

4) Malfunctioning and Older Improperly Sized Septic Systems; Illicit Connections of Domestic Sewage

Malfunctioning and older improperly sized septic systems contribute to fecal coliform loading in two ways: the system may fail hydraulically, where there is surface break out; or hydrogeologically, under conditions when soils are inadequate to filter pathogens. Specific management measures include the implementation of the NJPDES Municipal Stormwater Regulation Program, Sanitary Surveys, Septic System Management Programs and future sewer service area designations for service to domestic treatment works. Sanitary surveys are conducted in an effort to evaluate the water quality of natural surface waters and identify those components that affect water quality, including geographic factors and pollution sources. The focus of the sanitary survey is to identify nonpoint and stormwater source contribution of fecal coliform within the watershed. It is accomplished by sampling for various types of fecal indicators (fecal coliform, enterococcus, fecal streptococcus, *E. coli* and coliphage) during wet and dry weather conditions. Where potential problems with septic systems are identified, as described below, a trackdown study may be warranted. This could lead to an analysis of alternatives to address any identified inadequacies, such as rehabilitation of septic systems or connection to a sewage treatment system, as appropriate.

In 2006 the Department adopted changes to the SWQS to replace the fecal coliform criteria for those waters designated for primary contact recreation (FW2, SE1 and SC) with enterococcus (SE1 and SC waters) and *E. coli* as pathogen indicators (FW2 waters), respectively. The United States EPA recommends the use of *E. coli* and enterococcus as pathogen indicators for fresh waters and enterococcus for marine waters. Thus, the Department now monitors these parameters to determine if the specific designated use for recreation is being attained for the impaired waterbodies.

Implementation of TMDLs for the Non-Tidal Passaic River Basin Addressing Phosphorus Impairments

Significant load reductions from nonpoint sources are needed in order to attain water quality criteria and designated uses. The Passaic TMDL Implementation Plan identifies a suite of completed, on-going and planned activities needed to achieve the identified load reductions. In many cases, the completed and on-going projects have been made possible through EPA 319(h) grant awards. This funding is used in conjunction with state CBT funds, other federal funds (EQIP, CRP and CREP), and local funds to address nonpoint sources of pollutants. New Jersey will continue to rely on 319(h) funding as a key element for accomplishing NPS reductions through TMDL implementation and thereby restoring water quality and designated uses. The implementation plans for the Passaic River and Pompton Lake-Ramapo River Watershed TMDLs required municipalities in the contributory drainage area of the TMDL to adopt an ordinance consistent with a model ordinance provided by the Department as an additional measure of the Municipal Stormwater Permit. The model ordinance can be viewed

at www.state.nj.us/dep/watershedmgt/rules.htm under the section heading, "Water Quality Management Planning Rule".

During a 2008 Earth Week event, the Department Commissioner signed a memorandum of understanding (MOU) with members of the lawn-care industry, who pledged to reduce the amount of phosphorus released by fertilizers in the Garden State by 50 percent by 2010. In signing the MOU, members of the Lawn Care Product Manufacturing Industry agreed to establish technical groups to work with the DEP and Rutgers University's Agricultural Experiment Station in developing a stewardship program to foster better public education and to review strategies to reduce the levels of phosphorus in fertilizers. The largest distributor of fertilizer in New Jersey has reported a 45% reduction in tons of P₂O₅ from 2006 to 2008 based on sales of their no and/or low phosphorus fertilizer.

The TMDL required that 72 out of the 84 municipalities within the Passaic River Basin adopt a Fertilizer Management Ordinance (www.state.nj.us/dep/watershedmgt/rules.htm). The Department is confident that MOU endeavor along with municipal adoption of the fertilizer ordinance will begin to address the urban stormwater contribution of nutrients to waterbodies in the state. The earlier phosphorus TMDL "TMDL for Total Phosphorus to address 7 stream segments in the Northwest Water Region" approved by EPA called for the adoption of the ordinance by Vernon. The Passaic TMDL overlooked this previous requirement.

Point source reduction of phosphorus established through these TMDLs will be achieved through the issuance of New Jersey Pollutant Discharge Elimination System (NJPDES) surface water discharge permits to wastewater treatment plants with a defined phosphorus limit. In addition, dischargers may be allowed to perform water quality trading, provided that an acceptable tool is approved by the Department and EPA.

Arsenic impairment is caused by natural conditions from the underlying geology. The Department in coordination with the United States Geological Survey is investigating this phenomenon, but in the interim all water supply systems are required to meet a stringent 5 part per million safe drinking water limits for arsenic. Temperature impairment of the Pequannock River and its tributaries will be addressed by the forthcoming Water Allocation permit to the City of Newark to manage minimum flow requirements in the affected waterbodies.

Attachments:

- Flood Hazard Areas (FEMA-DFIRM) – Map
- Surface Water Quality Standards – Map
- TMDLs – Map

Environmental Constraints to Avoid

Threatened and Endangered Species Habitat and Natural Heritage Priority Sites are geographically-identified environmental constraints prioritized for protection by DEP's mandate to protect the ecological integrity and natural resources of New Jersey. DEP recommends avoidance of these areas, to the extent possible, in order to protect these ecosystems from degradation and destruction.

While Threatened and Endangered Species Habitat and Natural Heritage Priority Sites are not specifically regulated as such, the species and sites that are the basis for this information are considered in several DEP regulatory and planning programs - such as the Freshwater Wetlands Program, Water Quality Management Planning, and the Flood Hazard Area Control Act rule.

- **Threatened & Endangered Species Habitat**

The New Jersey Endangered Species Conservation Act was passed in 1973 and directed the New Jersey Department of Environmental Protection (DEP) to protect, manage and restore the state's endangered and threatened species. The DEP Endangered and Nongame Species Program (ENSP) has since become the voice for more than 400 species of wildlife in New Jersey, with success stories related to the Bald Eagle, the Peregrine Falcon, the Pine Barrens Tree frog, the Osprey, and others. There are currently 73 endangered and threatened wildlife species in New Jersey. Wildlife professionals within DEP's Endangered and Nongame Species Program oversee research, conservation and protection of rare wildlife species such as the bog turtle, great blue heron, piping plover, bobcat, and other animals that are struggling to survive here in New Jersey.

ENSP has developed the Landscape Project to identify and systemically map the habitat most critical for New Jersey's fish and wildlife populations. This tool is being used to gauge healthy ecosystems and help identify areas appropriate for protection while giving citizens and local government officials valuable scientific information about their municipalities. The Landscape Project ranks habitat patches by the status of the species present, as follows:

- **Rank 5** is assigned to patches containing one or more occurrences of at least one wildlife species listed as endangered or threatened on the Federal list of endangered and threatened species.
- **Rank 4** is assigned to patches with one or more occurrences of at least one State endangered species.
- **Rank 3** is assigned to patches containing one or more occurrences of at least one State threatened species.

Note that the Landscape Project has been updated relatively recently, and released in two versions. Version 3.0 was developed specifically for the Highlands Region. This version was developed using a new methodology and based on updated species occurrence data. Version 3.0 also identifies vernal habitats. These are areas that contain pools that have been field-verified by the Department and have been determined to meet both the physical and biological characteristics of a vernal habitat in accordance with N.J.A.C. 7:7A-1.4. For additional information on the Landscape Project, see [New Jersey's Landscape Project](#).

There are significant areas of threatened and endangered species habitat identified by the Landscape Project in Vernon Township. The species valuing this habitat include, but are not limited to federally protected species such as Bog Turtle, State Endangered species such as Bobcat, Timber Rattlesnake, and Barred Owl, and State Threatened Species such as Cooper's Hawk and Wood Turtle. The attached *Threatened & Endangered Species Habitat map* shows the extent of habitat in Vernon Township (including habitat for priority species – Rank 2 – that is discussed below in the 'Environmental Constraints to Consider' section).

In addition, through development of the Sussex County Wastewater Management Plan, DEP has completed a more detailed analysis on areas proposed as sewer service area that intersected with the designated center. This analysis further separated the habitat patches identified in the Landscape Project into 4 additional divisions: habitat critical to the survival of a species; habitat that could be included in sewer service with the appropriate off-setting mitigation; habitat that does not appear to meet the requirements of the species, and; those habitat patches for which on-the-ground analyses are required before such a determination could be made. Three primary areas were identified:

- The area within the designated center, west of County Route 644 and north of NJ Route 94, was identified as needing further analysis.
- The area west of County Route 515, to the Highlands Preservation Area was identified as needing mitigation.
- The area along the northern boundary of the designated center was identified as critical habitat.

These areas are shown on the *Center T&E Analysis map*. DEP cannot agree to include areas identified as "mitigation required" or "further analysis needed" within a designated center until such time that a mitigation plan and/or additional analyses are completed.

Note that just because a particular site is not identified as critical habitat, does not mean that it isn't. It simply means that the area has not been reviewed in sufficient details to make a determination.

- **Natural Heritage Priority Sites**

Through its Natural Heritage Database, the DEP Office of Natural Lands Management (ONLM) identifies critically important areas to conserve New Jersey's biological diversity, with particular emphasis on rare plant species and ecological communities. The database provides detailed information on rare species and ecological communities to planners, developers, and conservation agencies for use in resource management, environmental impact assessment, and both public and private land protection efforts. Using the database, ONLM has identified 343 Natural Heritage Priority Sites (NHPS), representing some of the best remaining habitat for rare species and rare ecological communities in the state. In addition, each NHPS includes a Biodiversity Rank according to its significance for biological diversity using a scale developed by The Nature Conservancy, the network of Natural Heritage Programs and the New Jersey Natural Heritage Program. The global biodiversity significance ranks range from B1 to B5.

B4 - Moderate significance on a global level, such as a viable occurrence of a globally rare element, a good occurrence of any ecological community, a good or excellent

occurrence or only viable state occurrence of an element that is critically imperiled in the State, an excellent occurrence of an element that is imperiled in the State, or a concentration (4+) of good occurrences of elements that are imperiled in the State or excellent occurrences of elements that are rare in the State.

V1 - Outstanding significance on a state level. Only known occurrence in the state for an element **or** Site with an excellent occurrence or the best occurrence in the state for an element ranked critically imperiled in the state **or** a concentration (4+) of good or excellent occurrences of elements that are imperiled or critically imperiled in the state.

There are two NHPS located within the Highlands Planning Area in Vernon Township, as follows:

| SITE NAME | DESCRIPTION | RANK | COMMENTS |
|---------------|---|------|--|
| McAfee Quarry | Wooded limestone ridge and unforested limestone outcrops along railroad right-of-way. Boundaries drawn to include known habitat for rare plant species plus some buffered habitat that is currently undeveloped. | B4V1 | Contains the best occurrence of a critically imperiled state plant species and an excellent occurrence of an imperiled plant species. |
| Vernon Valley | A portion of the valley between Wawayanda and Pochuck Mountains. Site contains a matrix of floodplain forests, wetlands, and uplands, all underlain by limestone. Boundary includes upland and wetland habitat plus buffer for a concentration of rare plant species. | B4V1 | Contains two plant species that are critically imperiled in the state, four that are imperiled in the state, and three that are rare in the state. |

Attachments:

- Threatened, Endangered & Priority Species Habitat and NHPS – Map
- Center T&E Review - Map

Environmental Constraints to Consider

Groundwater Recharge Areas, Wellhead Protection Areas, and Priority Species Habitat are geographically-identified environmental constraints recognized as important for the protection of water quality and biodiversity of New Jersey. DEP recommends avoidance of these areas, to the extent possible, in order to minimize the impact to water quality and species habitat.

- Groundwater recharge areas

Groundwater recharge areas are those sites where a high volume of precipitation and surface waters infiltrate into the soil and act to resupply surface and ground waters. Protection of these areas from over-development, and addressing stormwater runoff for these areas, directly affects the water quality of both drinking water supplies and water-based habitats.

The New Jersey Geological Survey (NJGS) has developed ground water recharge data sets using several data factors, such as land use patterns, impervious surface amounts, soil types, precipitation, and evaporation rates, among others, to calculate the amount of water each area of the state normally contributes to the underlying aquifers. The data are reported and mapped in several standard categories, in units of inches per year.

For the State Planning process, the original ground water recharge data, calculated for each Watershed Management Area, were converted to a volume-based rating, and then grouped into three classes to simplify further analysis, based on the percent contribution to the total recharge amounts. Those undeveloped areas contributing the highest one-third of the recharge volume in each Watershed Management Area were selected as high priority for protection. The final Ground Water Recharge layer used for this analysis includes all undeveloped areas in the state that were identified as contributing the highest one-third of the recharge volume in the appropriate Watershed Management Area.

- Well Head Protection Areas

Areas of land surrounding public community wells, known as Well Head Protection Areas, from which contaminants may move through the ground to be withdrawn in water taken from the well, have been delineated. Protection of the public health, safety and welfare through protection of ground water resources, ensures a supply of safe and healthful drinking water.

Well Head Protection Areas (WHPA) are mapped areas calculated around a Public Community Water Supply (PCWS) well in New Jersey that delineates the horizontal extent of ground water captured by a well pumping at a specific rate over a two-, five-, and twelve-year period of time for confined wells. The confined wells have a fifty foot radius delineated around each well that defines the well head protection area, which must be acquired and controlled by the water purveyor in accordance with Safe Drinking Water Regulations (see NJAC 7:10-11.7(b)1).

WHPA delineations are conducted in response to the Safe Drinking Water Act Amendments of 1986 and 1996 as part of the Source Water Assessment Program (SWAP). The delineations are the first step in defining the sources of water to a public supply well. Within these areas, potential contamination will be assessed and appropriate monitoring will be undertaken as subsequent phases of the NJDEP SWAP. WHPA delineation methods are described in ["Guidelines for Delineation of Well Head Protection Areas in New Jersey"](#) .

Updates for Public Community Water Supply Well Head Protection Areas are described in [Well Head Delineations Updates List](#).

A complete list of individual Public Community Water Supply Well Head Protection Area delineations are described in [Well Head Delineations List](#).

- Priority Species Habitat

Similar to threatened and endangered species, the DEP Endangered Non-Game Species Program also considers "priority species." Priority Species are nongame wildlife that are considered to be species of *special concern* as determined by a panel of experts. These species warrant special attention because of some evidence of decline, inherent vulnerability to environmental deterioration, or habitat modification that would result in their becoming a Threatened species. This category would also be applied to species that meet the foregoing criteria and for which there is little understanding of their current population status in the state. The Landscape Project ranks habitat patches by the status of the species present, as follows:

- **Rank 2** is assigned to patches containing one or more occurrences of at least one non-listed State priority species.

Attachments:

- Wellhead Protection Areas and Groundwater Recharge Areas – Map

Contaminated Areas Considerations

All New Jersey municipalities can be home to contaminated sites, whether the contamination comes from industrial, agricultural, retail, or even residential sources. The information provided in this section is intended to help municipal officials identify known contaminated areas and incorporate consideration of these areas into planning efforts. The existence of a contaminated area does not necessarily mean that it is inappropriate for development or redevelopment. Nonetheless, the severity of the contamination, the potential for remediation, and the potential impact on human health must be considered before development or redevelopment plans are underway.

Known Contaminated Sites List

The Known Contaminated Sites List for New Jersey 2005 includes those sites and properties within the state where contamination of soil or ground water has been identified, or where there has been, or there is suspected to have been, a discharge of contamination. This list of Known Contaminated Sites may include sites where remediation is either currently under way, required but not yet initiated or has been completed. The data included here dates from 2001. Additionally, new contaminated sites have been identified since the creation of this list and are not included here. For further information contact NJDEP's Site Remediation Program and Waste Management (SRWM) lead program, which are identified with each site listed in this data base. Contact information for SRWMs lead program can be acquired at <http://www.state.nj.us/dep/srp/kcs-nj/>.

Note: There are some sites found in the 'official' KSCNJ list that do not exist in the GIS mapped version. There were about 50 sites that either had poor address descriptions and could not be located accurately or are 'sites' that actually describe a case covering several locations and cannot be expressed by a single point. These problem sites were intentionally omitted from the GIS map.

The Known Contaminated Sites in New Jersey report (<http://www.nj.gov/dep/srp/kcs-nj/>) is produced by NJDEP in response to N.J.S.A. 58:10-23.16-17 that requires preparation of a list of sites affected by hazardous substances. It also satisfies the Site Remediation Program's obligations under the New Jersey New Residential Construction Off-Site Conditions Disclosure Act (N.J.S.A 46:3C1 et seq.). DEP recommends reviewing this list, as it is too long to include in this report.

Known Contaminated Sites - Classification Exception Areas (CEA)

Classification Exception Areas are DEP designated areas of groundwater contamination meeting certain criteria and associated with Known Contaminated Sites or sites on the Site Remediation Program (SRP) Comprehensive Site List. CEAs are institutional controls in geographically defined areas within which the New Jersey Ground Water Quality Standards (NJGWQS) for specific contaminants have been exceeded. When a CEA is designated for an area, the constituent standards and designated aquifer uses are suspended for the term of the CEA. A public understanding of where groundwater is known to be contaminated can help prevent inappropriate well placement, preventing potential health risks and can minimize unintended contaminant plume migration. Contaminants of concern within a CEA record are described in

one of two ways, either in a field named for the contaminant, e.g., benzene; or listed in a general contaminant field, e.g., VO.

The Department has identified multiple CEAs within Vernon Township:

| CEA TYPE | NAME | ADDRESS | KCSL | CLOSED | GW_CLASS | BENZENE | LEAD_PB | TICS |
|----------|--------------------------------|------------------|--------------|--------|----------|---------|---------|------|
| CEA-VO | Mobil Service Station #15-BFQ | Rt. 94 & Rt. 515 | NJD986604734 | No | II-A | Yes | Yes | |
| CEA | Dorothy Henry Memorial Library | 66 Rt. 94 | NJL600246979 | No | II-A | | | Yes |

For further information about Classification Exception Areas see:

http://www.state.nj.us/dep/srp/guidance/cea/cea_guide.htm

Landfills

NJDEP maintains a list of landfills in the state, including active facilities, properly closed facilities, those being remediated with public funds, those proposed for redevelopment, and inactive landfills. The state has a landfill strategy to notify and work with owners or other responsible parties to bring into compliance inactive landfills that are out of compliance with closure requirements. Two organizations in NJDEP oversee landfill permitting, remedial, and closure work: the vast majority of operating and inactive landfills come under the jurisdiction of the Solid and Hazardous Waste Program in the Department's Environmental Regulation Program. Those landfills that are being remediated with public funding are overseen by the Site Remediation Program, as are sites that are proposed for redevelopment with any component of future use that might directly impact human health, including industrial, commercial or residential use.

Landfills often represent some of the largest tracts of potentially developable land that a municipality and/or county can include in its smart growth and planning efforts. Turning a former landfill into a beneficial use may then enable the protection of other sensitive areas in a community. Innovative uses of landfills include passive open space, active open space, renewable energy "farms" for wind turbines, gas collection and use, and/or solar collection, shopping centers, and mixed use developments.

DEP mapping identifies one Solid Waste Landfills in Vernon Township.

| CSLNUM | LFNAME | STREET |
|--------------|-----------------------------------|-----------------------------|
| NJL900001314 | VERNON TOWNSHIP SANITARY LANDFILL | RTE 94 & VERNON CROSSING RD |

For questions regarding the redevelopment of landfill sites, please contact the Office of Brownfield Re-Use at (609) 292-1251.

Toxics Release Inventory

The **Toxics Release Inventory (TRI)** is a publicly available EPA database that contains information on toxic chemical releases and waste management activities reported annually by certain industries as well as federal facilities. For more information on TRI, see <http://www.epa.gov/TRI/>.

There are two TRI sites located in Vernon Township.

| NAME | STREET | PARENT_CO |
|-------------------|---------------------|------------------------|
| AMES RUBBER CORP. | VERNON CROSSING RD. | AMES RUBBER CO. |
| ACCURATE FORMING | RTE. 94 | TYCO LABORATORIES INC. |

Attachments:

- Contaminated Sites – Map

Preserved Lands & Historic Resources

Open space preservation helps to protect New Jersey's rich natural, historic, and cultural heritage. It ensures that animal and plant habitats are protected and that areas of scenic beauty and agricultural importance are preserved. It safeguards streams and water supplies and provides opportunities to enjoy the outdoors. Open space preservation lies at the core of the quality of life of New Jersey's communities - from the most urbanized cities to the most remote rural areas of the state. Besides enhancing the quality of life, protecting open space can provide economic benefits. It can help a community avoid the costly mistakes of misusing available resources. Protected open space usually raises the taxable value of adjacent properties and is less costly to maintain than the infrastructure and services required by residential development. Even taking into account the increased tax base that results from development, open space usually proves easier on the municipal budget in the long-run.

Historic preservation is the identification, evaluation, and protection of historic and archaeological resources so that they continue to play an integral, vibrant role in their communities. New Jersey's historic properties and the environment in which they exist are irreplaceable assets that contribute to the quality of life that residents enjoy and expect. Historic properties are the physical links to our past, providing meaning to the present and continuity with the future. They are the physical records of the events and people that shaped New Jersey's history. Historic properties add visual and intellectual spirit to the physical environment that New Jersey residents experience daily.

Preserved Lands

Based on the Department's records, the following table represents the preserved open space lands located in Vernon Township. DEP recognizes that its records may be incomplete or incorrect, and appreciates all assistance in keeping its records up-to-date.

Green Acres Program – Open Space Database

| Block | Lot | Facility Name | Interest | Type | Funded? |
|--------------|------------|----------------------------|-----------------|-------------|----------------|
| 402 | 3 | CLARKS WOODS (BRIDGEWATER) | ET/FE | M | N |
| 407 | 4 | CLARKS WOODS (BRIDGEWATER) | ET/FE | M | N |
| 100 | 9 | FAIR ST | ET/FE | M | N |
| 108 | 14 | EXCHANGE FIELD | ET/FE | M | N |
| 123.02 | 1 | RARITAN GREENWAY | ET/FE | C | N |

Interest: ET/FE - Entire Taking/Fee Simple;

Type: M - Municipal; C - County; N - Non Profit

Funded?: Y - Park received Green Acres funding; N - Park did not receive Green Acres funding

Historic Resources

The NJ Historic Preservation Office administers a variety of programs that offer protection for historic properties. The HPO consults with federal agencies under Section 106 of the National Historic Preservation Act for federally funded, licensed or permitted projects. At the state level, the New Jersey Register of Historic Places Act requires that actions by state, county, or local governments, which may impact a property listed in the New Jersey Register of Historic Places, be reviewed and authorized through the HPO. The HPO also provides advice and comment for a number of permitting programs within the Department of Environmental Protection, including some permits required under the [Land Use Regulation Program](#).

The most effective way to protect historic resources and promote our architectural and archaeological heritage is through local stewardship. When implemented at the local level, historic preservation activities may take the form of master plan elements, comprehensive zoning ordinances, regulated code enforcement, or public education and outreach programs. Local initiatives have far reaching effects on preserving historic resources for future generations. The HPO provides technical assistance, training, and other resources for historic preservation to New Jersey's communities through a variety of programs.

The following New Jersey and National Registers of Historic Places listings include properties and historic districts in New Jersey for which a formal action was taken by the State Historic Preservation Officer or designee. The listings are current through the end of 2002, and the HPO will update these listings on a periodic basis to reflect ongoing additions and corrections.

The listings itemize the buildings, structures, sites, objects, and districts listed on the New Jersey Register of Historic Places (SR) and the National Register of Historic Places (NR). They also include resources that have received Certifications of Eligibility (COE), opinions of eligibility from the State Historic Preservation Officer (SHPO Opinion), or Determinations of Eligibility (DOE) from the Keeper of the National Register. These properties and historic districts all meet the New Jersey and National Register criteria for significance in American history, archaeology, architecture, engineering or culture, and possess integrity of location, design, setting, materials, workmanship, feeling and association. Properties that have been entered on the New Jersey and/or National Registers of Historic Places are listed by their historic names, which may be different from their current names. Properties that have SHPO Opinions or DOE's are listed by their historic name, when known. The New Jersey and National Registers of Historic Places for Sussex County can be found at <http://www.state.nj.us/dep/hpo/1identify/lists/sussex.pdf>.

Appalachian Trail (ID#2778)
The 400-foot-wide right-of-way of the trail, from
Warren to Passaic Counties
SHPO Opinion: 6/14/1978
DOE: 8/22/1978
See Main Entry / Filed Location:
Warren County, Hardwick Township

Archeological Site (28-Sx-273) (ID#3468)
SHPO Opinion: 4/1/1982

Black Creek Site (28-Sx-297) (ID#2636)
SHPO Opinion: 8/4/1993
SR: 4/1/2002
NR: 11/27/2002 (NR Reference #: 02000626)

P.J. Brown Farmstead Site (28-Sx-295) (ID#3469)
SHPO Opinion: 4/28/1994

Glenwood, Mill (ID#4628)
1860 Route 565
SHPO Opinion: 6/10/1999

Hanke site (ID#4708)
SHPO Opinion: 3/28/2007

High Breeze Farm (ID#2634)
(Wawayanda State Park) Barrett Road
NR: 7/27/1989 (NR Reference #: 89000993)
SR: 6/20/1989

Hunt-Wood-Parker Farmstead (ID#4790)
483 Stockholm Road
SHPO Opinion: 4/16/2008

Meadowburn Farm (ID#2637)
Meadowburn Road
NR: 8/9/1993 (NR Reference #: 93000748)
SR: 6/28/1993

Park Log House (ID#2638)
Glenwood Mountain Road
COE: 12/22/1992
(Dismantled, awaiting reconstruction)

Ring Quarry Prehistoric Mining Historic District
(ID#30)
SHPO Opinion: 9/16/1996

Sand Hill Site (28-Sx-426) (ID#4529)
SHPO Opinion: 9/6/1996

“Sea Captains House” (ID#3472)
Route 515
SHPO Opinion: 9/12/1988

Stewart House (ID#4530)
189 McAfee-Vernon Road
SHPO Opinion: 10/19/2005

Stewart House Site (28-Sx-427) (ID#4528)
SHPO Opinion: 10/19/2005

William Crampton House (ID#4793)
514 Stockholm road (CR 515)
SHPO Opinion: 4/16/2008

Winans Tavern (“Stage Coach Stop”) (ID#3473)
NJ Route 94
SHPO Opinion: 9/12/1988
(Destroyed by fire 2004)

Attachments:

- Open Space – Map
- Historic Resources – Map

Permit Extension Act

On September 6, 2008 Governor Jon S. Corzine signed the Permit Extension Act of 2008 (P.L. 2008, Chapter 78). For your information and convenience, DEP provides information at <http://www.nj.gov/dep/opppc/extension.htm>. If the Department's Permit Extension Act website does not address the particular circumstances of a permit holder or applicant, questions may be submitted in writing to NJ Department of Environmental Protection, Office of Permit Coordination and Environmental Review, P.O. Box 423, Trenton, New Jersey 08625-0423, by phone at (609) 292-3600, or at <http://www.nj.gov/dep/opppc/permitcoor.htm>.

Notice of Permit Extension Act Provisions

Take notice that, pursuant to the “Permit Extension Act of 2008” (Act), P.L. 2008, c. 78, approvals, as defined in section 3 of the Act, including any Department authorization in the form of a permit, approval, license, certification, waiver, letter of interpretation, agreement, center designation, or any other executive or administrative decision, except for administrative consent orders, which expire during the period of January 1, 2007 through July 1, 2010, are hereby extended through July 1, 2010. This Act automatically extends any approvals granted by the Department of Environmental Protection, including, but not limited to, those issued under the authority of the following statutes:

- (A) Waterfront Development Law, N.J.S.A. 12:5-1 et seq.
- (B) Wetlands Act of 1970, N.J.S.A. 13:9A-10 et seq.
- (C) Freshwater Wetlands Protection Act, N.J.S.A. 13:9B-1 et seq.
- (D) Coastal Area Facility Review Act, N.J.S.A. 13:19-1 et seq.
- (E) Water Supply Management Act, N.J.S.A. 58:1A-1 et seq.
- (F) Well Drilling Permits, N.J.S.A. 58:4A-5 et seq.
- (G) Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.
- (H) The Realty Improvement Sewerage and Facilities Act (1954), N.J.S.A. 58:11-23 et seq.; and N.J.S.A. 58:11-25.1 et seq.
- (I) Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq.
- (J) Safe Drinking Water Act, N.J.S.A. 58:12A-1 et seq.
- (K) Flood Hazard Area Control Act, N.J.S.A. 58:16A-50 et seq.

Nothing in the Act shall have the effect of extending:

1. any permit or approval issued within an environmentally sensitive area as defined in the Act;
2. any permit or approval within an environmentally sensitive area issued pursuant to the Highlands Water Protection and Planning Act, N.J.S.A. 13:20-1 et seq.;
3. any permit or approval issued pursuant to the Flood Hazard Area Control Act, N.J.S.A. 58:16A-50 et seq., except where work has commenced, in any phase or section of the

development, on any site improvement, as defined in paragraph (1) of subsection a. of section 41 of the Municipal Land Use Law, N.J.S.A. 40:55D-53 or on any buildings or structures; or

4. any coastal center designated pursuant to the Coastal Area Facility Review Act, N.J.S.A. 13:19-1 et seq., that as of March 15, 2007

(a) had not submitted an application for plan endorsement to the State Planning Commission, and

(b) was not in compliance with the provisions of the Coastal Zone Management rules at N.J.A.C. 7:7E-5B.6;

5. any permit or approval issued pursuant to federal assumption or delegation. The Act shall not affect any administrative consent order issued by the Department in effect or issued during the extension period, nor shall it be construed to extend any approval in connection with a resource recovery facility as defined in N.J.S.A. 13:1E-137.

Nothing in the Act shall affect the ability of the Commissioner of the Department to revoke or modify a specific permit or approval, or extension thereof pursuant to the Act, when that specific permit or approval contains language authorizing the modification or revocation of the permit or approval by the Department.

In the event that any approval tolled pursuant to the Act is based upon connection to a sanitary sewer system, the approval's extension shall be contingent upon the availability of sufficient capacity, on the part of the treatment facility, to accommodate the development whose approval has been extended. If sufficient capacity is not available, those permit holders whose approvals have been extended shall have priority with regard to the further allocation of gallonage over those approval holders who have not received approval of a hookup prior to the date of enactment of the Act. Priority regarding the distribution of further gallonage to any permit holder who has received the extension of an approval pursuant to the Act shall be allocated in order of the granting of the original approval of the connection. Further, nothing in the Act shall be deemed to extend the obligation of any wastewater management planning agency to submit a wastewater management plan or plan update, or the obligation of a municipality to submit a wastewater management plan or plan update, pursuant to the Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq. and the Water Quality Management Planning rules, N.J.A.C. 7:15, adopted by the Department effective July 7, 2008. Nothing in the Act shall be construed or implemented in such a way as to modify any requirement of law that is necessary to retain federal delegation to, or assumption by, the State of any authority to implement a federal law or program.

Finally, nothing in the Act shall be deemed to extend or purport to extend any permit or approval issued by the government of the United States or any agency or instrumentality thereof, or to any permit or approval by whatever authority issued of which the duration or effect or the date or terms of its expiration are specified or determined by or pursuant to law or regulation of the federal government or any of its agencies or instrumentalities.

Attachments:

- Permit Extension Act Environmentally Sensitive Areas – Map

Summary of Major Issues

1. Master Plan Update

The MSA notes (on page 38) that the Township is considering updating its Maser Plan in 2009. What is the status of this effort?

2. Transfer of Development Rights

DEP recommends that Vernon Township consider participating in the Highlands Council TDR program as a means to benefit from the existence of the Region. Participation in the Highlands TDR program provides certain benefits to the Town such as enhanced planning grants from the Council of up to \$250,000; eligibility for a grant to reimburse the reasonable costs of amending municipal development regulations, and; the authorization to impose impact fees. It would also serve to protect water quality and natural resources in the Highlands Region that benefit – directly or otherwise – the citizens of the Township.

Should the Township decide not to participate in the Highlands Council TDR program, DEP recommends that the Township consider an intra-municipal TDR program, and consider the designated center as a receiving area.

Development and implementation of a TDR program are eligible activities under the DEP-managed Local Greenhouse Gas Reduction Grant Program (additional information below). That grant program provides preference and additional funding to regional projects.

3. Historic Preservation Issues

The State Historic Preservation Office (SHPO) has reviewed the sections of the MSA and Vernon Township Master Plan relating to historic preservation issues. SHPO's comments follow:

The Master Plan document was originally authored in 1995. In terms of the description and treatment of historic properties, the document could use significant updating, augmentation, and general improvement. SHPO suggests that it be re-written to reflect the current state of knowledge of historic resources in Vernon Township. In particular:

- 1. Portions dealing with Native American occupation should be revised, preferably by someone meeting the professional qualification standards in archaeology (see attached). All references to Native Americans or their culture as 'prehistoric' or 'Indian' should be struck. Adequate distinctions between archaeological sites and geologic sites should be maintained.*
- 2. In addition to the three resources listed in the New Jersey and National Registers of Historic Places (Black Creek Site, High Breeze Farm, and Meadowburn Farm), mention should be made of those extant sites with eligibility opinions.*

Additional recommendations include:

- 1. Vernon Township should consider passage of an MLUL-complaint ordinance to establish a historic preservation commission.*

2. *None of the survey data mentioned in the master plan is on file at the Historic Preservation Office. A file copy for use by researchers of any and/or all documents would be appreciated. (This includes the 1970 survey, the 1992 survey recommending 50 sites for preservation, and the 1995 survey recommending 116 sites for preservation). Since the HPO does not have copies of any of these documents on file, we cannot comment on the validity of any of their recommendations.*

- Certified Local Government. Upon adoption of such an MLUL-compliant ordinance, DEP recommends that Vernon Township apply to SHPO for designation as a Certified Local Government (CLG). Designation as a CLG comes with additional benefits. For additional information see: <http://www.state.nj.us/dep/hpo/3preserve/local.htm#clg>
- Review the NJ Historical Commission's (NJ Department of State) grant program at <http://www.nj.gov/state/divisions/historical/grants/>.

4. Open Space

DEP's open space data appears to differ from that identified in Vernon Township's MSA. DEP requests that Vernon Township submit both GIS shapefiles and its ROSI.

5. Redevelopment Areas

DEP notes that portions of the McAfee Village, Mountain Creek, and Vernon Town Center redevelopment areas have significant environmental constraints, including a Natural Heritage Priority Site and Critical Habitat. DEP will seek some level of environmental protections and considerations through the Plan Endorsement process.

6. COAH

DEP offers Vernon Township a "desktop analysis" of proposed COAH sites in an attempt to identify regulatory and planning issues.

At a minimum, DEP recommends that Vernon Township consider the information provided in this report, the draft Wastewater Management Plan and sewer service area, and Highlands Council data when developing its Fair Share Plan.

7. Flooding Issues

Flooding issues should be addressed within the Borough's All Hazard Mitigation Plan which is required by FEMA. This plan allows the municipality to be eligible for several mitigation grant programs for flood mitigation and disaster relief. These programs are administered through the Office of Emergency Management (OEM) within State Police. Sussex County, in coordination with Warren, Hunterdon and Mercer, has been awarded a pre-disaster mitigation (PDM) grant from FEMA to put their plan together. Vernon Township should participate in that effort.

8. Data Requests

Please provide ArcGIS shapefiles of the following data identified in the MSA:

- Zoning
- Steep Slopes
- Open Space

- Redevelopment Areas

9. Center Proposal

DEP supports the re-designation of much of the Vernon Township designated center which expired in July, 2009. However, as a general rule, DEP does not support including environmentally sensitive areas within a center. Further, as noted in the discussion of threatened and endangered species habitat on page 15 of this report, there are areas previously included in the designated center that DEP cannot support including until additional analyses have been completed. In addition, DEP questions why portions of Block 190, Lots 10.01 and 10.02 that appear to be in use as ski trails, are included within the center.

A draft modified center boundary proposal consistent with DEP policies and programs has been included with this report. DEP recognizes that Vernon Township may wish some environmentally sensitive areas be included in the center boundary. DEP policy is that environmentally sensitive features may be included in a center so long as appropriate ordinances and policies are adopted by the municipality to protect environmentally sensitive resources in the ‘environs’.

Also note that the inclusion of a property or area within a designated center does not necessarily guarantee its inclusion in sewer service area. In order to come to an agreement on a modified sewer service area through the Plan Endorsement process, DEP requires the same “environs protection” planning identified above.

10. Local Greenhouse Gas Reduction Grant Program

DEP has implemented a new grant program that will provide approximately \$2.5 million to local governments to reduce greenhouse gas emissions. The Local Government Greenhouse Gas Reduction Grants Program is a competitive grant process available to municipalities, counties, local authorities, school boards and county colleges.

This grant program is intended to support New Jersey’s local government efforts to plan, develop and implement measures that reduce greenhouse gas emissions through projects that result in energy efficiency, renewable energy, distributed energy and sustainable land use planning. A paramount element of this program is the need for local governments to identify how their efforts result in measurable reductions in greenhouse gas emissions or energy demand.

DEP notes its receipt of Vernon Township’s pre-application for a Vision Plan and Form Based Code for its center..

For a full description of the grant program, pre-application form and process go to: www.nj.gov/dep/opsc/ghggrant.html or e-mail questions to GHGGrants@dep.state.nj.us. For a copy of the Press Release announcing the program, go to:

http://www.nj.gov/dep/newsrel/2009/09_0015.htm.

11. Grant & Loan Programs

DEP’s grant and loan programs are listed at: <http://www.nj.gov/dep/grantandloanprograms/>.

Requests for Assistance

Following are the Vernon Township requests for State Assistance, as provided in the MSA (*in italics*), for which DEP is the primary contact, and DEP's response.

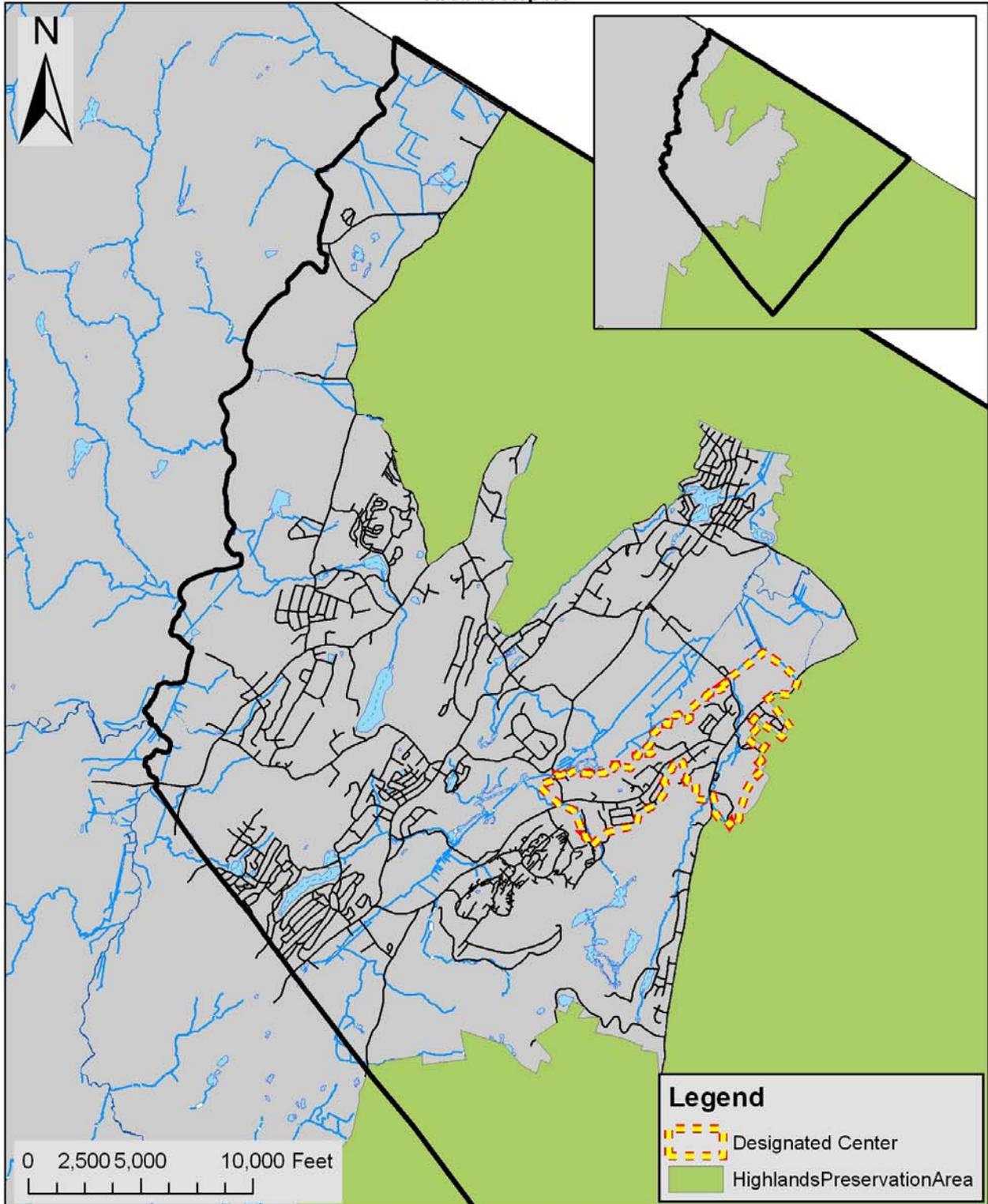
- *Provide assistance in maintaining sewer service areas in the Town Center.*
 - The Plan Endorsement process is one route by which modification of sewer service area can be accomplished, per the Water Quality Management Planning rule (N.J.A.C. 7:15). It should be understood that DEP will not “rubber stamp” a modified sewer service area simply because the municipality is involved in the Plan Endorsement process. In order to extend sewer service area into environmentally sensitive areas, off-setting protections of environmentally sensitive areas, above and beyond that of basic regulatory and planning limitations, will be required.
- *Provide assistance in water allocation issues related to the Center.*
 - The updated State Water Supply Plan will be released in the near future. Water allocation issues consistent with the Water Supply Plan, Wastewater Management Plan, and Plan Endorsement will be supported.
- *Provide Vernon access to the NJDEP Small Water System Technical Assistance Program for the proposed water system in the Town Center.*
 - Frequently Asked Questions for the Small Water System Technical Assistance Program may be found at http://www.state.nj.us/dep/watersupply/faq_swstech.htm.
 - The Small Water System Technical Assistance program is designed to provide hands on assistance for public water systems which are having difficulty supplying potable water because of some short term technical need. DEP is unclear which United Water Resources is the public water system entity in Vernon Township. Since Vernon Township is not itself the owner/operator of a public water system, the Township is not eligible for this assistance.
- *Development of Historic Sub-District within the Town Center Redevelopment Area to include a self-guided walking tour.*
 - The steps to expand the historic district by the Town should be consistent with, if not mirror, those steps taken in the original process, and outlined in ordinance
- *Provide funding and technical assistance to increase access to state parks, publicly preserved open space and wildlife management areas for recreation activities.*
- *Provide assistance in coordinating reviews with state and federal park agencies for amenities in the parks in Vernon, i.e. access points and parking areas, etc.*
 - DEP is unclear as to what is being requested here. Please provide further information.

Vernon Township may apply for Green Acres funding for both land preservation and park and recreation projects. All NJ municipalities are notified by the Green Acres program when funding applications are being accepted. Green Acres will provide technical assistance on open space and recreation planning to Vernon upon request.

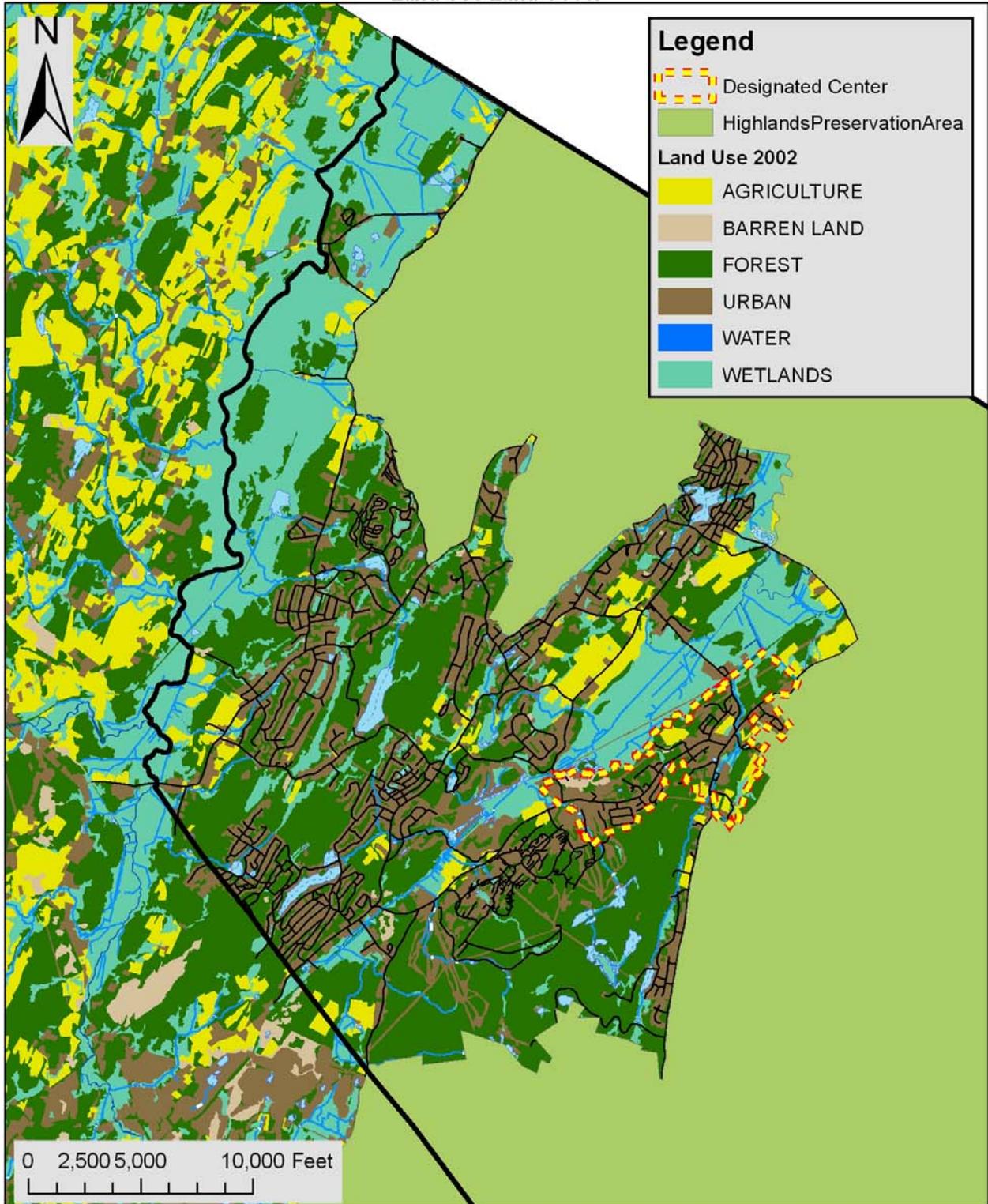
- Regarding access to state parks and wildlife management areas, these public open space lands are already accessible with parking areas for public conservation and recreation uses. Any project on these lands would need to be coordinated with either the DEP Division of Parks and Forestry, the Division of Fish and Wildlife, and/or the United States Fish and Wildlife Service, as these agencies are responsible for the operation and management of these lands.

Maps

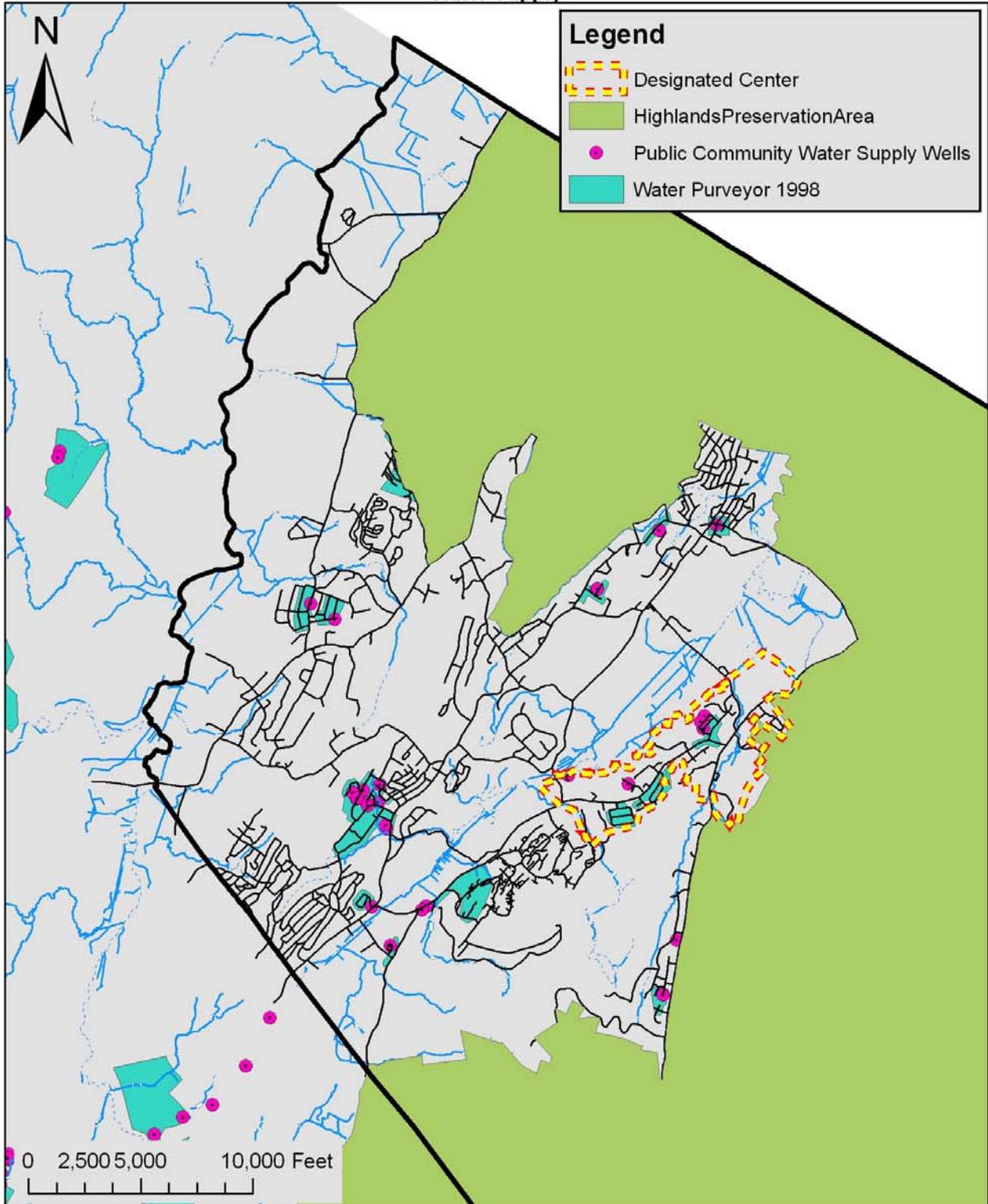
Vernon Township, Sussex County
Opportunities & Constraints Analysis
Area of Report



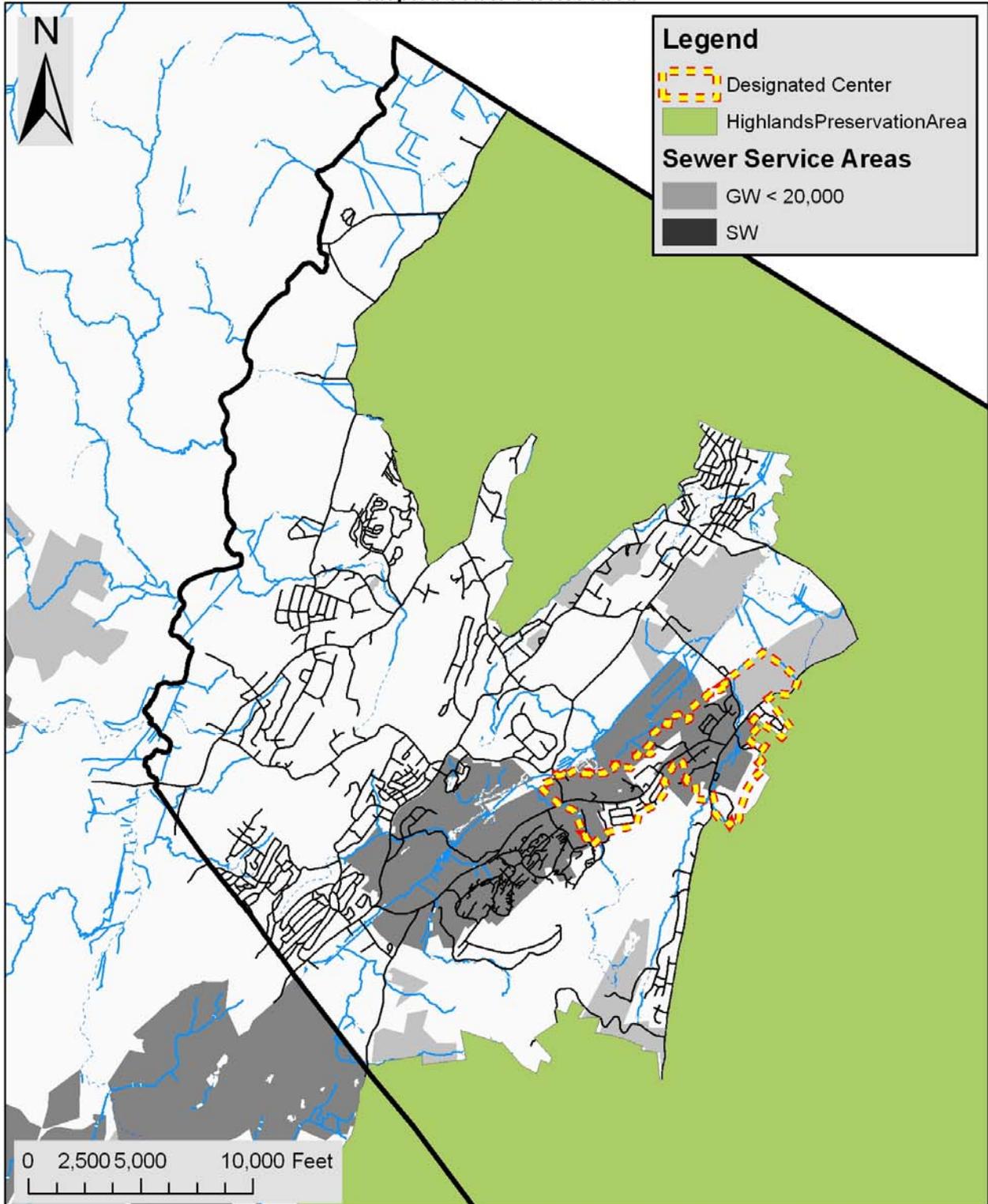
Vernon Township, Sussex County
Opportunities & Constraints Analysis
Land Use Land Cover



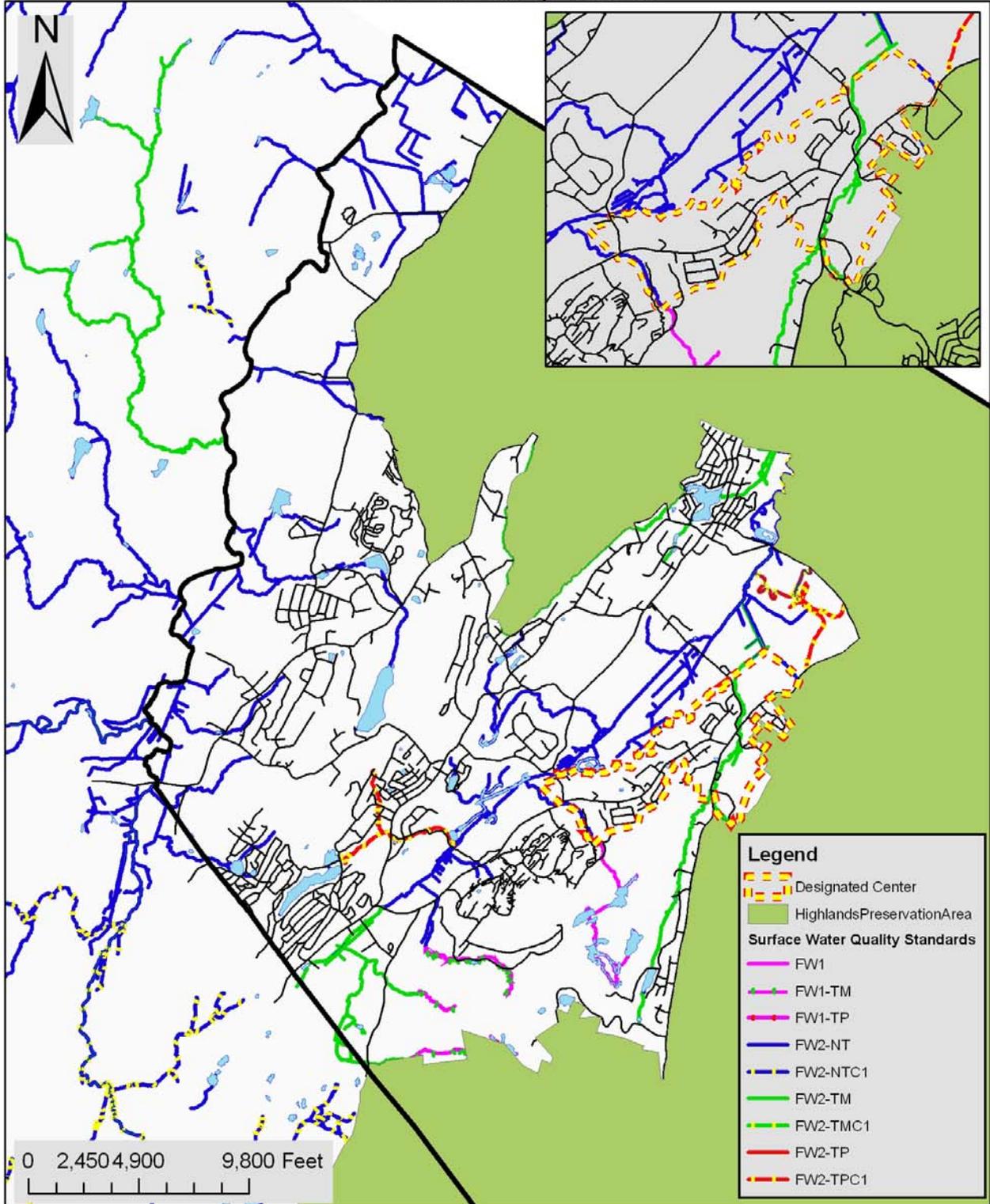
Vernon Township, Sussex County
Opportunities & Constraints Analysis
Water Supply



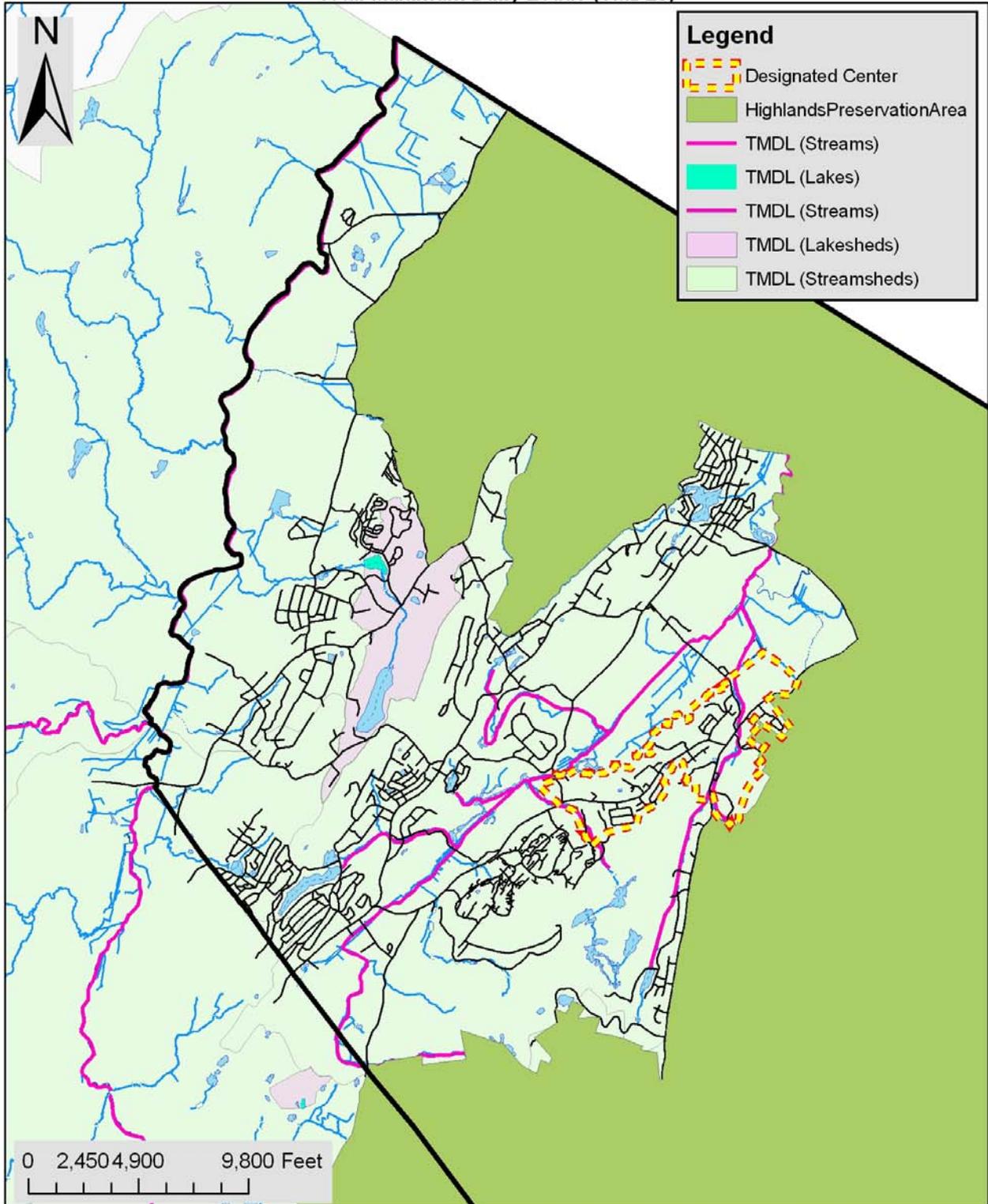
Vernon Township, Sussex County
Opportunities & Constraints Analysis
Adopted Sewer Service Area



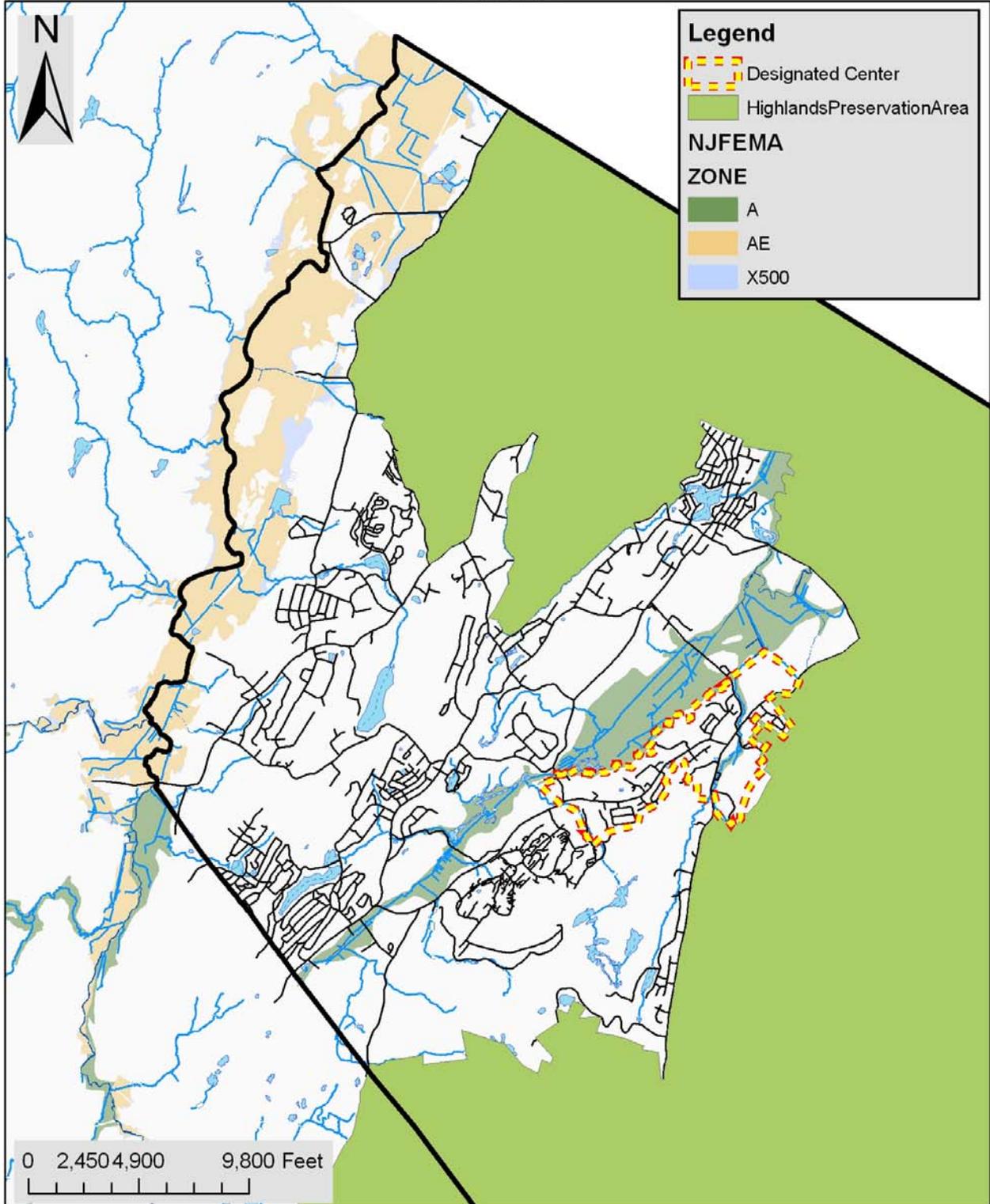
Vernon Township, Sussex County
 Opportunities & Constraints Analysis
 Surface Water Quality Standards



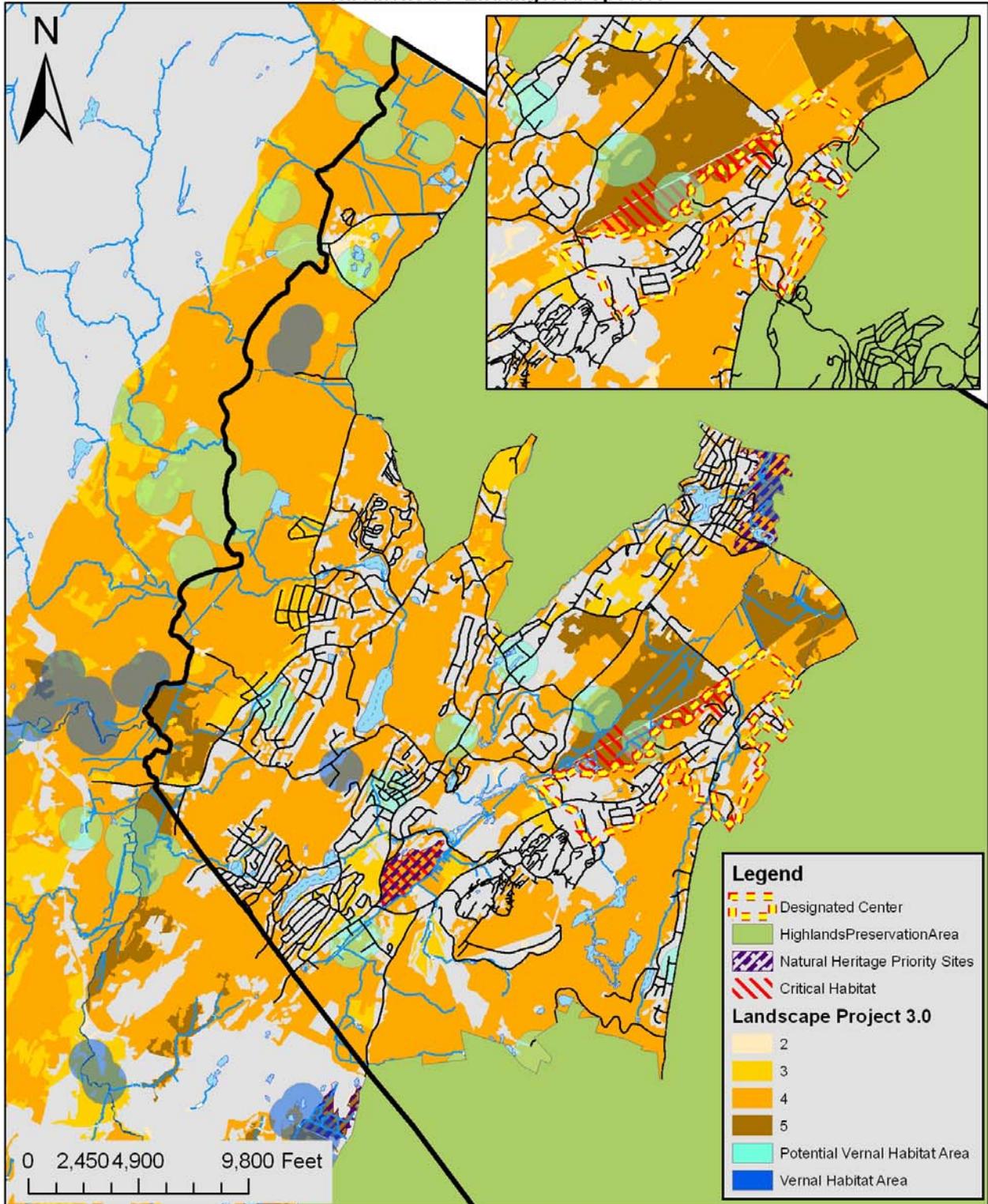
Vernon Township, Sussex County
Opportunities & Constraints Analysis
Total Maximum Daily Loads (TMDLs)



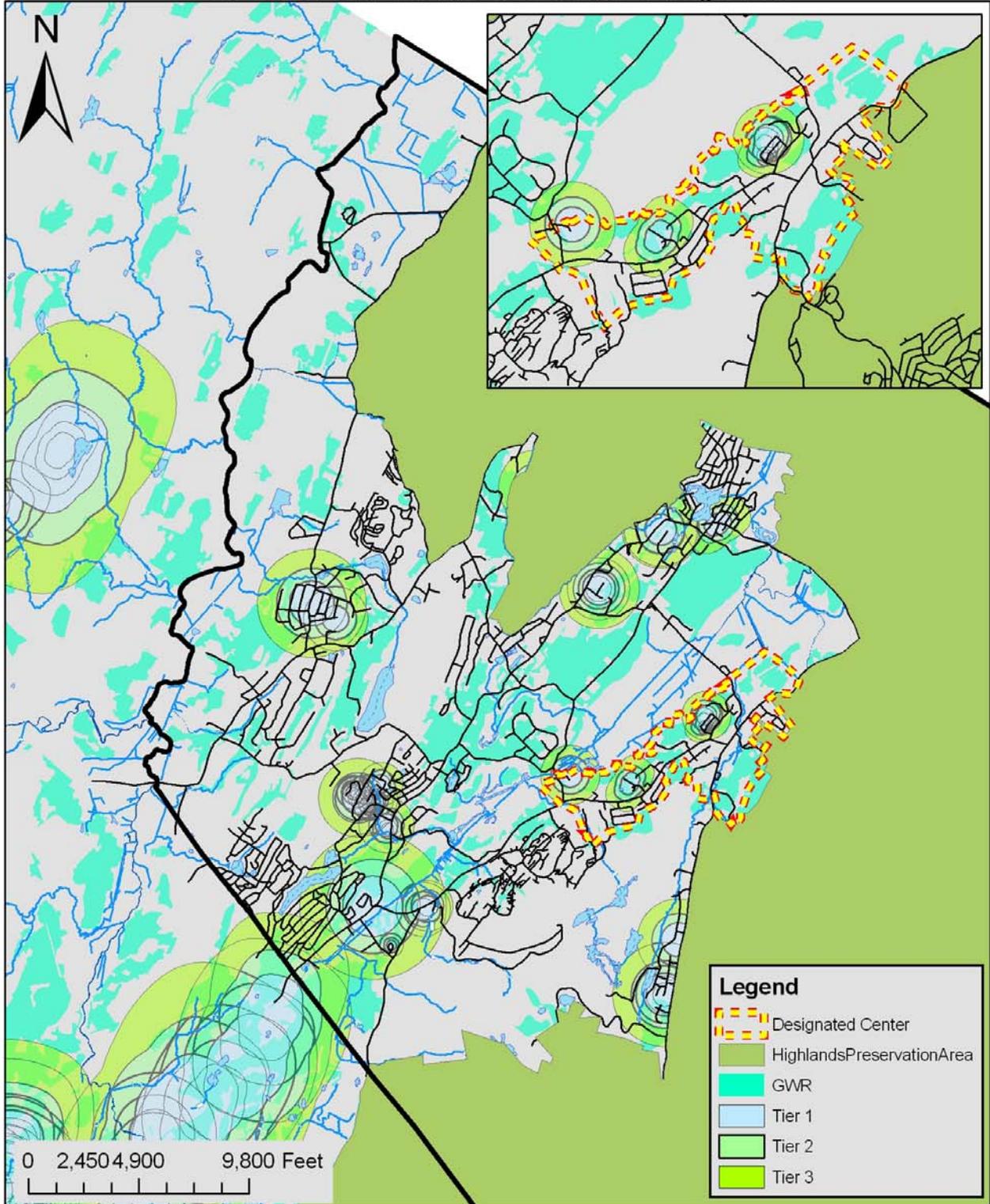
Vernon Township, Sussex County
Opportunities & Constraints Analysis
Flood Zones



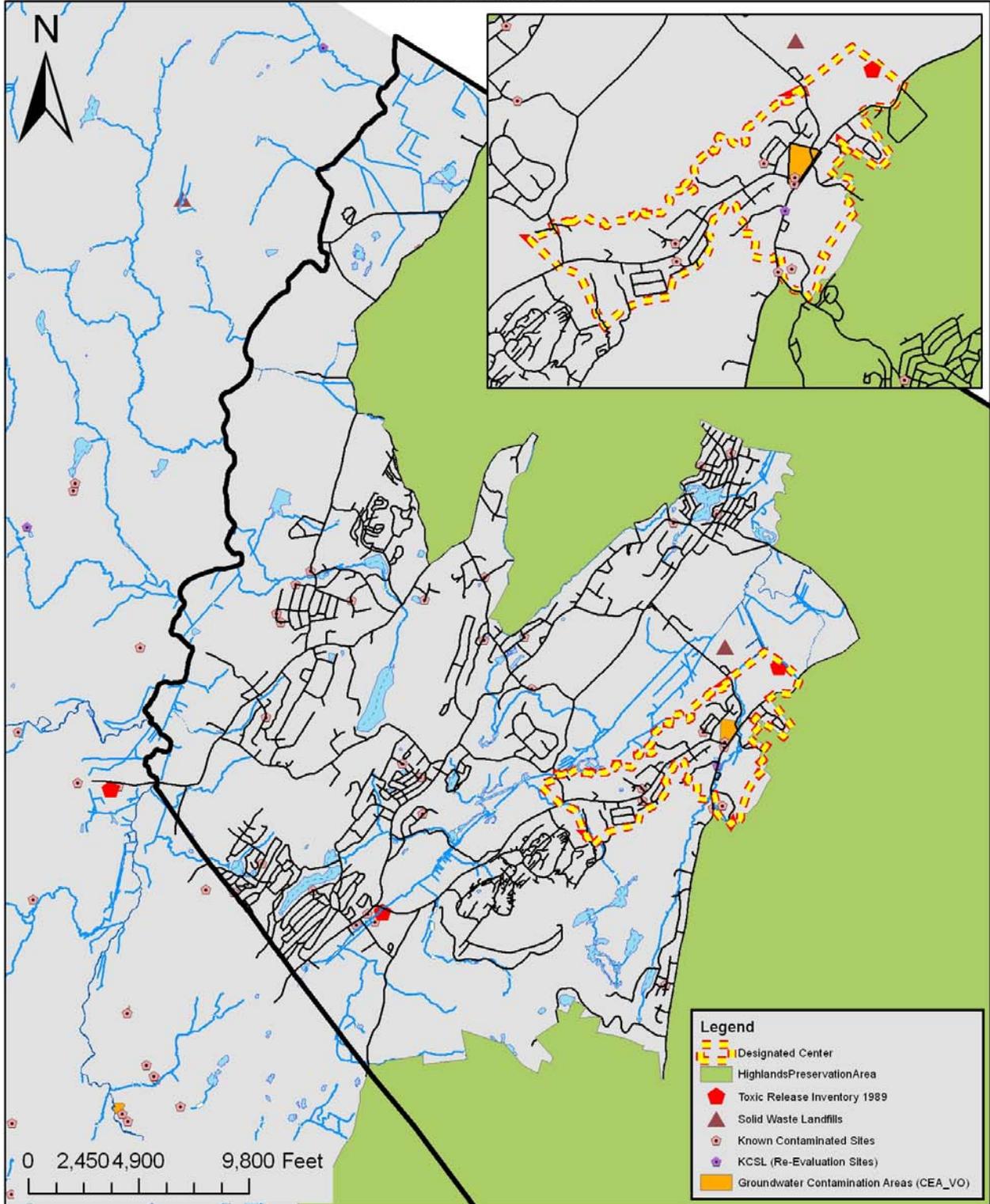
Vernon Township, Sussex County
 Opportunities & Constraints Analysis
 Threatened & Endangered Species



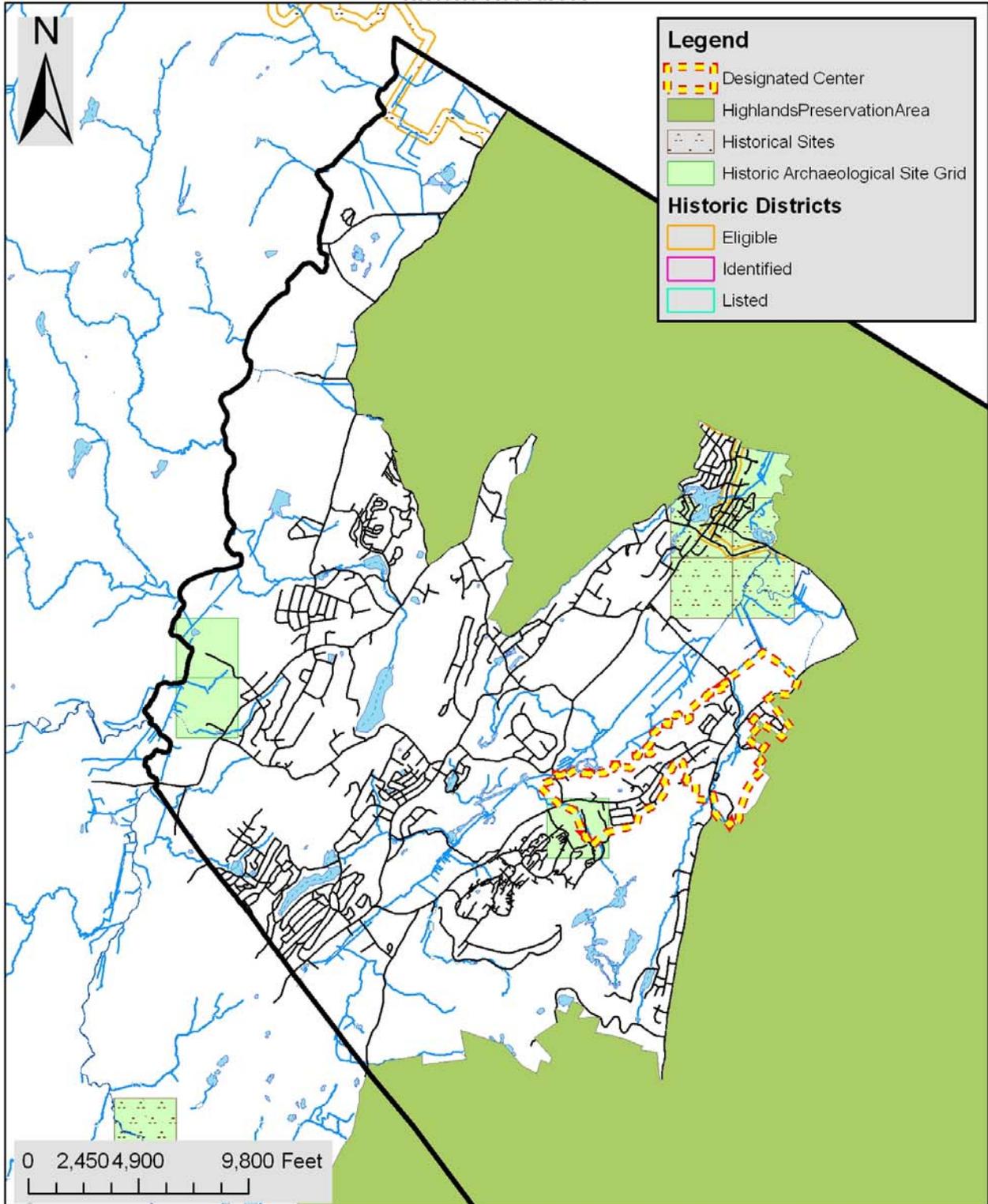
Vernon Township, Sussex County
Opportunities & Constraints Analysis
Wellhead Protection Areas & Groundwater Recharge Areas



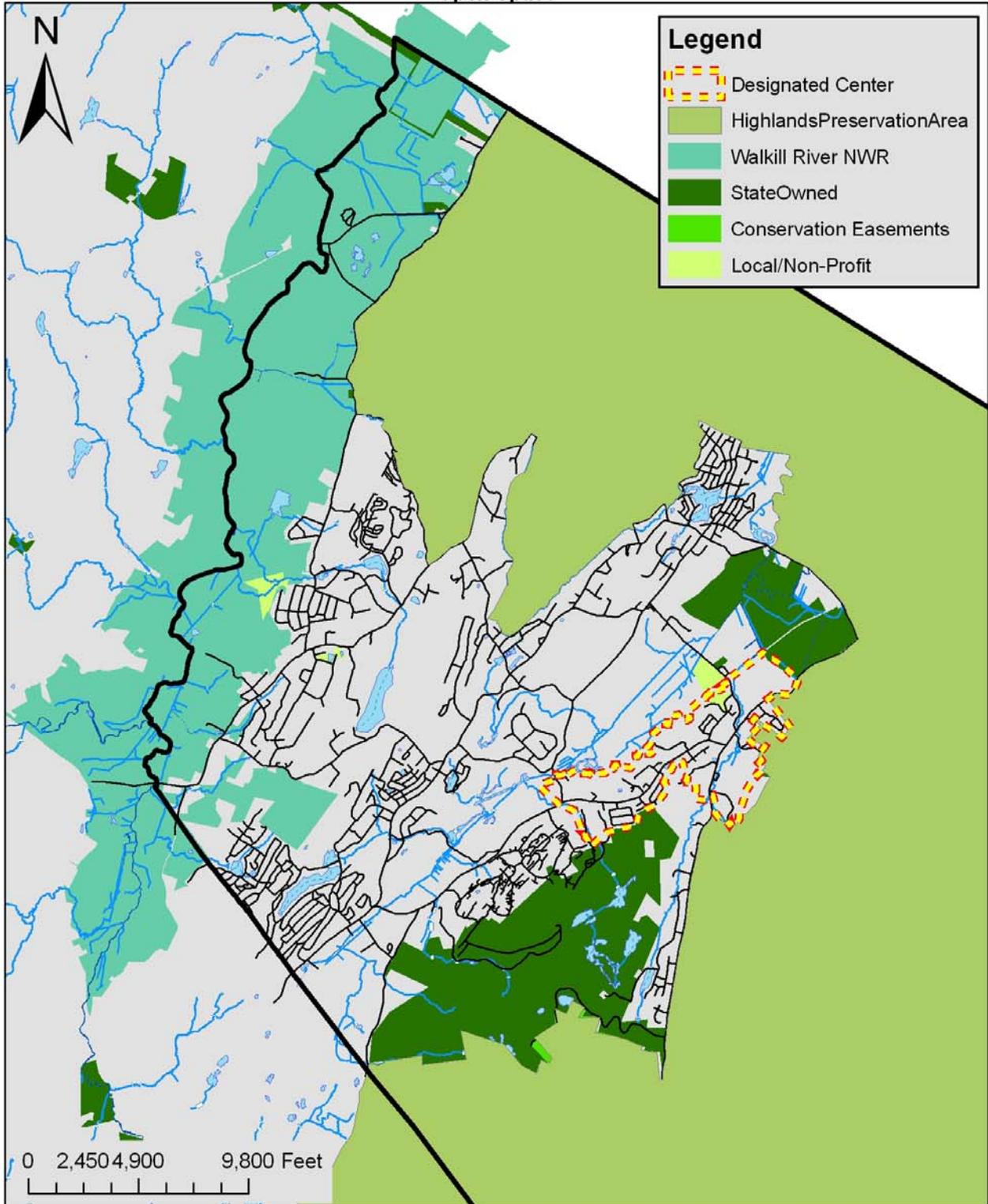
Vernon Township, Sussex County
Opportunities & Constraints Analysis
Contaminated Sites



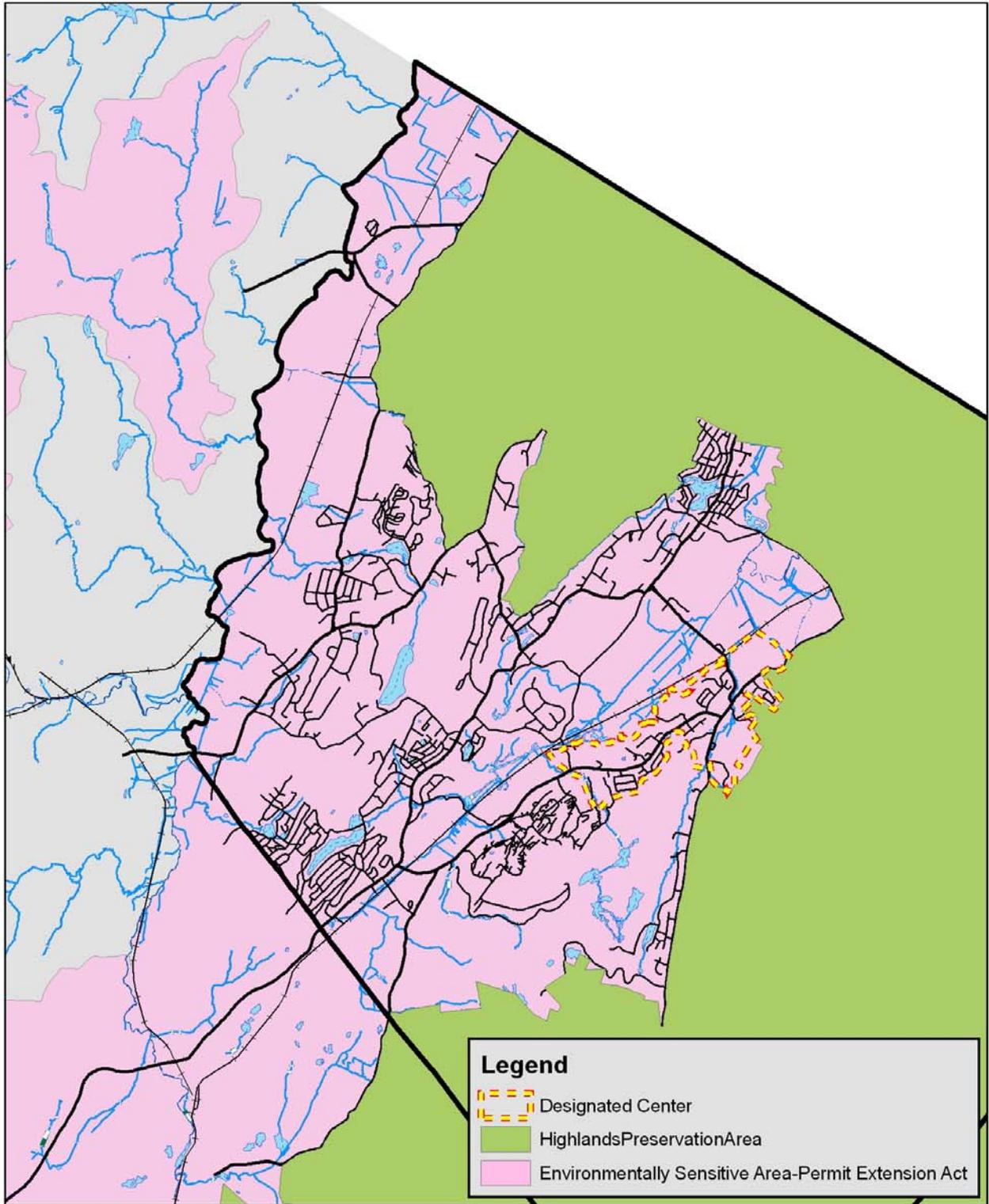
Vernon Township, Sussex County
Opportunities & Constraints Analysis
Historic Resources



Vernon Township, Sussex County
Opportunities & Constraints Analysis
Open Space



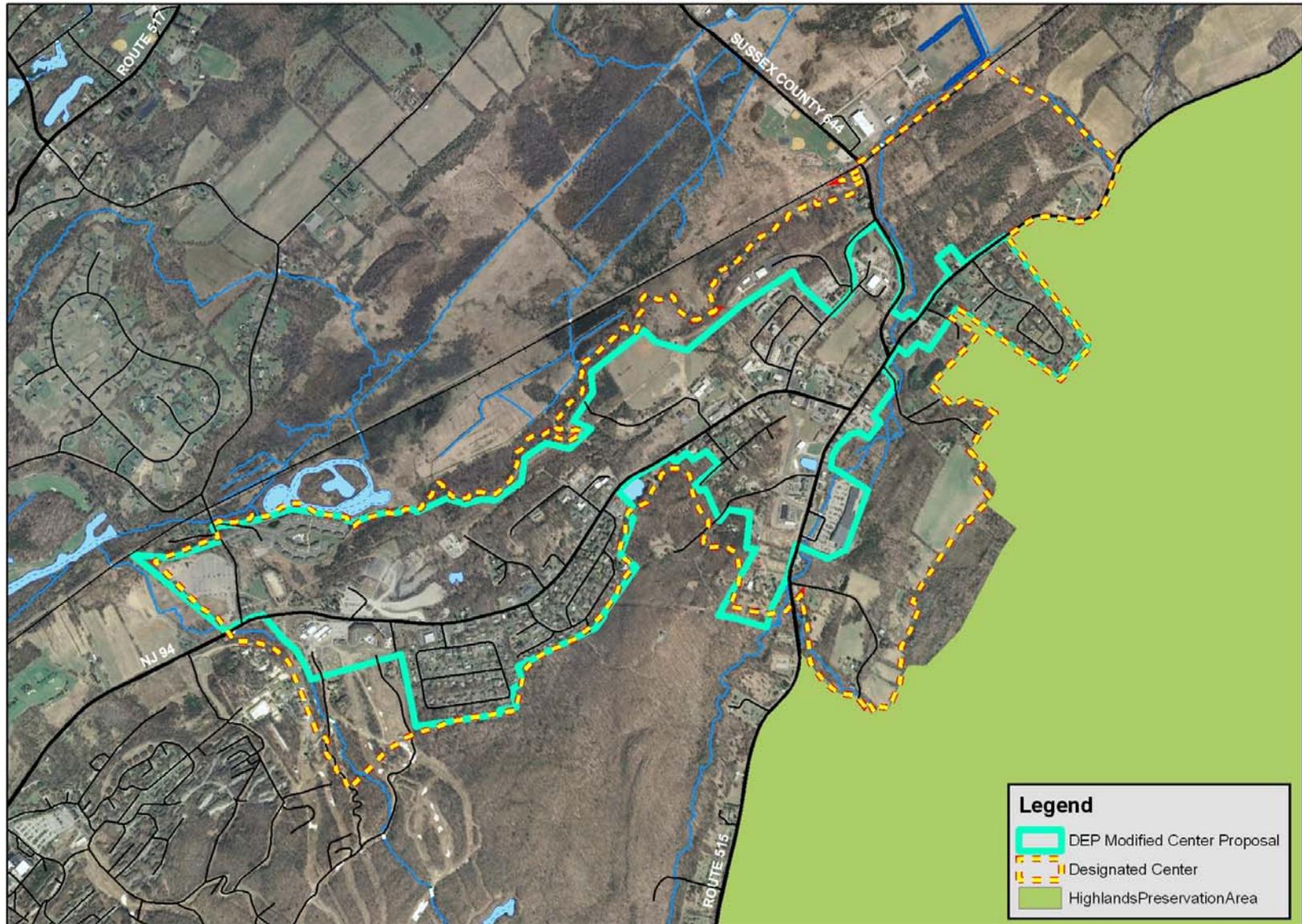
Vernon Township, Sussex County
Opportunities & Constraints Analysis
Permit Extension Act



Vernon Township, Sussex County
Opportunities & Constraints Analysis
Designated Center Habitat Analysis



Vernon Township, Sussex County
Opportunities & Constraints Analysis
DEP Modified Center Proposal



Additional Attachments

Public Water System Deficit/Surplus

VERNON TOWNSHIP WATER COMMISSION

PWSID: 1409001

County: Morris

Last Updated: 08/08/07

Water Supply Firm Capacity: 4.320 MGD

Available Water Supply Limits

| | Allocation | Contract | Total |
|---------------|--------------|----------|--------------|
| Monthly Limit | 112.000 MGM | N/A MGM | 112.000 MGM |
| Yearly Limit | 1153.000 MGY | N/A MGY | 1153.000 MGY |

Water Demand

| | Current Peak | Date | Committed Peak | Total Peak |
|----------------|--------------|---------|----------------|--------------|
| Daily Demand | 3.409 MGD | 07/2004 | 0.000 MGD | 3.409 MGD |
| Monthly Demand | 105.675 MGM | 07/2004 | 0.000 MGM | 105.675 MGM |
| Yearly Demand | 1068.452 MGY | 2004 | 0.000 MGY | 1068.452 MGY |

Water Supply Deficit or Surplus

| Firm Capacity | Water Allocation Permit |
|---------------|-------------------------|
| 0.911 MGD | 6.325 MGM |
| | 84.548 MGY |

Note: Negative values (a deficit) indicate a shortfall in firm capacity and/or diversion privileges or available supplies through bulk purchase agreements.

Bureau of Water System and Well Permitting Comments:

Changes include up to June 2007

Bureau of Water Allocation Comments:

No comments provided

For more information concerning water supply deficit and surplus, please refer to:

▶ [Firm Capacity and Water Allocation Analysis](#) (Pdf Format)

▶ [Currently Effective Water Allocation Permits by County](#)

This report displays all effective water allocation permits issued by the Department.

▶ [Pending Water Allocation Permits with Requests for a Hearing](#)

All pending water allocation permits with public hearing requests.

▶ [Water Allocation Permits Made Effective within a Selected Timeframe](#)

This report displays water allocation permits based on a specified date range.

Questions regarding safe demands and firm capacity please contact the Bureau of Water System and Well Permitting at 609-984-6831 or for questions concerning water allocation and status please contact the Bureau of Water Allocation at 609-292-2957. Questions may also be sent to the [Division of Water Supply](#).

Professional Qualifications in Archaeology

The following requirements are those used by the National Park Service, and have been previously published in the September 29, 1983, issue of the Federal Register, as Professional Qualification Standards, part of the larger Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation. They are further referenced in Code of Federal Regulations, 36 CFR Part 61. These Professional Qualification Standards are in effect currently. The qualifications define minimum education and experience required to perform identification, evaluation, registration, and treatment activities. In some cases, additional areas or levels of expertise may be needed depending on the complexity of the task and the nature of the historic properties involved. In the following definitions, a year of full-time professional experience need not consist of a continuous year of full-time work but may be made up of discontinuous periods of full-time or part-time work adding up to the equivalent of a year of full-time experience.

History

The minimum professional qualifications in history are a graduate degree in history or closely related field; or a bachelor's degree in history or closely related field plus one of the following:

1. At least two years of full-time experience in research, writing, teaching, interpretation, or other demonstrable professional activity with an academic institution, historic organization or agency, museum, or other professional institution; or
2. Substantial contribution through research and publication to the body of scholarly knowledge in the field of history.

Archeology

The minimum professional qualifications in archeology are a graduate degree in archeology, anthropology, or closely related field plus;

1. At least one year of full-time professional experience or equivalent specialized training in archeological research, administration or management;
2. At least four months of supervised field and analytic experience in general North American archeology; and
3. Demonstrated ability to carry research to completion.

In addition to these minimum qualifications, a professional in prehistoric archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the prehistoric period. A professional in historic archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the historic period.

Architectural History

The minimum professional qualifications in architectural history are a graduate degree in architectural history, art history, historic preservation, or closely related field, with coursework in American architectural history; or a bachelor's degree in architectural history, art history, historic preservation or closely related field plus one of the following:

1. At least two years of full-time experience in research, writing, or teaching in American architectural history or restoration architecture with an academic institution, historical organization or agency, museum, or other professional institution; or
2. Substantial contribution through research and publication to the body of scholarly knowledge in the field of American architectural history.

Architecture

The minimum professional qualifications in architecture are a professional degree in architecture plus at least two years of full-time experience in architecture; or a State license to practice architecture.

Historic Architecture

The minimum professional qualifications in historic architecture at a professional degree in architecture or a State license to practice architecture, plus one of the following:

1. At least one year of graduate study in architectural preservation, American architectural history, preservation planning or closely related field; or
2. At least one year of full-time professional experience in historic preservation projects.

Such graduate study or experience shall include detailed investigations of historic structures, preparation of historic structures research reports, and preparation of plans and specifications for preservation projects.

References

In the September 29, 1983, issue of the Federal Register, the National Park Service published Professional Qualification Standards as part of the larger Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation. These Professional Qualification Standards are in effect currently. Since 1983, the National Park Service has not issued any revisions for effect, although the National Park Service is in the process of drafting such revisions. These current standards are those used by the National Park Service, and were previously published in the Code of Federal Regulations, 36 CFR Part 61, but although cited, were not included fully in subsequent revisions.

Consequently, the full citation for Professional Qualification Standards, is 48 FR 44716, as published September 29, 1983. National Park Service *Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines*. 48 FR 44716-42.

National Park Service web sites: <http://www.cr.nps.gov/hps/laws/ProfQual83.htm>

and http://www.cr.nps.gov/local-law/arch_stnds_9.htm

and http://www.cr.nps.gov/local-law/gis/html/questions_and_answers.html

and http://www.nps.gov/history/local-law/gis/html/discipline_and_proficiencies.html

NJDEP Office of Planning and Sustainable Communities

The Office of Planning and Sustainable Communities was formed to facilitate the Department's move toward a proactive planning approach based on principles of sustainability and environmental capacity-based planning.

Mission

To coordinate the [sustainable development](#) and [environmental capacity-based planning](#) policies of the Department and proactively work with other state agencies, regional entities, local governments and other groups to incorporate these policies into all levels of land use and environmental planning.

Background

In January, 2007, the Department of Environmental Protection (DEP) adopted its [Policy Priorities and Action Plan](#) which outlines the strategic direction of the agency over the next three years. The Plan identifies eight broad goal areas and underlying objectives.

One of the eight goal areas is Sustainable Growth:

Maximize use of department resources to encourage sustainable growth and livable communities by incorporating consistent criteria for the protection of natural resources and development of smart growth and green design principles into DEP rulemaking, priority setting and planning efforts, other state smart and economic growth priorities, and in regional and local planning efforts.

The first objective of this goal is:

“Incorporate sustainable growth and environmental protection criteria into state, regional and local planning.”

At the core of this goal is a recognized need for more progressive statewide environmental planning by the Department to help inform the local land use development and redevelopment process. Historically, the Department has engaged primarily in environmental planning in targeted areas based on statutory direction. Critically important work has been done in such areas as water quality management planning, water supply master planning, habitat protection planning (Landscape Project) and county/state solid waste planning. DEP is now committed to ensuring that these various planning programs are integrated and coordinated so that our guidance to regional and local planning agencies is consistent, comprehensive and supportive of both local and state priorities.

In a significant business practice improvement, DEP is also committed to implementing the Sustainable Growth goal by broadening the scope of its major project review process by requiring consideration and rewarding incorporating of green design the principles and practices.

Office of Planning and Sustainable Communities

401 E. State Street, 7 Floor East
P.O. Box 402
Trenton, NJ 08625-0402
Phone: (609) 341-5311
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JON S. CORZINE
Governor

State of New Jersey

Highlands Water Protection and Planning Council
100 North Road (Route 513)
Chester, New Jersey 07930-2322
(908) 879-6737
(908) 879-4205 (fax)
www.highlands.state.nj.us



JOHN R. WEINGART
Chairman

EILEEN SWAN
Executive Director

Highlands Council Opportunities and Constraints Analysis Vernon Township, Sussex County

In response to the Township of Vernon's submittal of a Municipal Self-Assessment Report to the Office of Smart Growth (OSG), the Highlands Water Protection and Planning Council (Highlands Council) staff has prepared a preliminary assessment of local opportunities and constraints with regard to development, infrastructure (water, wastewater, transportation), and water resources, natural resources, agricultural resources, scenic resources, and historic, cultural, and archaeological resources for the Highlands Region. This analysis includes the most current Highlands Council data in order for the OSG to prepare a full Opportunities and Constraints analysis to determine whether trend growth is sustainable based on the resources and infrastructure available in the municipality and on a regional basis.

The Highlands Regional Master Plan (RMP) was adopted by the Highlands Council on July 17, 2008, and became effective on September 8, 2008. As the product of a long-term, participatory, and region-wide planning effort, the Highlands RMP is representative of the collective response of the wider community to the Legislature's call for a Highlands comprehensive master plan. The Highlands RMP is accompanied by supporting digital spatial data and 15 technical report documents. These documents are available on the Highlands Council website at the following link: <http://www.state.nj.us/njhighlands/master/index.html>.

The Highlands Council website serves as a means for sharing current technical data. This information will include, but not be limited to, the Highlands Resource data layers and the LUCM Series and supporting data layers, along with the narrative information below. Digital spatial data is available for the LUCM Series and supporting data layers on the website at the following link: http://www.highlands.state.nj.us/njhighlands/actmaps/maps/gis_data.html.

The Highlands Council is regularly maintaining the information in its databases and GIS layers in order to maintain the quality and timeliness of the data. However, the Highlands Council recognizes unintentional inaccuracies may occur, particularly where data or information is derived from sources other than the Highlands Council. The Highlands Council recognizes more accurate local information may be readily available and will be considered by the Highlands Council through Map Updates. The narrative below includes approximate percentages that are based on the total land area in the Township of Vernon.

Highlands Preservation and Planning Area (boundaries represented on each map by stipple pointing inward toward the Preservation Area)

- 35% Planning Area (15,470 acres)
- 65% Preservation Area (29,319 acres)

Highlands Final Regional Master Plan – Land Use Capability Map Zone (Map 1)

- Approximately 67% Protection Zone
- Approximately 1% Conservation Zone

- Approximately 10% Conservation Zone Environmentally Constrained Sub-Zone
- Approximately 7% Existing Community Zone
- Approximately 1% Existing Community Environmentally Constrained Sub-Zone
- Approximately 3% Lake Community Sub-Zone
- Approximately 11% Wildlife Management Sub-Zone

Land Use Capability Map Series - Water Availability by sub watershed HUC 14 (Map 2)

- 16 HUC's Represented
- Approximately 0% Non-Deficit HUC 14 at 0.10 to 0.39
- Approximately 0% Non-Deficit HUC 14 at 0.05 to 0.09 MGD
- Approximately 34% Non-Deficit HUC 14 at 0.00 to 0.04 MGD
- Approximately 34% Deficit HUC 14 at -0.09 to 0.00 MGD
- Approximately 32% Deficit HUC 14 at -0.99 to -0.10 MGD
- Approximately 0% Deficit HUC 14 at -7.10 to -1.00 MGD

Land Use Capability Map Series – Highlands Domestic Sewerage Facilities – Existing Areas Served (Map 3)

- Approximately 0.1% of the Protection Zone, 7.6% of the Existing Community Zone, 2.5% of the Existing Community Environmentally Constrained Sub-Zone, and 0.1% of the Conservation Zone are served by Public Wastewater
- Public Wastewater Entity: Upper Wallkill
- 0.87685 million gallons per day (MGD) available capacity, respectively
- The public wastewater entity serves multiple municipalities in this region and the available capacity is not solely for the Township of Vernon.

Land Use Capability Map Series – Highlands Public Community Water Systems – Existing Areas Served (Map 4)

- Approximately 4.7% of the Existing Community Zone, 1.9% of the Existing Community Environmentally Constrained Sub-Zone, and 0.8% of the Lake Community Sub-Zone are served by Public Water
- Public Water Entities: Vernon Water Company / United Water Vernon Valley Inc.
- 1.116 / 4.123 million gallons per month (MGM) available capacity
- The public water entities serve multiple municipalities in this region and the available capacity is not solely for the Township of Vernon.

Land Use Capability Map Series – Septic System Yield Analysis by Zone by Municipality (Informational only no map)

- Nitrate Targets by LUCM Zone - values represent the median nitrate concentrations for the Planning Area by zone, using 4 persons per household, 10 pounds of nitrate per person-year, and drought recharge by HUC14 subwatershed:
 - Planning Area, Existing Community Zone: 2 mg/L
 - Planning Area, Conservation Zone: 1.87 mg/L
 - Planning Area, Protection Zone: 0.72 mg/L

Highlands Constraints

- **Forest Resources** (Map 5)
 - Approximately 85% Forest Resource Area
- **Agricultural Resources** (Map 6)
 - Approximately 18% Agricultural Resource Area
- **Water and Natural Resources** (Maps 7, 8, and 9)
 - 7 Significant Natural Areas (1 buffers is within municipal border)

- 13 Confirmed Vernal Pools + 1,000' (1 buffers is within municipal border)
- Approximately 63% Critical Wildlife Habitat
- **Wellhead Protection, Carbonate Rock, and Prime Ground Water Recharge** (Maps 10, 11 and 12)
 - Approximately 3% 2-Year Tier Wellhead Protection Area (Tier 1)
 - Approximately 4% 5-Year Tier Wellhead Protection Area (Tier 2)
 - Approximately 7% 12-Year Tier Wellhead Protection Area (Tier 3)
 - Approximately 17% Carbonate Rock
 - Approximately 25% Prime Ground Water Recharge Areas
- **Steep Slopes and Riparian Areas** (Maps 13 and 14)
 - Approximately 36% Steep Slopes are classified as Severe
 - Approximately 6% Steep Slopes are classified as Moderate
 - Approximately 22% of the Existing Community Zone is within the Riparian Area

Priority Areas (Maps 15, 16, and 17)

- Approximately 16% Agricultural Priority Area
- Approximately 27% Conservation Priority Area
- Approximately 2% Special Environmental Zone

Preserved Open Space and Agricultural Lands (Map 18)

- Data generated by Highlands Council as of 12/31/07 and based on NJDEP Green Acres, SADC, county and local data available as of that date.
- Approximately 52% (23,493 acres) Preserved Open Space
- Significant parks (state)/National Wildlife Refuge (federal): Appalachian Trail (Federal), Wallkill River National Wildlife Refuge (Federal), Newark Watershed (WSMA), Hamburg Mtn Wildlife Mgmt Area (State), Wawayanda State Park (State), Pochuck Mountain (State)
- Approximately 2% (813 acres) Preserved Agricultural Land

Historic, Cultural, Archaeological and Scenic Resources (Maps 19 and 20)

- Historic resource data generated by GIS as of 12/31/07 and based on NJDEP SHPO data.
- 3 sites listed on the New Jersey / National Registers of Historic Places (NJ / NRHP)
- 1 sites deemed eligible for listing NJ / NRHP
- 10 sites with a formal SHPO opinion
- Historic Districts: Appalachian Trail
- Sites on the Highlands Scenic Resource Inventory: Appalachian Trail (Federal), Wallkill River National Wildlife Refuge (Federal), Hamburg Mtn Wildlife Mgmt Area (State), Wawayanda State Park (State)

Potential Redevelopment and Infill Opportunities (Map 21)

- Local approved Redevelopment Area
- Redevelopment Opportunity: multiple, potentially underutilized, properties identified by the Redevelopment & Infill Analysis Tool, subject to municipal approval

Impervious Surface Represented & Federal & State Potentially Contaminated Sites (Maps 22 and 23)

- All impervious surface represented
- Data represents a selection of publically reported Federal and State contaminated site database information
- 1 Highlands Tier 1 Contaminated Sites: Estate of Kenneth Kopec
- 7 Highlands Tier 2 Contaminated Sites: Dorothy Henry Memorial Library, George Wallhauser, Bob Baldwins Transportation Inc., Mobil #57722, Seasons Resort, Vernon Garage, Vernon Gulf

Transportation/Transit Conditions (Maps 24 and 25)

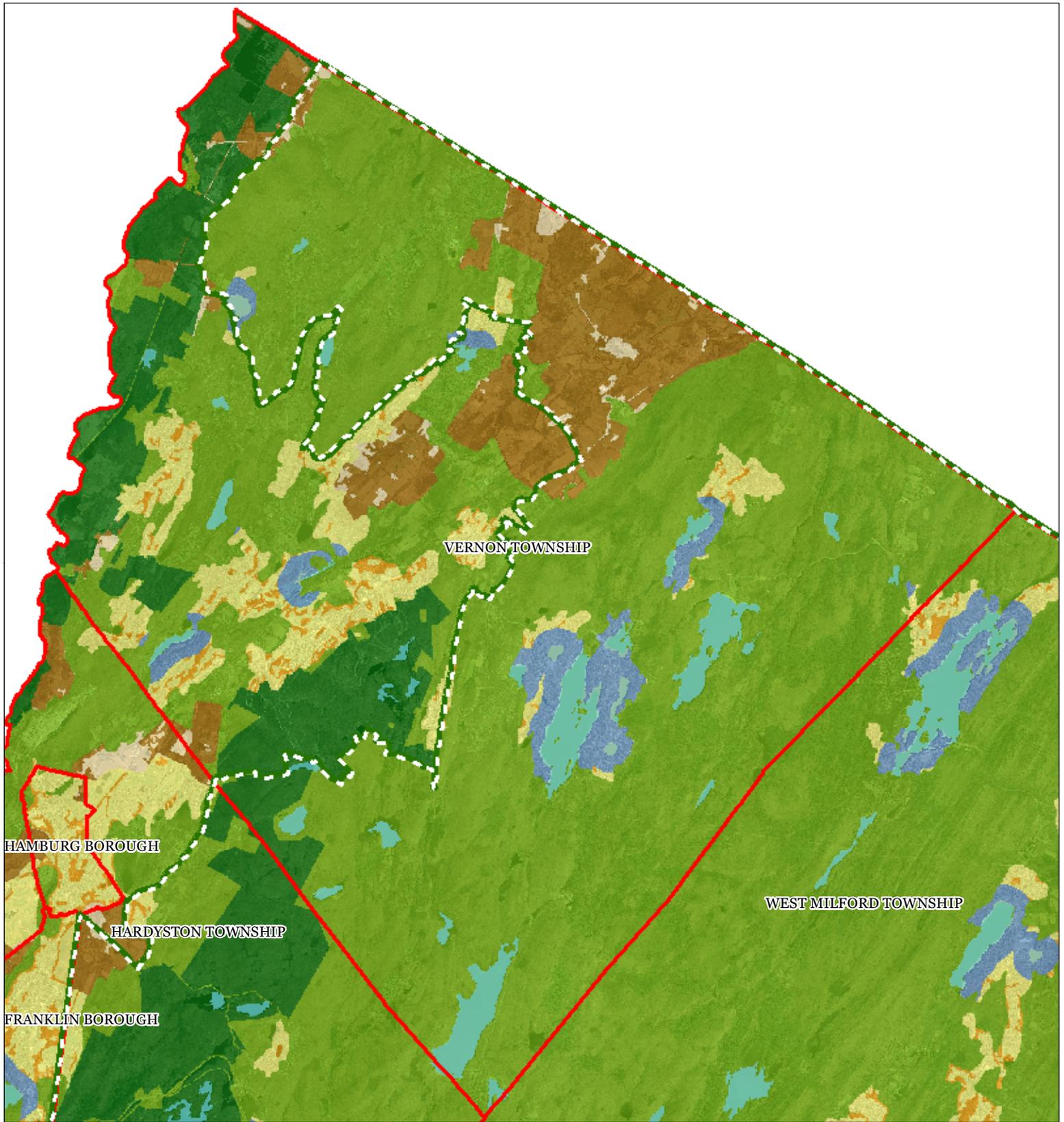
- 1 active and 1 abandoned freight line
- NJ Transit public bus commuter services
- Transit Score ≥ 3

COAH Third Round Status (Informational only no map)

- **COAH Extension:** Yes / Date of Resolution: 12/01/08
- Date Petition Filed for Third round: 12/16/05 / Status: Petition
- Rehab = 31 / Adj. Prior Round = 60 / Projected Growth Share (2004 through 2018) = 389 units
- Actual Certificates of Occupancy (Jan. 2004 through June 2008) = 312 units (20% = 62 units)
Non-residential square footage = 853,507 sq. ft. = 89 affordable units (estimate)
- **COAH Growth Share Vacant Land Numbers (Full Build Out)**
 - Preservation Area = 1,736 units, Planning Area = 308 units, Total = 2,044 *20% = 408 affordable units
 - Non-residential square footage = 2,825,226 sq. ft. = 379 affordable units (estimate)
- Trust Fund Balance = \$589,090
- Existing Population = 24,686 (2000 census)

Highlands Grant Programs and Status (Informational only no map)

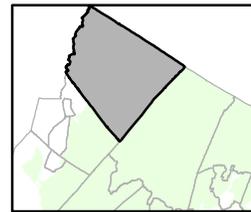
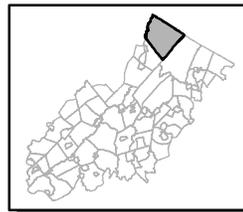
- 2005 COAH Round 3 Grant \$7,500; Status: Executed
- 2008 Initial Assessment Grant \$15,000; Status: Closed
- 2009 Plan Conformance Grant \$50,000; Status: Executed
- 2009 WUCMP Pilot Grant \$5,000; Status: Application Received



Regional Master Plan Overlay Zone Designation

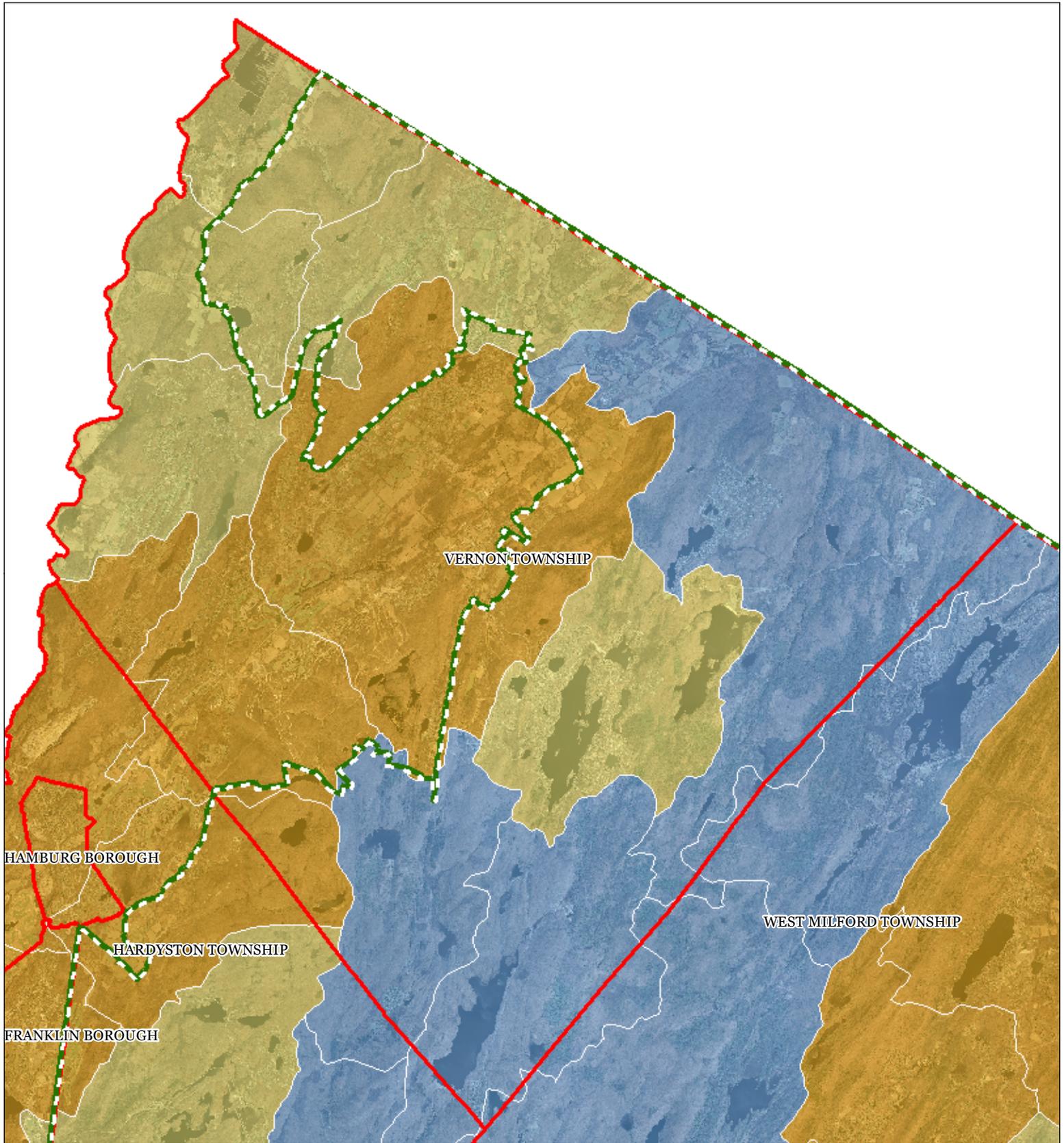
- Zone**
- Protection
 - Conservation
 - Existing Community
 - Existing Community Environmentally Constrained
 - Conservation Environmentally Constrained
 - Lake Community
 - Wildlife Management
- Sub-Zone**
- Existing Community Environmentally Constrained
 - Conservation Environmentally Constrained
 - Lake Community
 - Wildlife Management
- Lakes Greater Than 10 acres
 - Preservation Area
 - Municipal Boundaries

VERNON TOWNSHIP



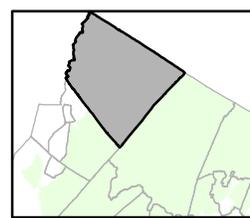
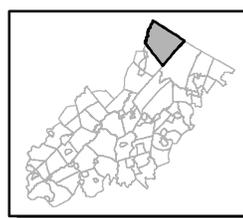
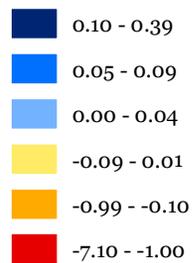
1 inch = 1.477 miles





Net Water Availability by HUC14 Subwatershed

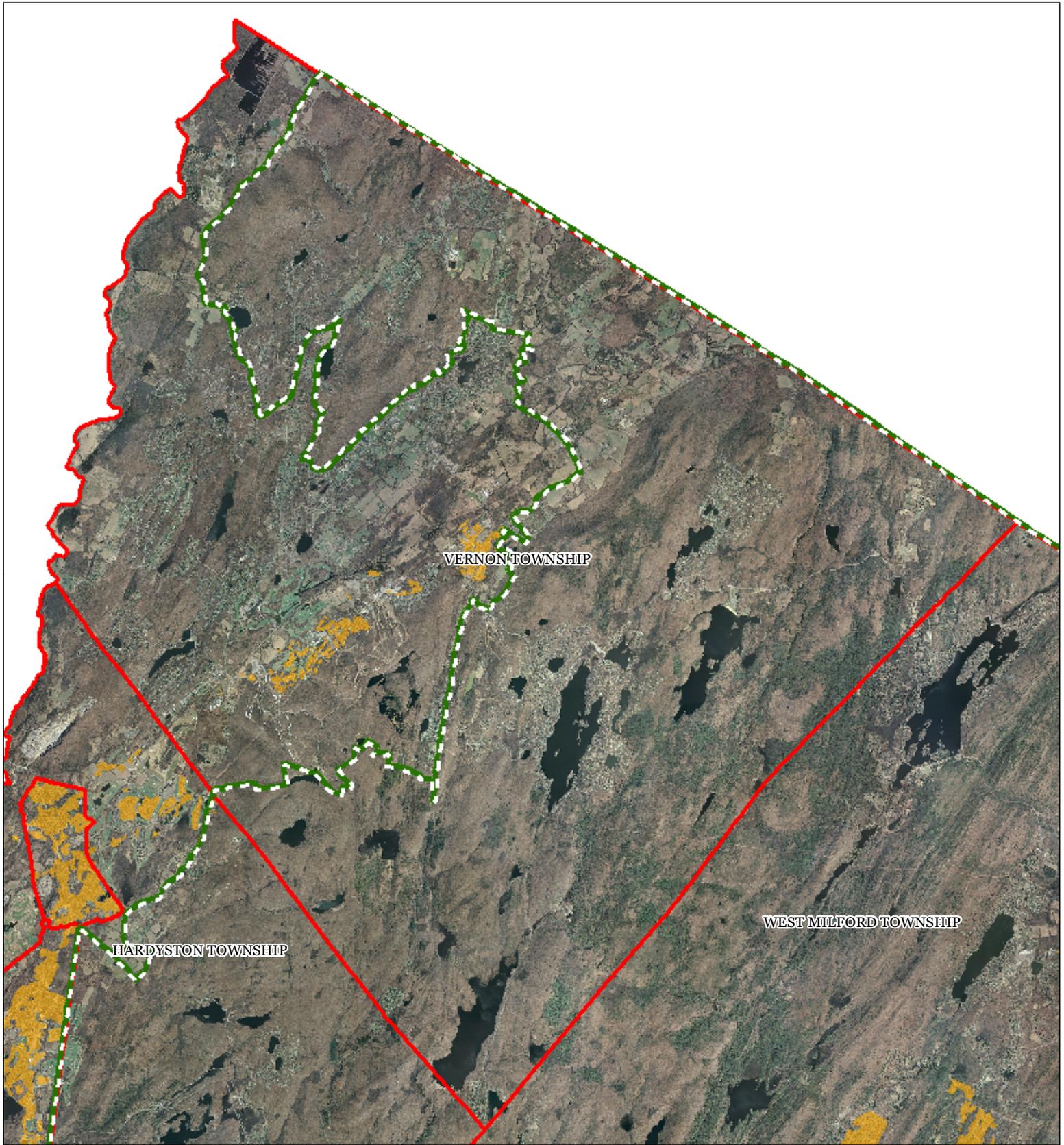
Million Gallons Per Day (MGD)



1 inch = 1.477 miles



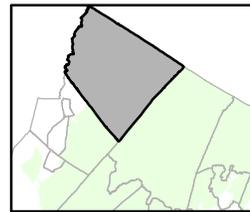
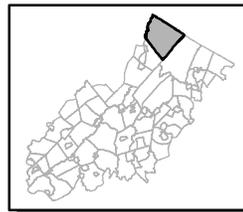
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Highlands Domestic Sewerage Facilities

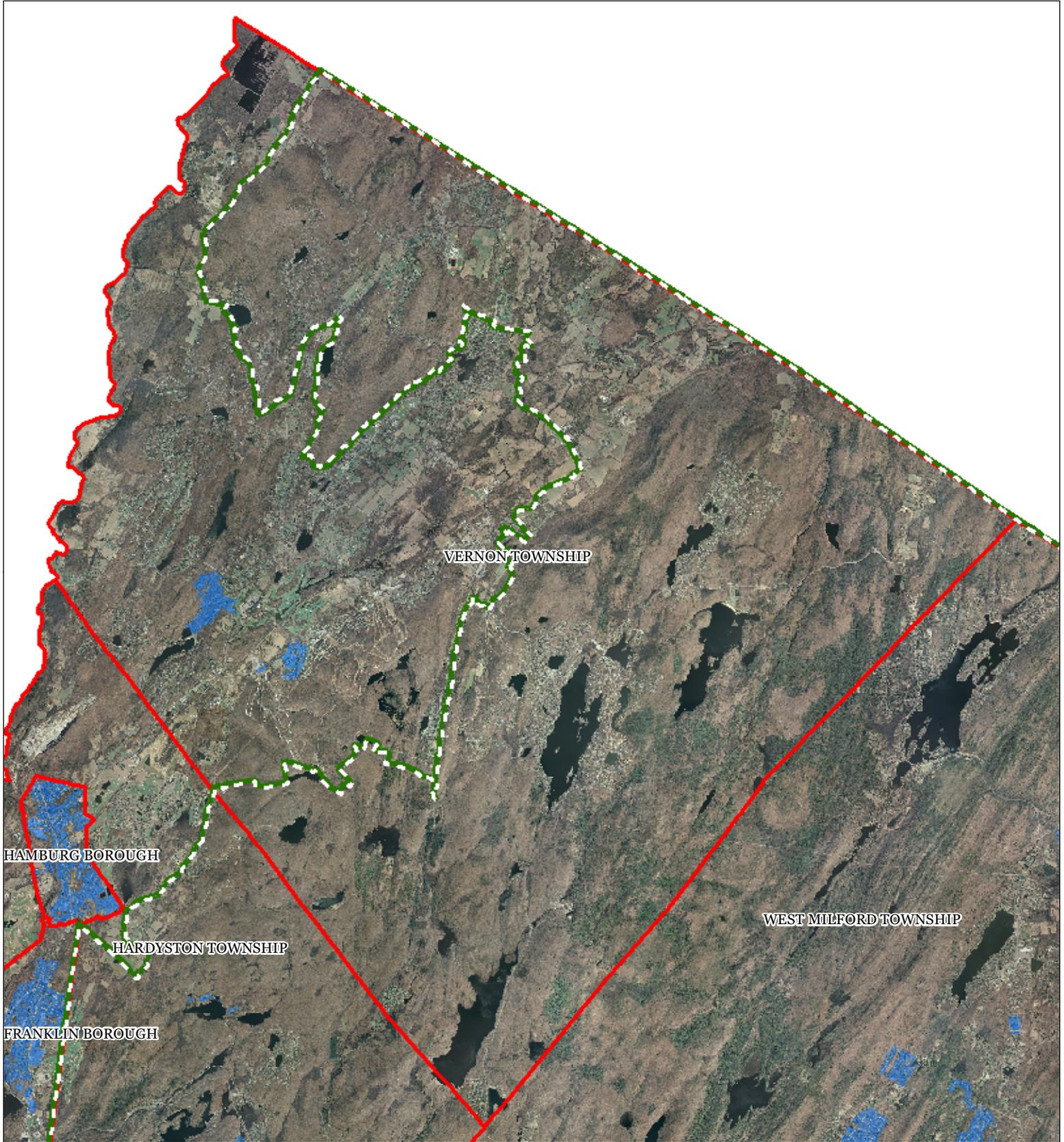
- Existing Area Served
- Preservation Area
- Municipal Boundaries

VERNON TOWNSHIP



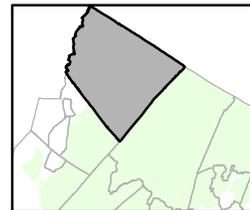
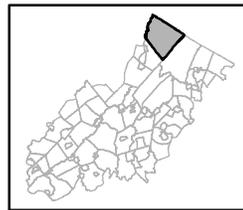
1 inch = 1.476 miles





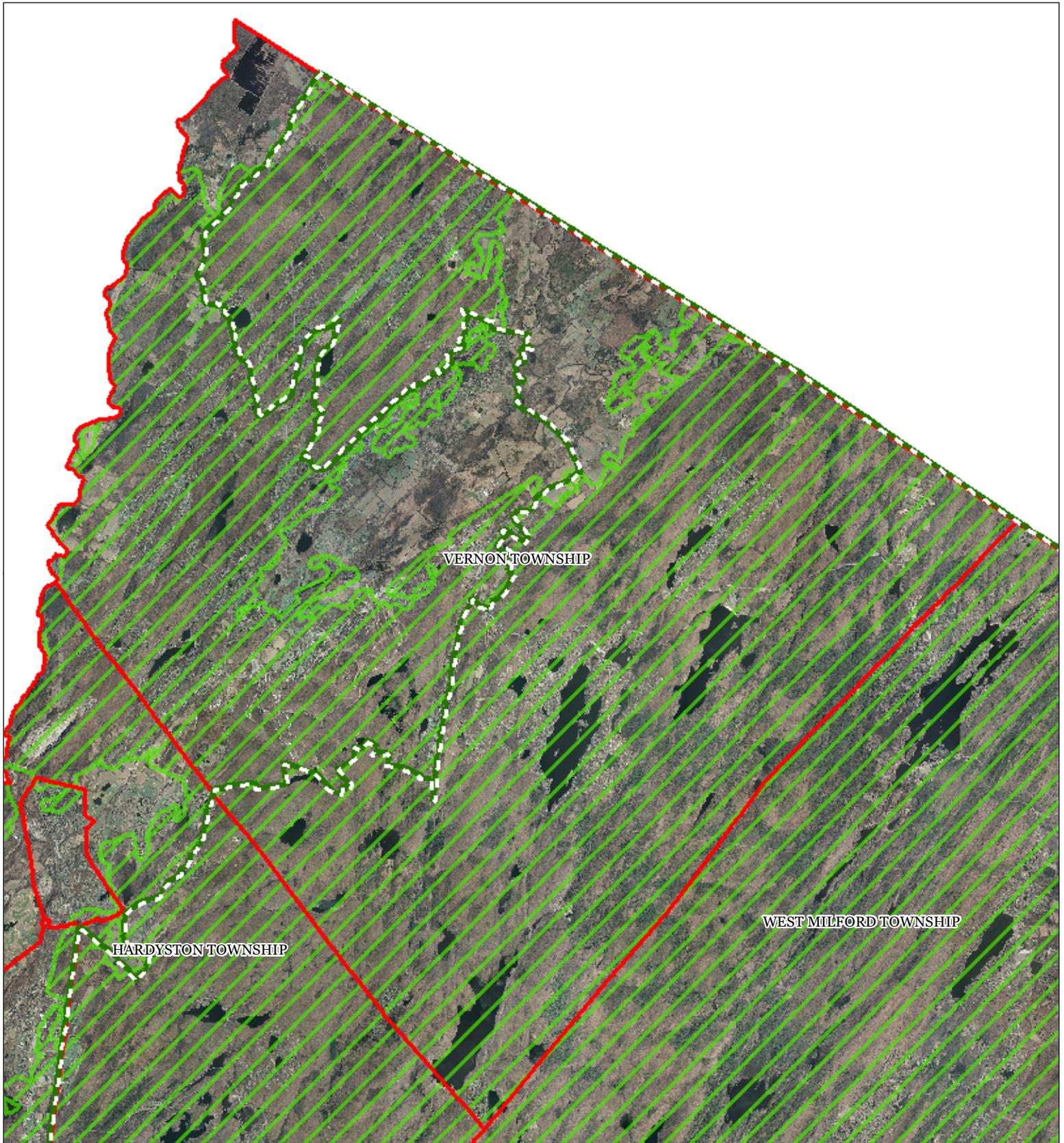
-  Public Community Water Systems
-  Preservation Area
-  Municipal Boundaries

VERNON TOWNSHIP



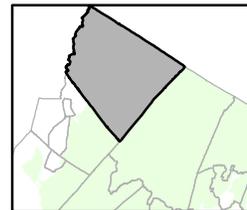
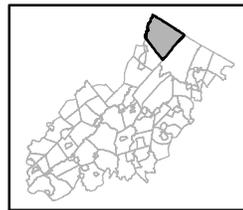
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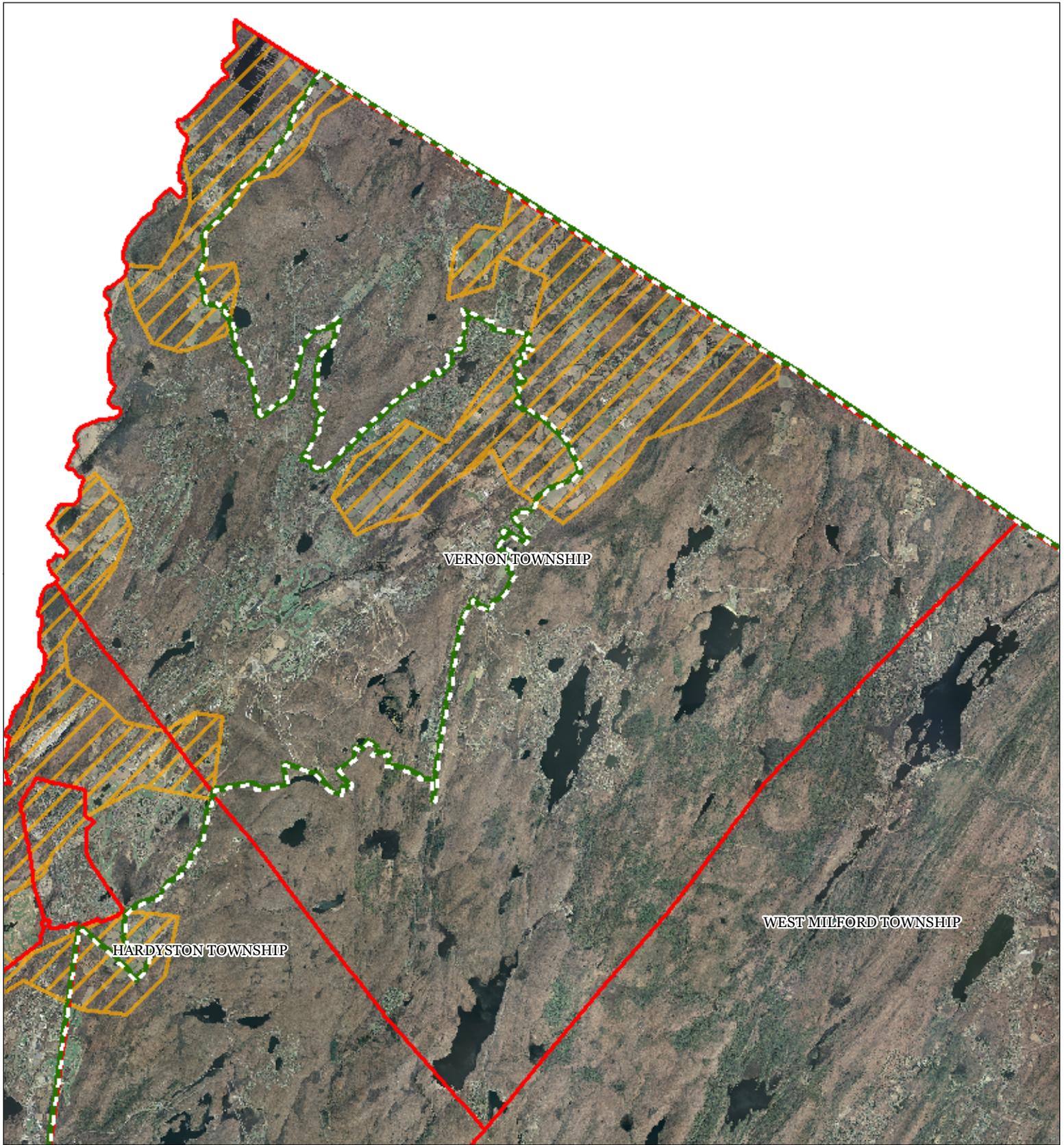
-  Forest Resource Area
-  Preservation Area
-  Municipal Boundaries

VERNON TOWNSHIP



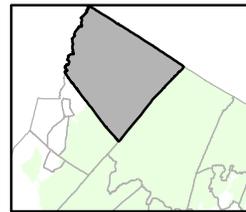
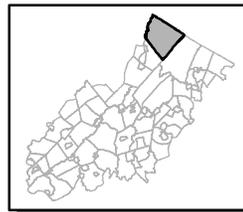
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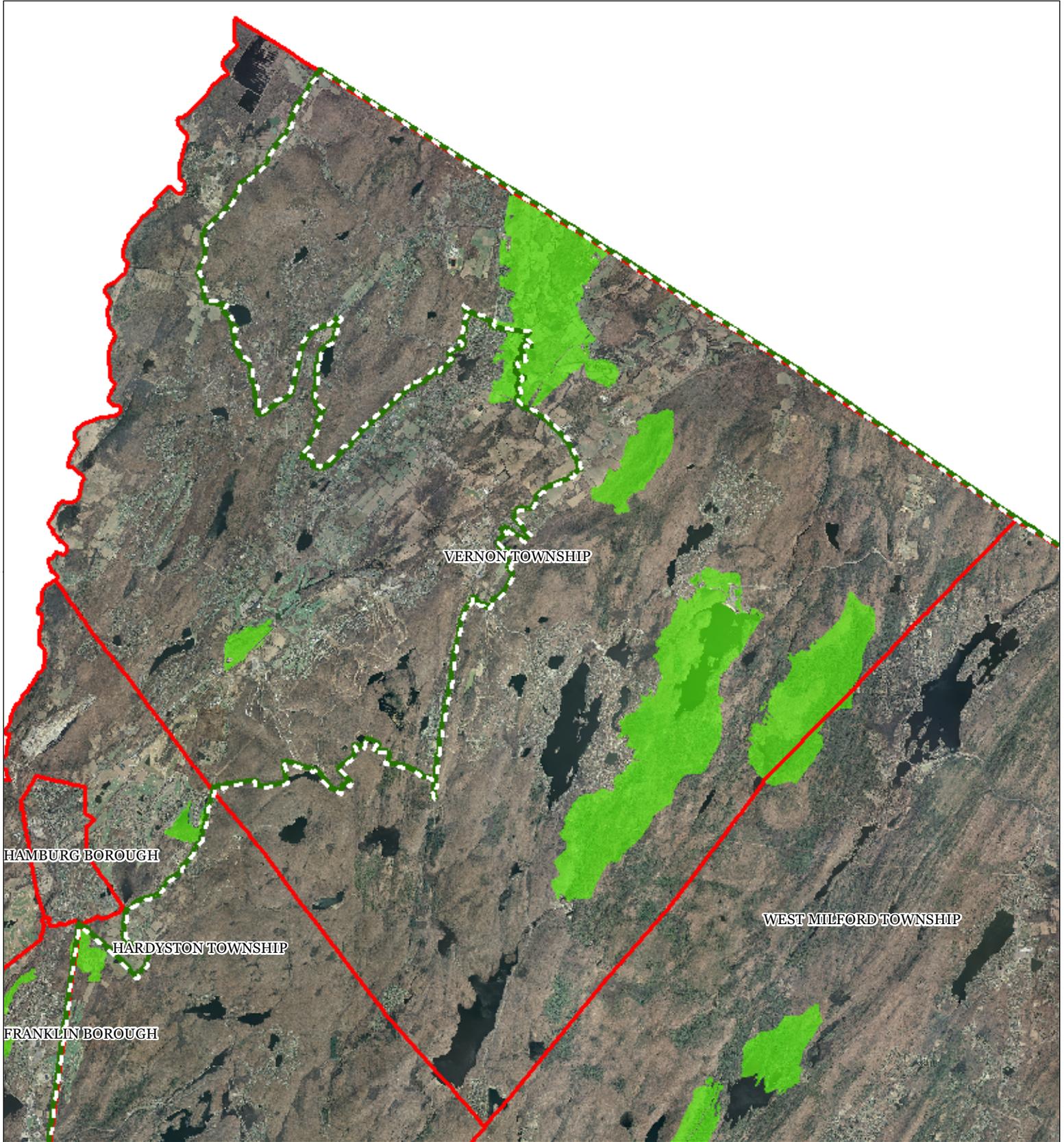
-  Agricultural Resource Area
-  Preservation Area
-  Municipal Boundaries

VERNON TOWNSHIP



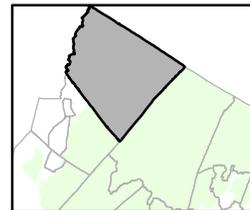
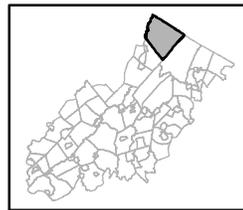
1 inch = 1.476 miles





- Significant Natural Areas
- Preservation Area
- Municipal Boundaries

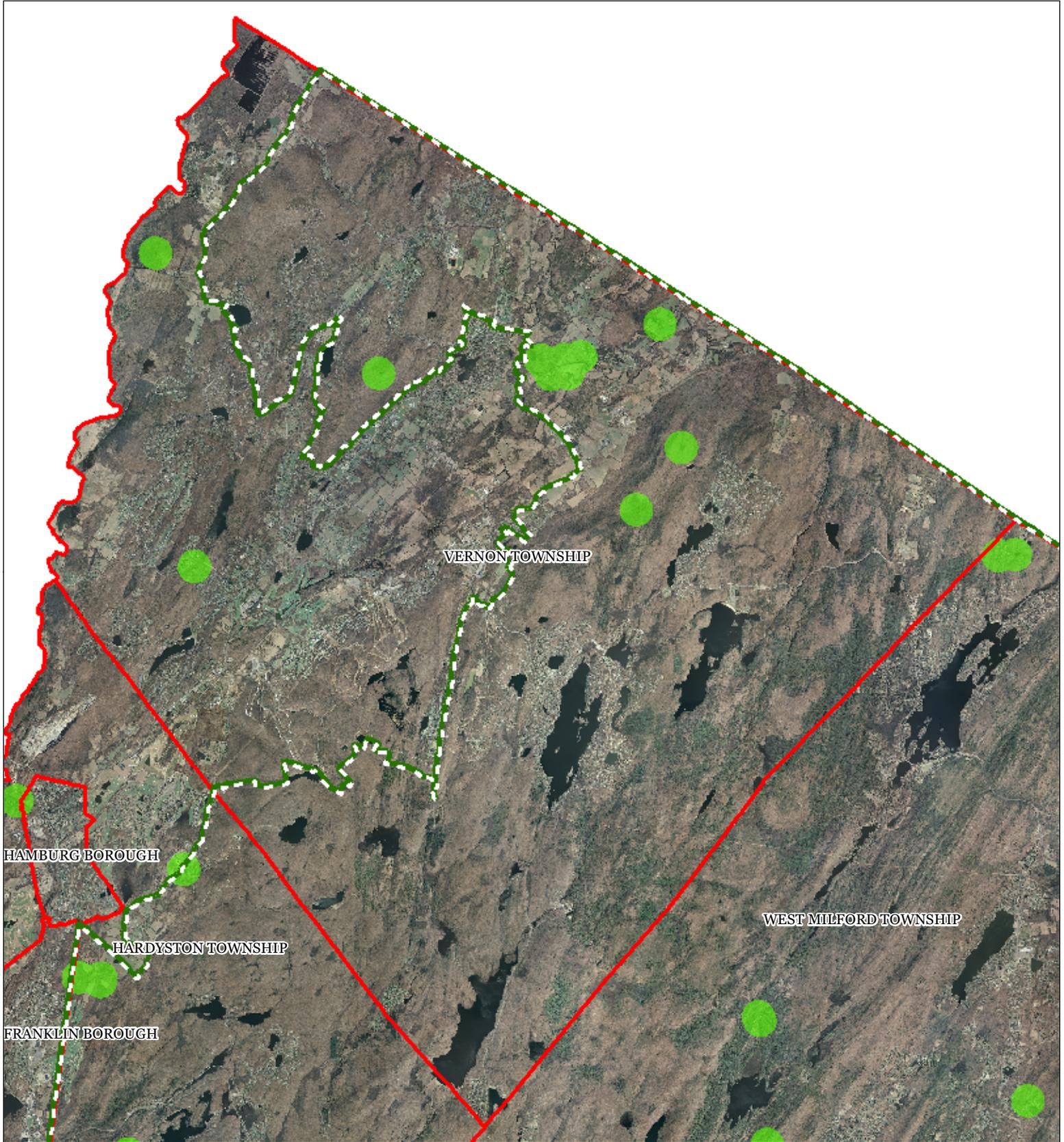
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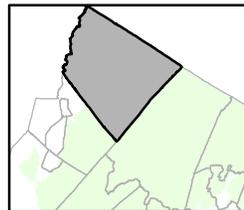
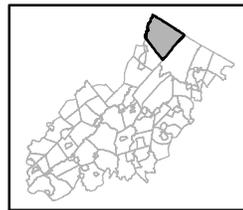


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- Vernal Pools + 1000ft Buffer
- Preservation Area
- Municipal Boundaries

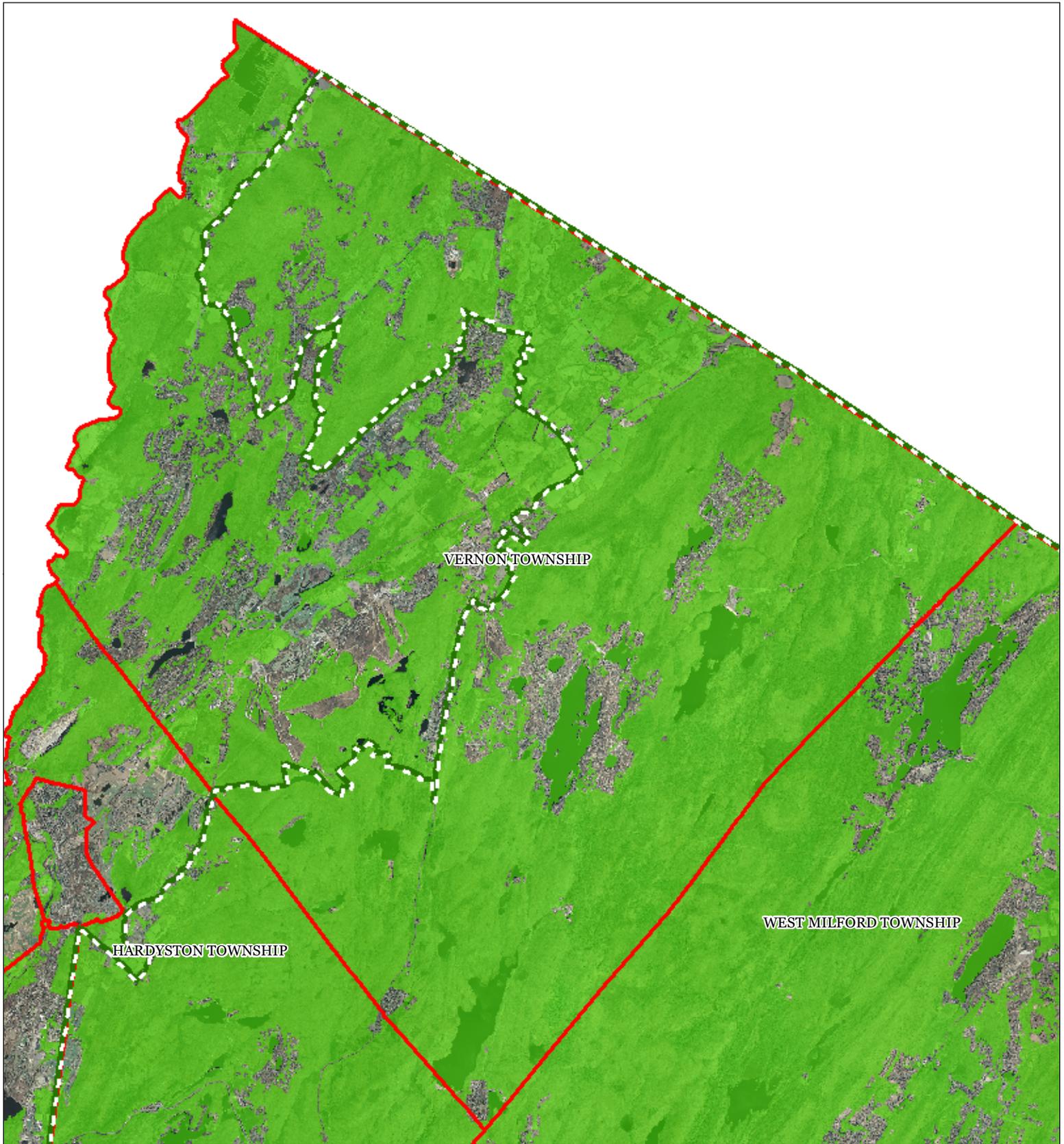
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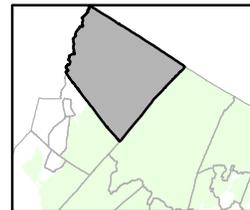
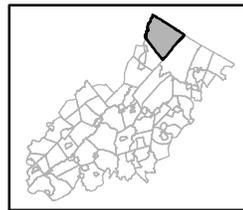


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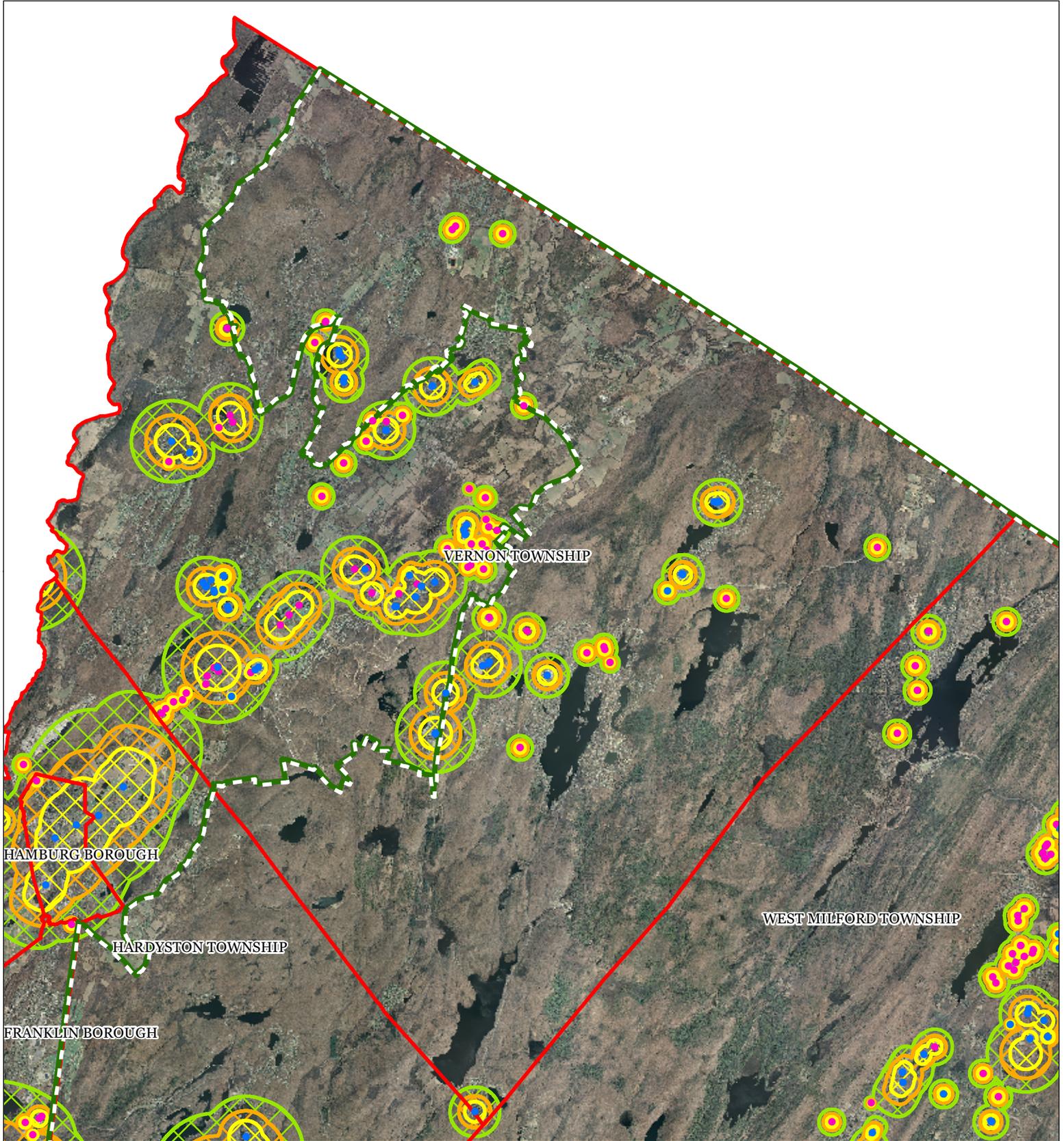
-  Critical Wildlife Habitat
-  Preservation Area
-  Municipal Boundaries

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1 inch = 1.476 miles





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HAMBURG BOROUGH

HARDYSTON TOWNSHIP

FRANKLIN BOROUGH

WEST MILFORD TOWNSHIP

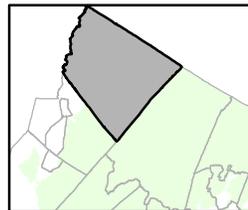
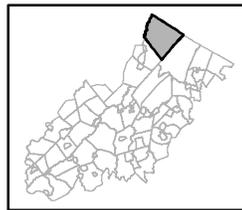
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- Public Community Wells
- Non-Public Community Wells

Wellhead Protection Areas

-  2-Year Tier
-  5-Year Tier
-  12-Year Tier

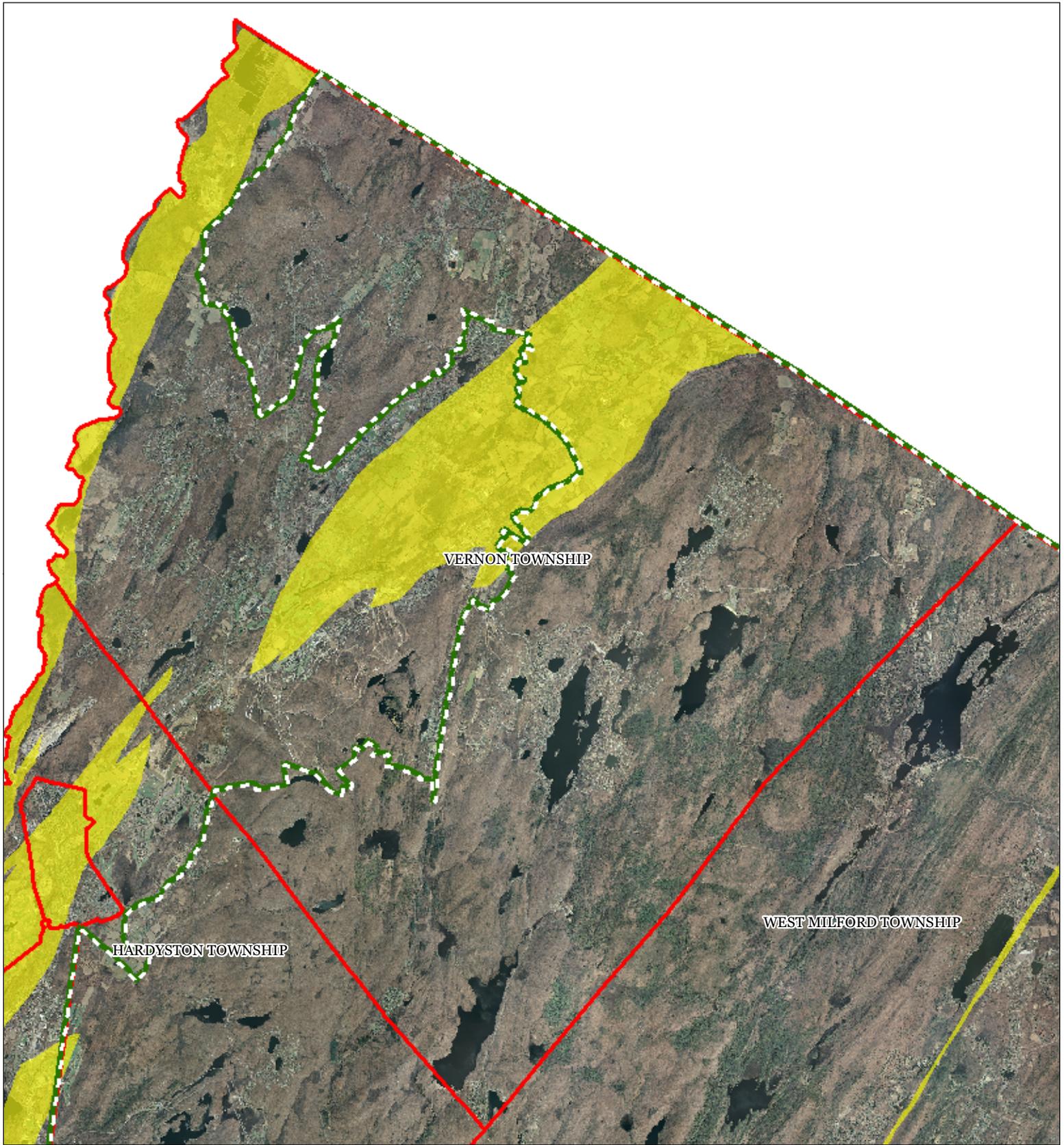
-  Preservation Area
-  Municipal Boundaries



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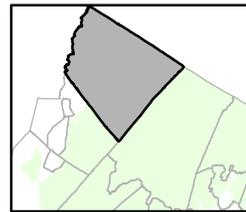
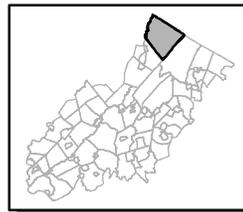


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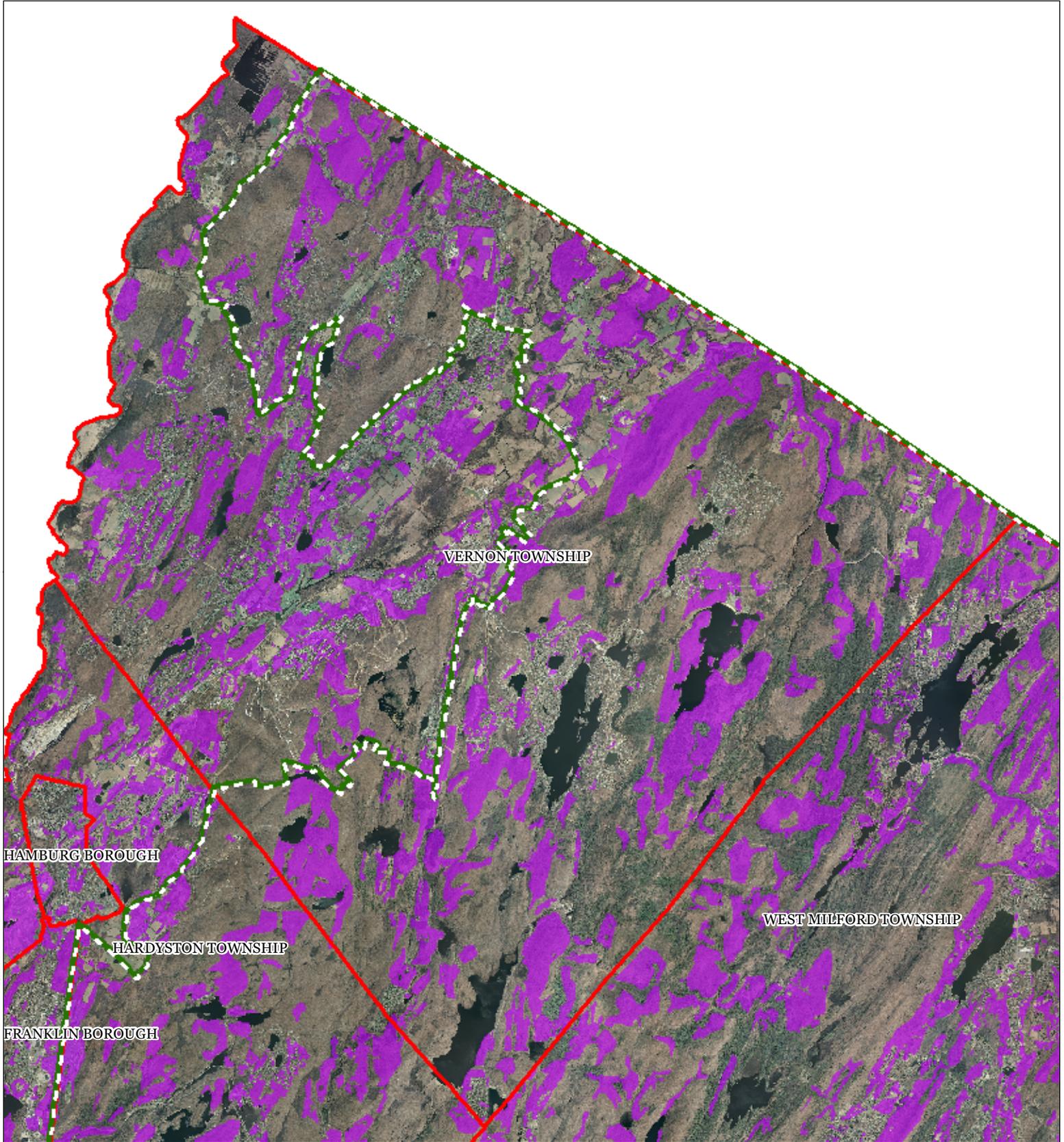
-  Carbonate Rock Area
-  Preservation Area
-  Municipal Boundaries

VERNON TOWNSHIP



1 inch = 1.476 miles





VERNON TOWNSHIP

HAMBURG BOROUGH

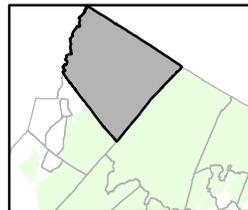
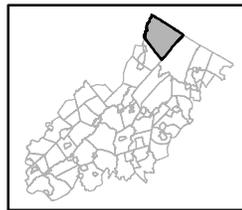
HARDYSTON TOWNSHIP

FRANKLIN BOROUGH

WEST MILFORD TOWNSHIP

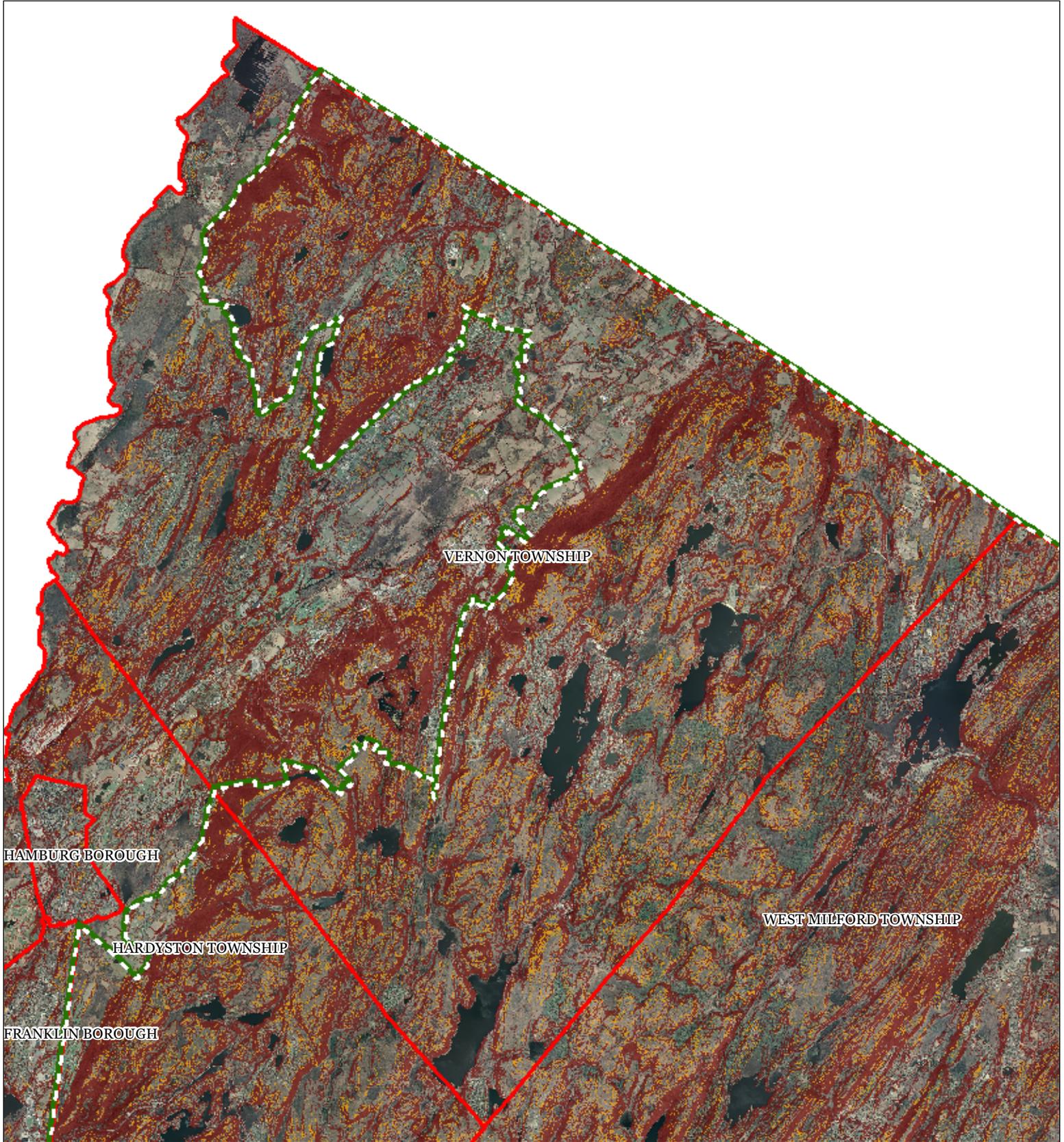
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-  Prime Ground Water Recharge Areas
-  Preservation Area
-  Municipal Boundaries



1 inch = 1.477 miles

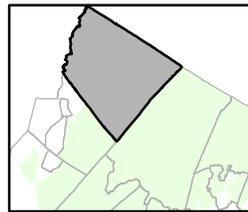
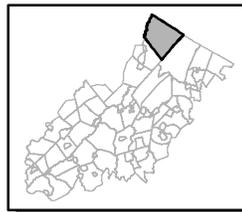




Step Slopes

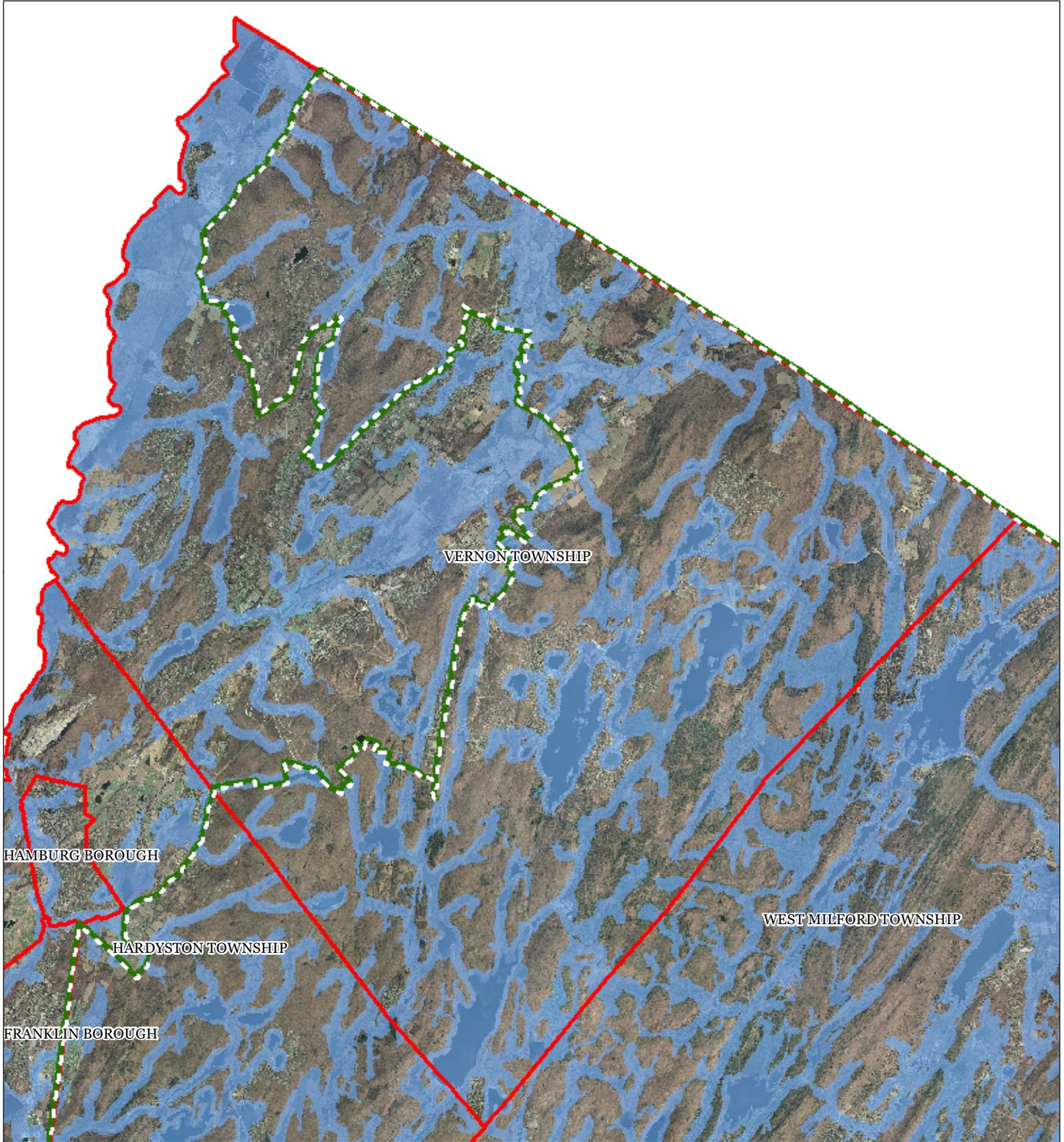
-  Moderate
-  Severe
-  Preservation Area
-  Municipal Boundaries

VERNON TOWNSHIP



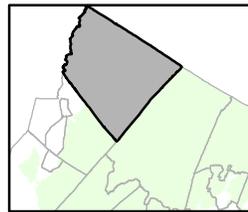
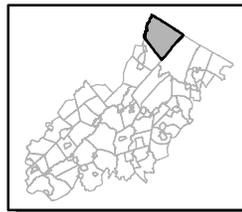
1 inch = 1.476 miles





- Riparian Area
- Preservation Area
- Municipal Boundaries

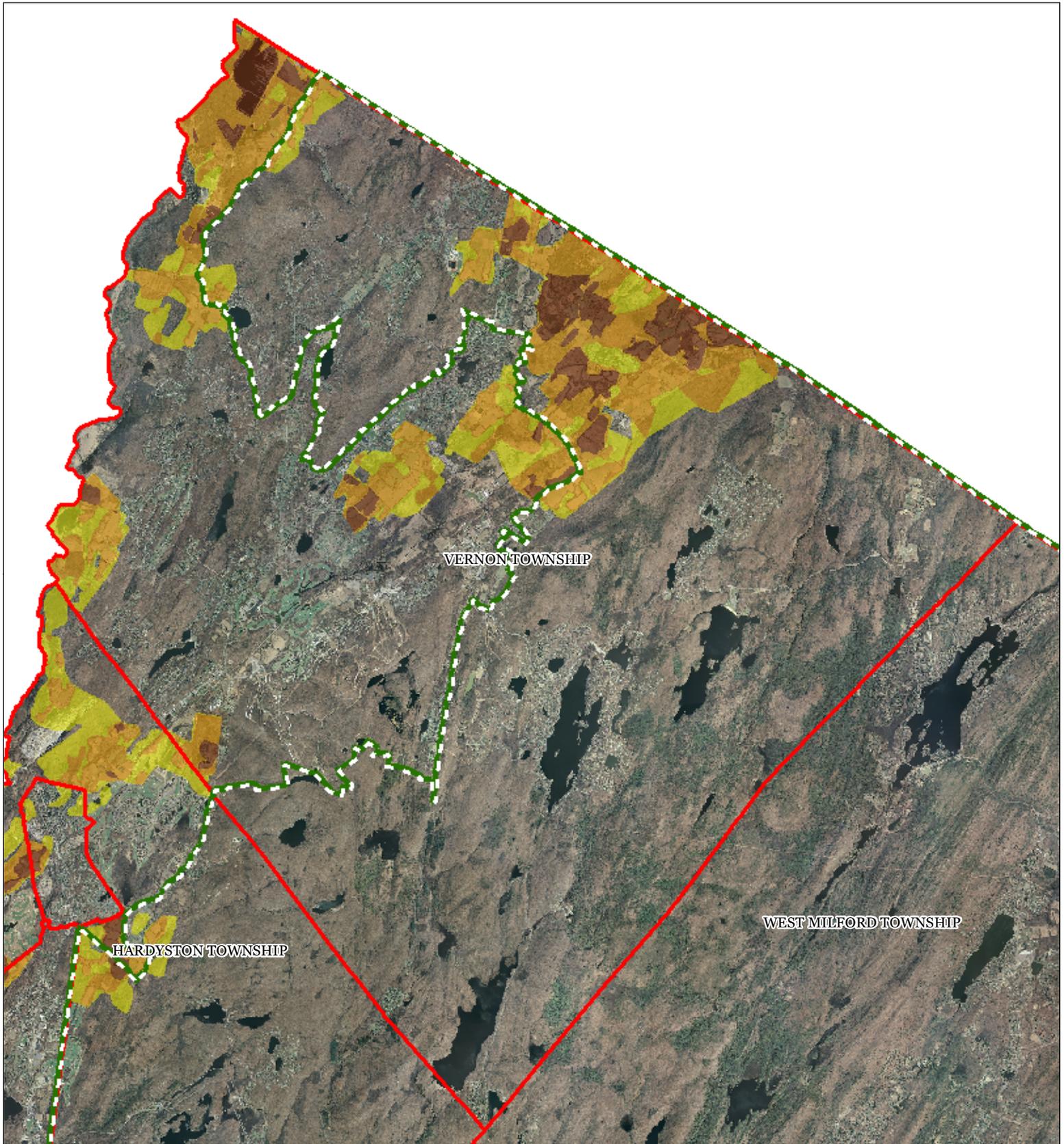
VERNON TOWNSHIP



1 inch = 1.476 miles



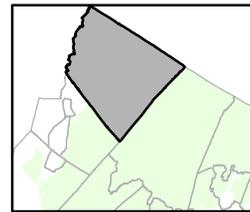
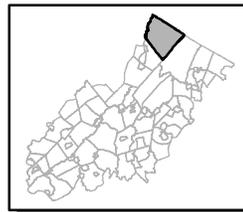
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Agricultural Priority Area

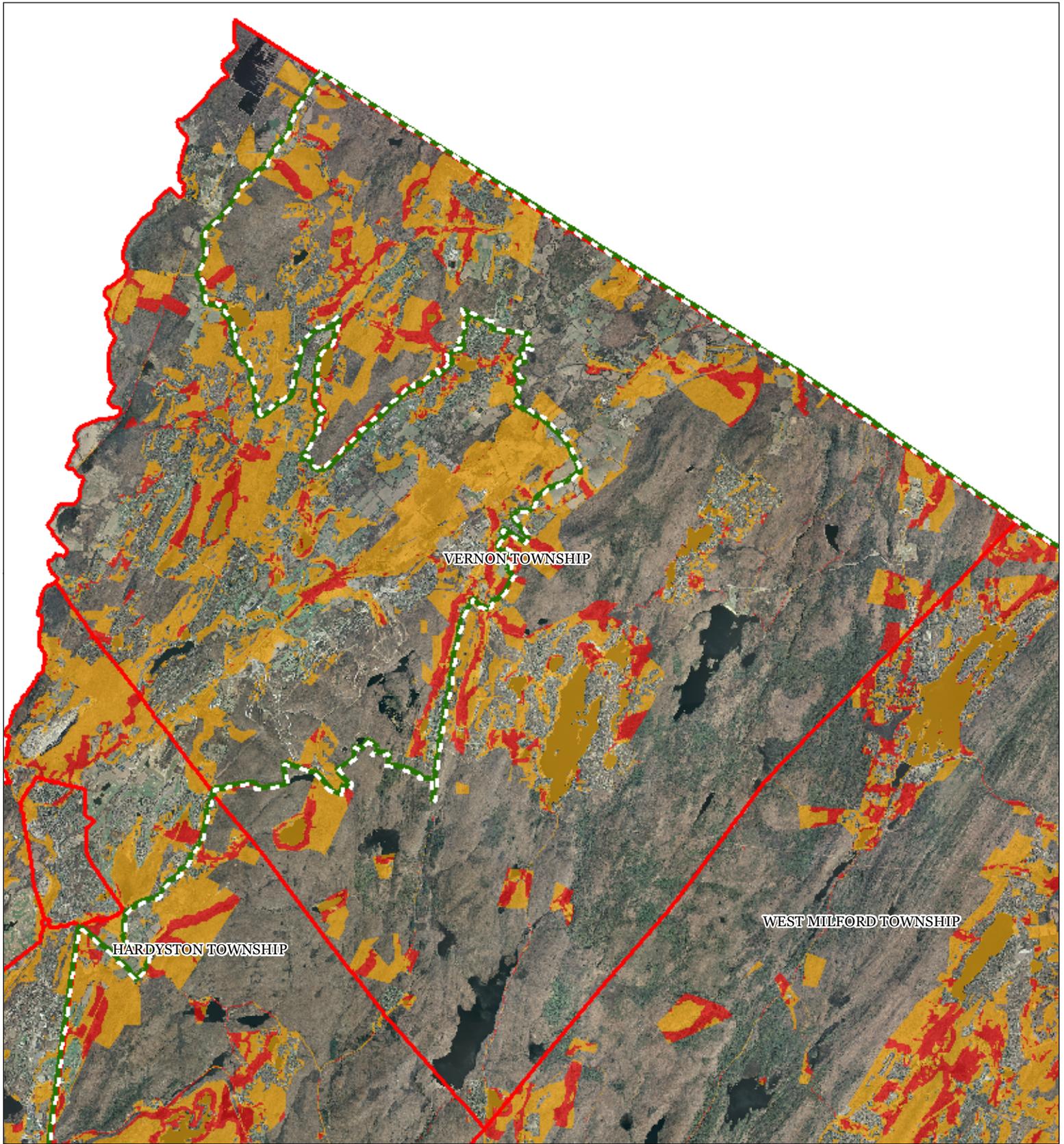
-  *Low*
-  *Moderate*
-  *High*
-  Preservation Area
-  Municipal Boundaries

VERNON TOWNSHIP



1 inch = 1.476 miles

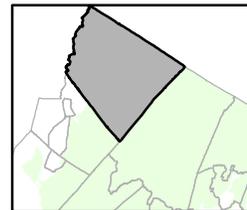
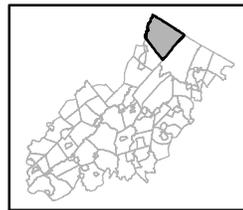




Conservation Priority Area

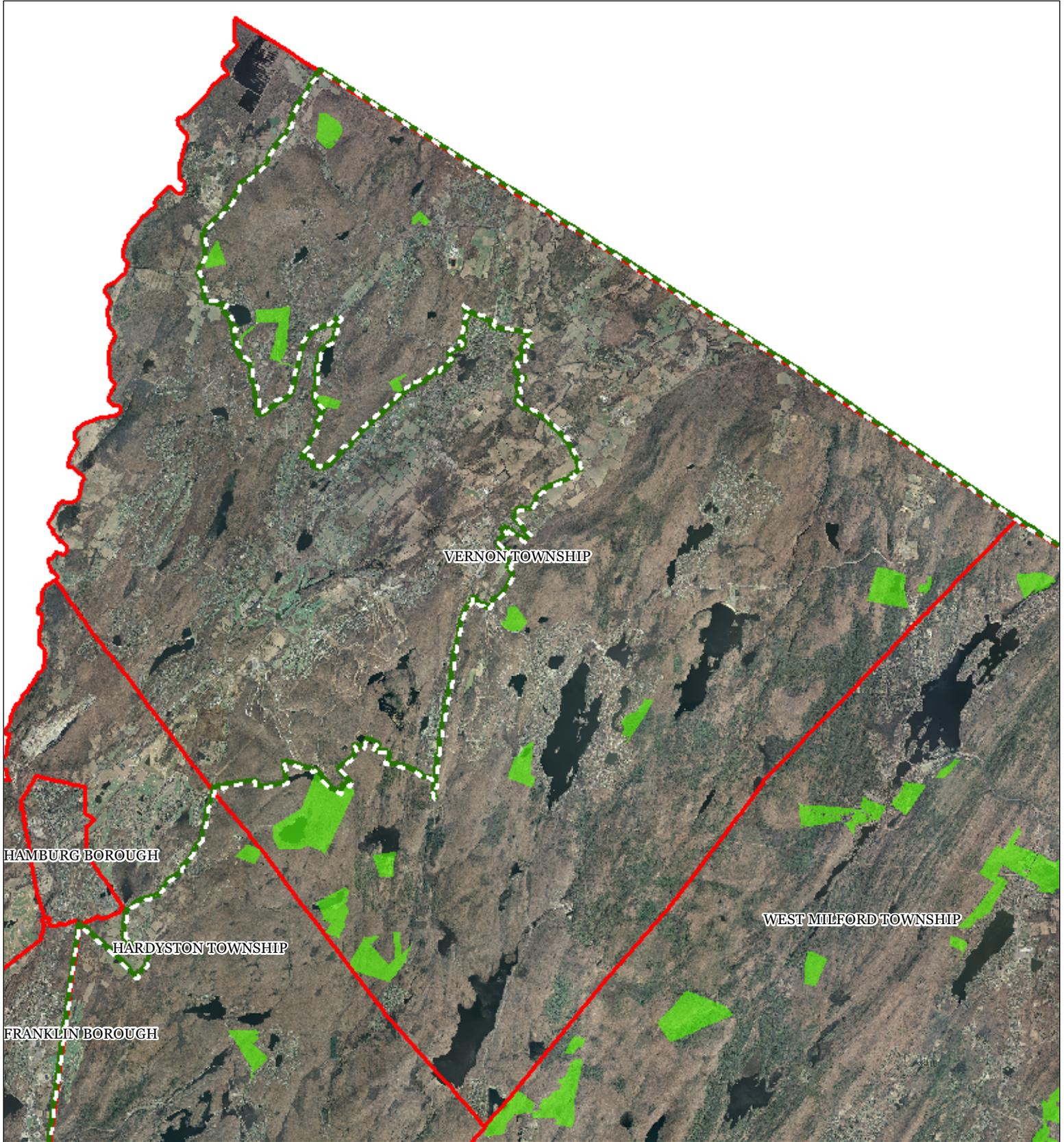
- Moderate
- High
- Preservation Area
- Municipal Boundaries

VERNON TOWNSHIP



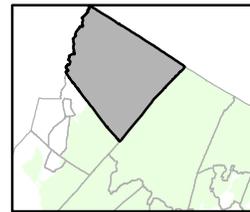
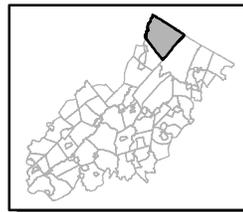
1 inch = 1.476 miles





-  Special Environmental Zones
-  Preservation Area
-  Municipal Boundaries

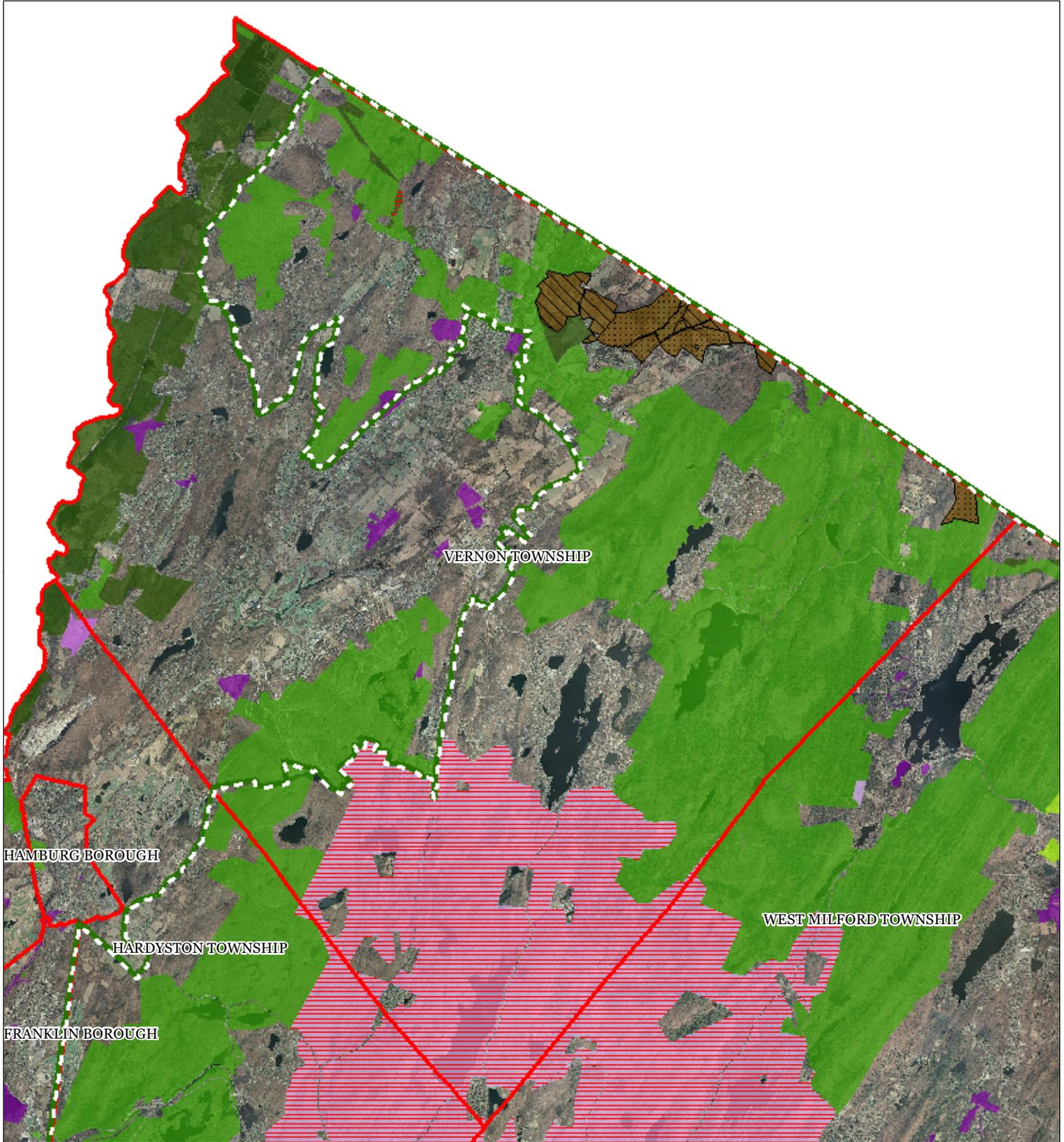
VERNON TOWNSHIP



1 inch = 1.476 miles

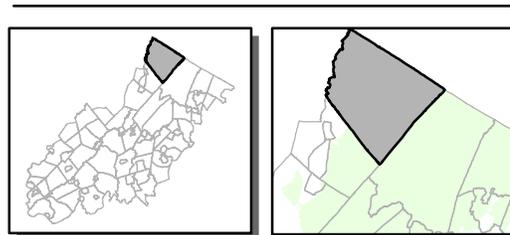


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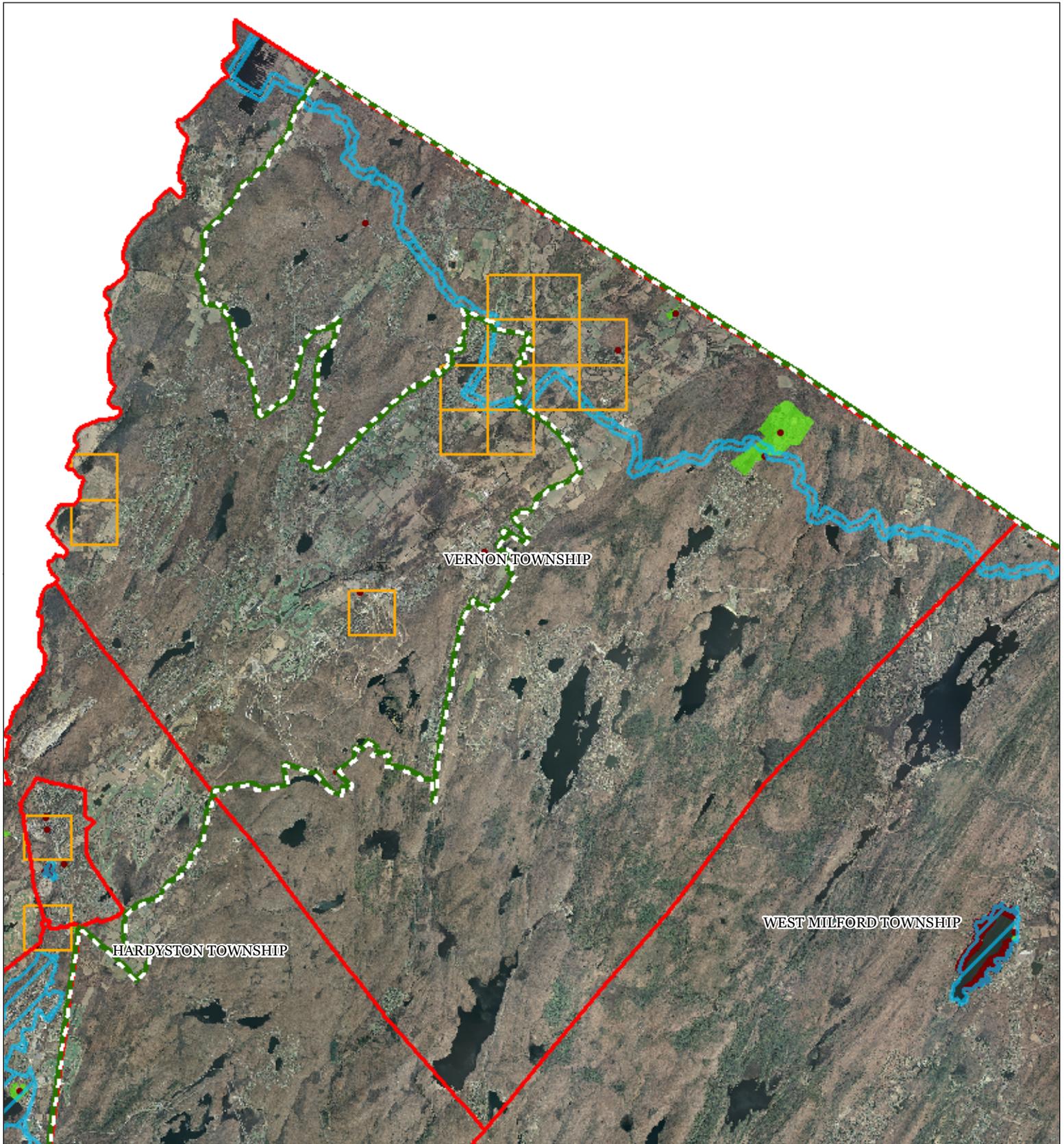
| Conservation Easements | Preserved Lands |
|------------------------|-------------------------------|
| Green Acres | Federal Open Space |
| SADC Final | State Open Space |
| SADC 8 Year | County Open Space |
| SADC Preserved | Municipal Open Space |
| Municipal Boundaries | Non-Profit/Private Open Space |
| Preservation Area | Water Supply Watershed Lands |
| | Preserved Farmland |

VERNON TOWNSHIP



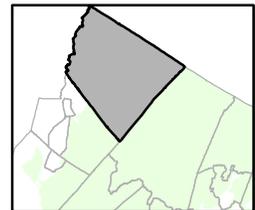
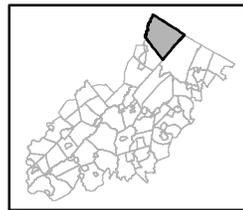
1 inch = 1.476 miles





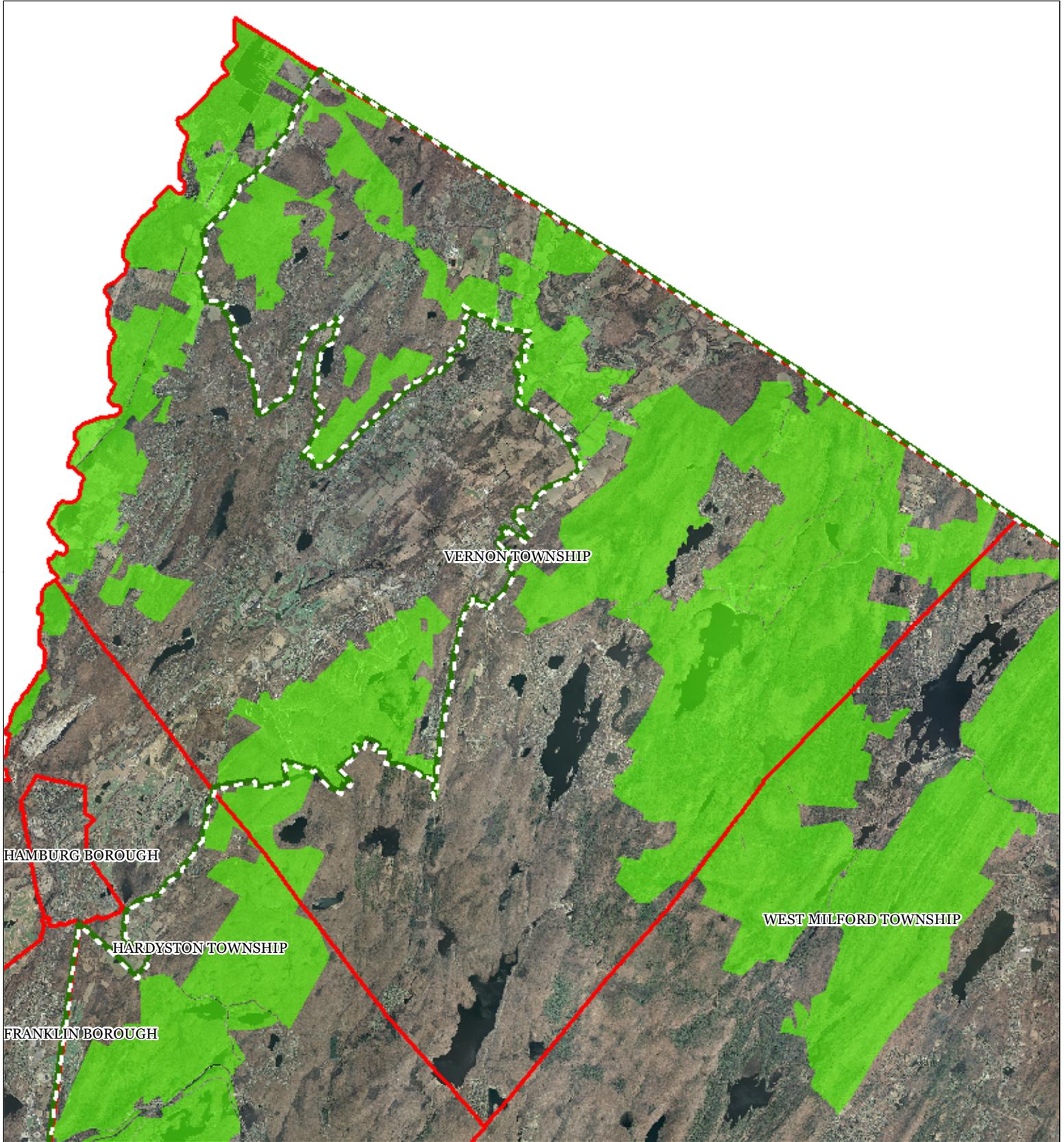
-  Preservation Area
-  Municipal Boundaries
-  Archaeological Grids (1 sqmi)
-  NJ Historic Districts
-  Historic Property Points
-  Historic Property Polygons

VERNON TOWNSHIP



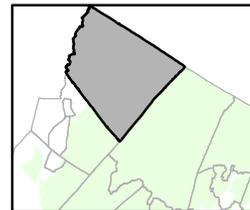
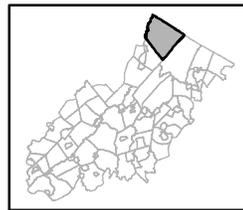
1 inch = 1.476 miles





VERNON TOWNSHIP

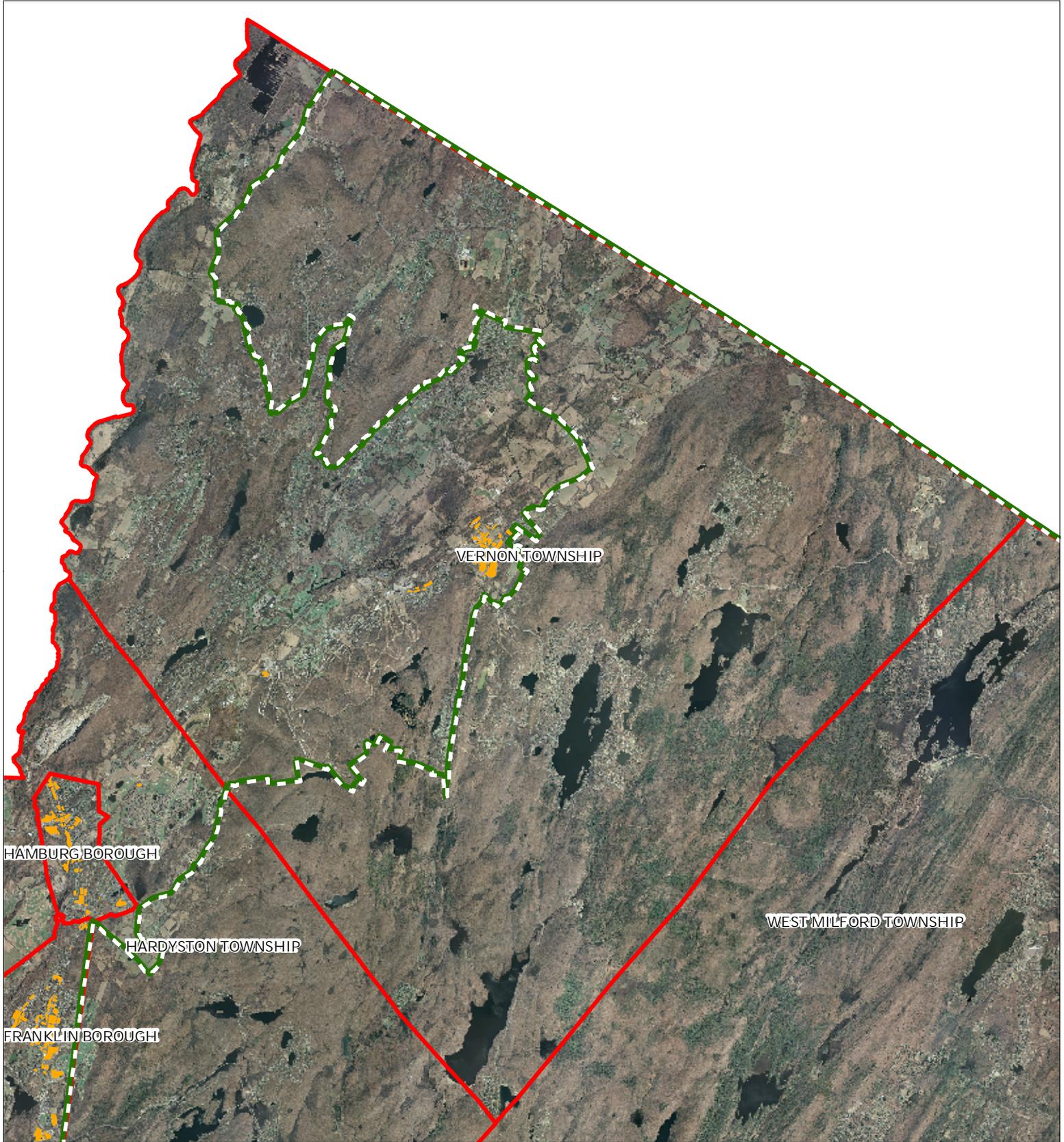
-  Scenic Resources
-  Municipal Boundaries
-  Preservation Area



1 inch = 1.476 miles

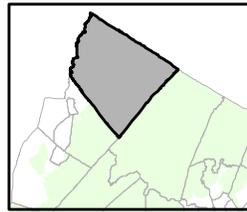
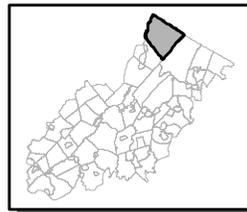


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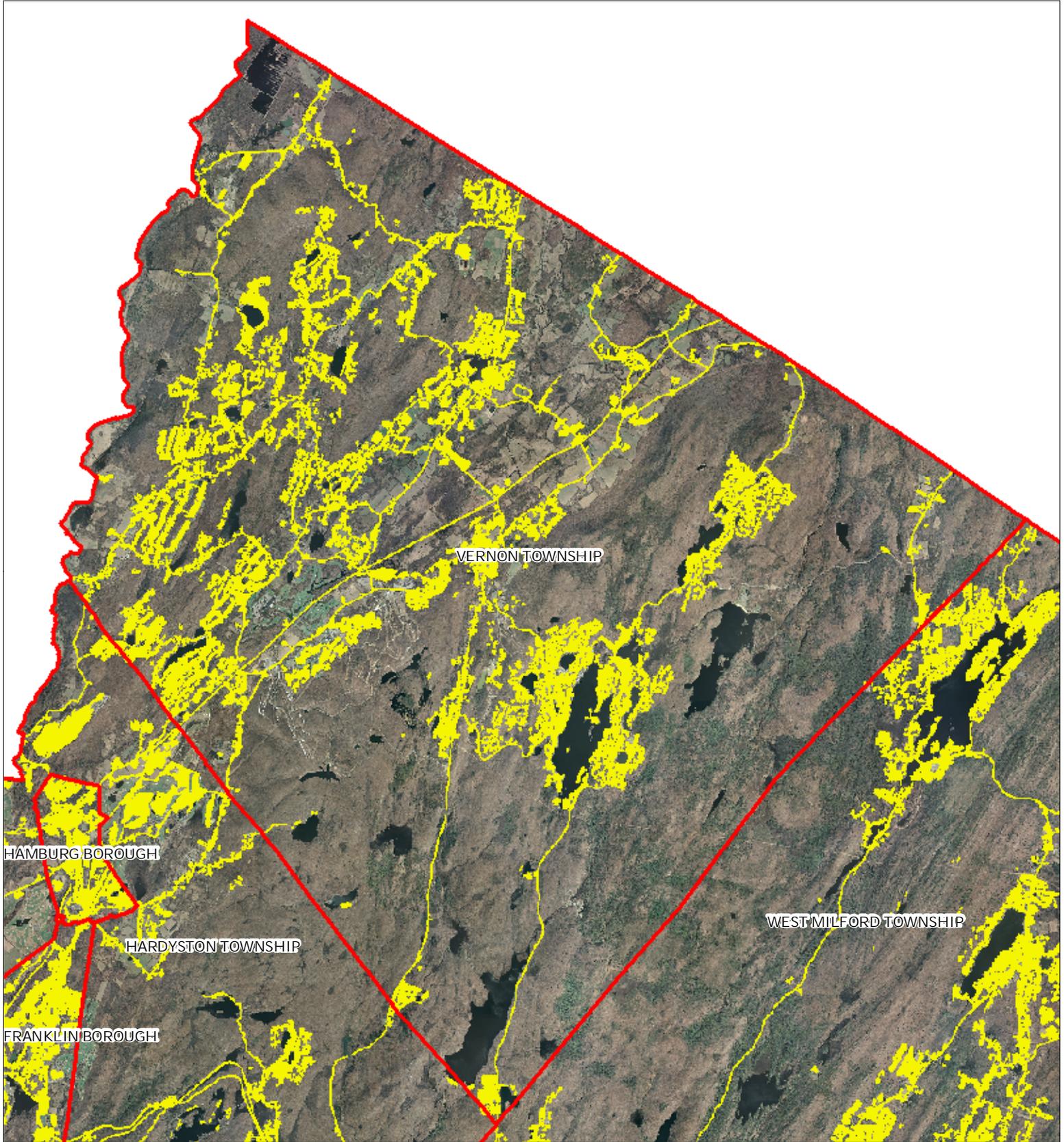
-  Redevelopment Opportunity
-  Municipal Boundaries

VERNON TOWNSHIP



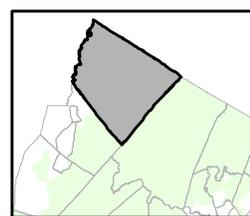
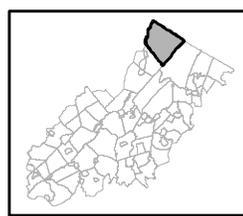
1 inch = 1.484 miles





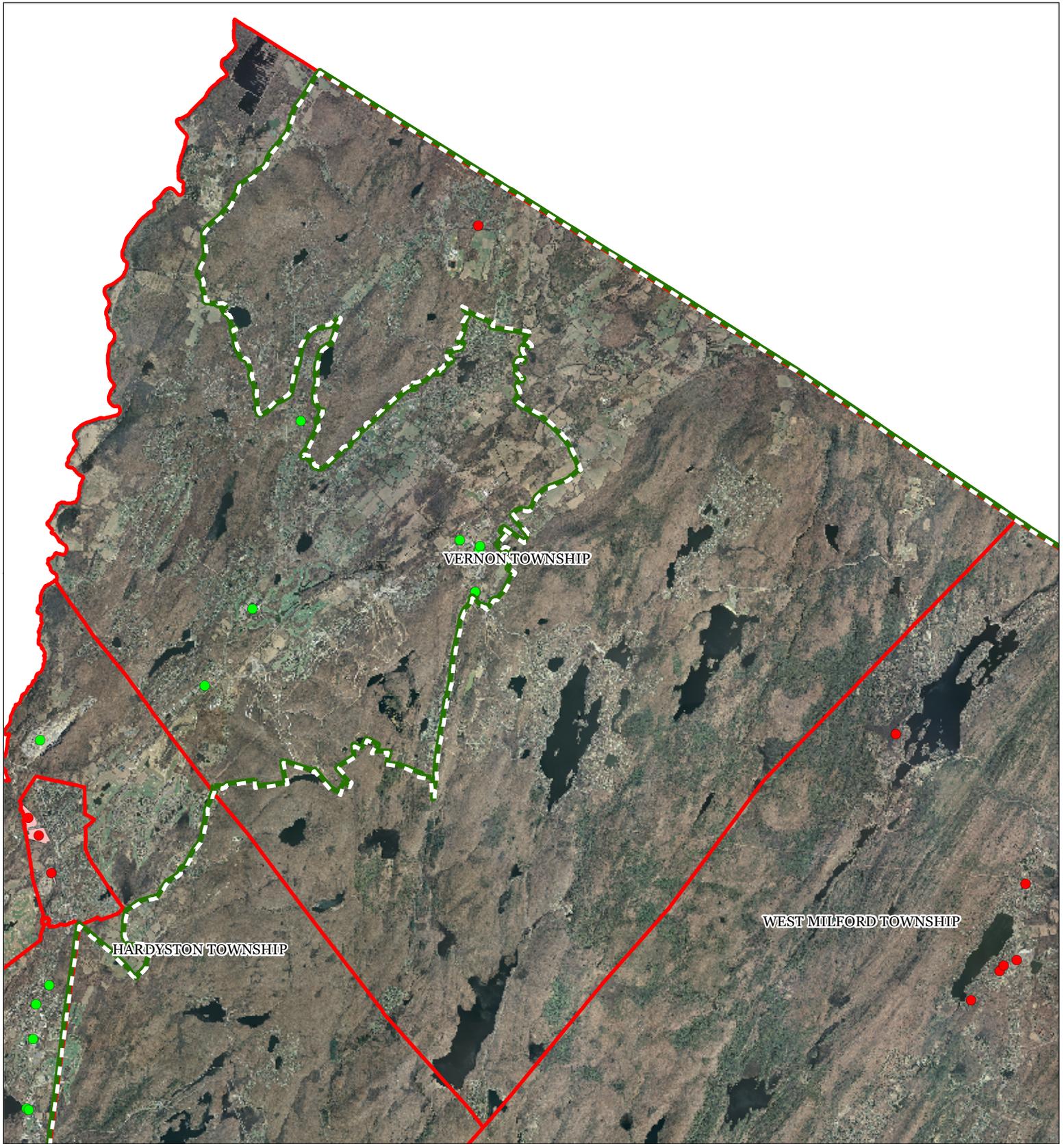
VERNON TOWNSHIP

-  Impervious Surface
-  Municipal Boundaries



1 inch = 1.484 miles

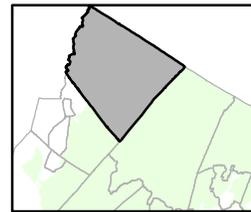
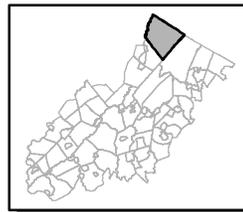




Highlands Contaminated Site Inventory

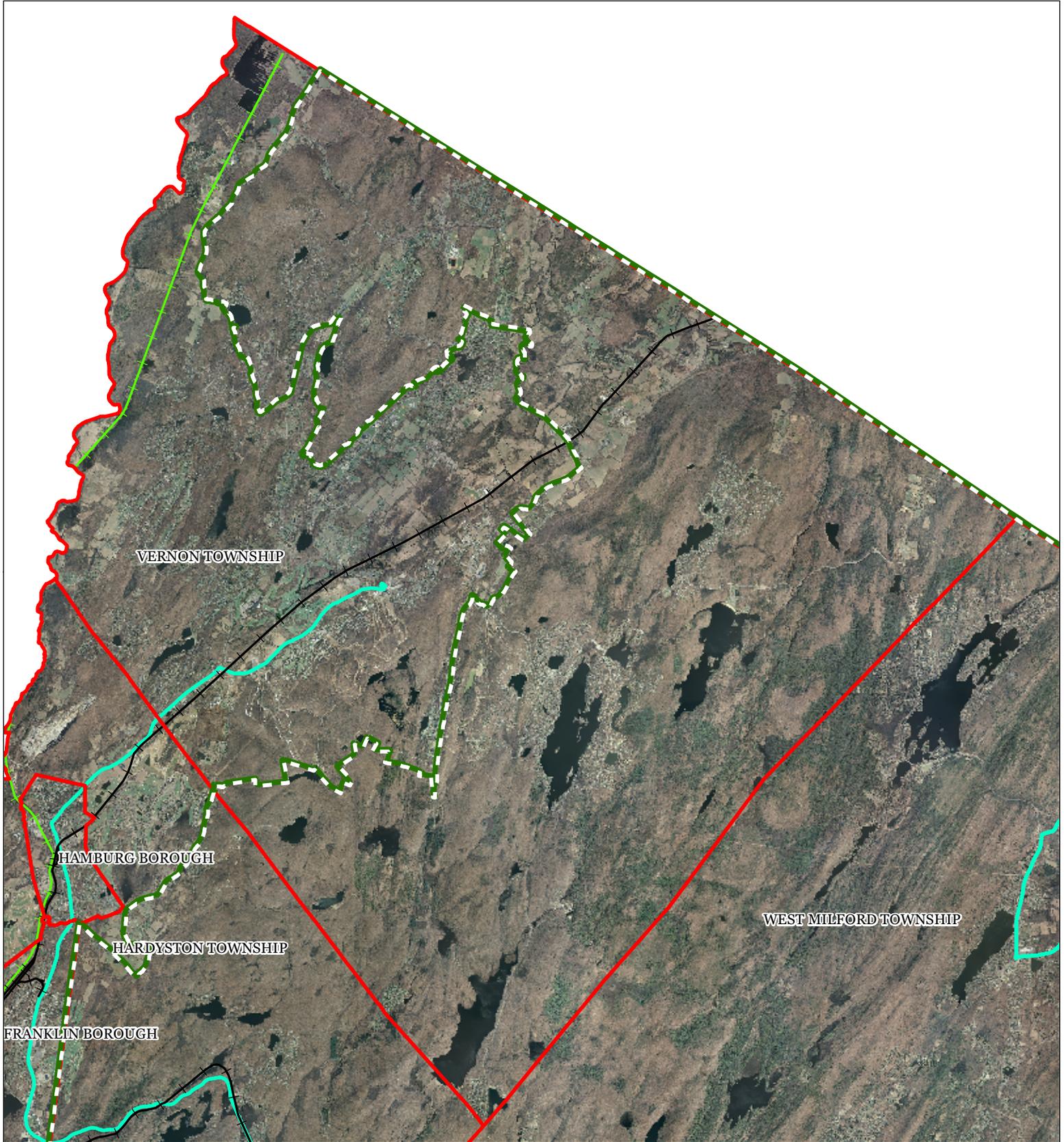
VERNON TOWNSHIP

- Tier 1 Sites
- Tier 1 Sites (Polygons)
- Tier 2 Sites
- Preservation Area
- Municipal Boundaries



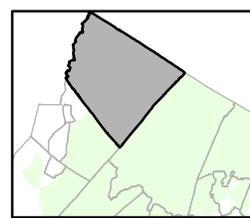
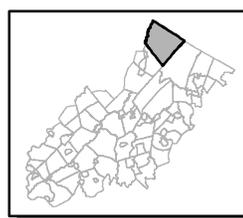
1 inch = 1.476 miles





- | | |
|--------------------------------|----------------------|
| Rail Network | Rail Stations |
| Boonton Line | Park and Ride Sites |
| Main Line & Bergen County Line | Private Bus Lines |
| Morris and Essex Line | NJ Transit Bus Lines |
| Raritan Valley Line | Airports |
| Freight Rail Lines | |
| Freight Rail Lines | |
| Abandoned Freight Rail | |

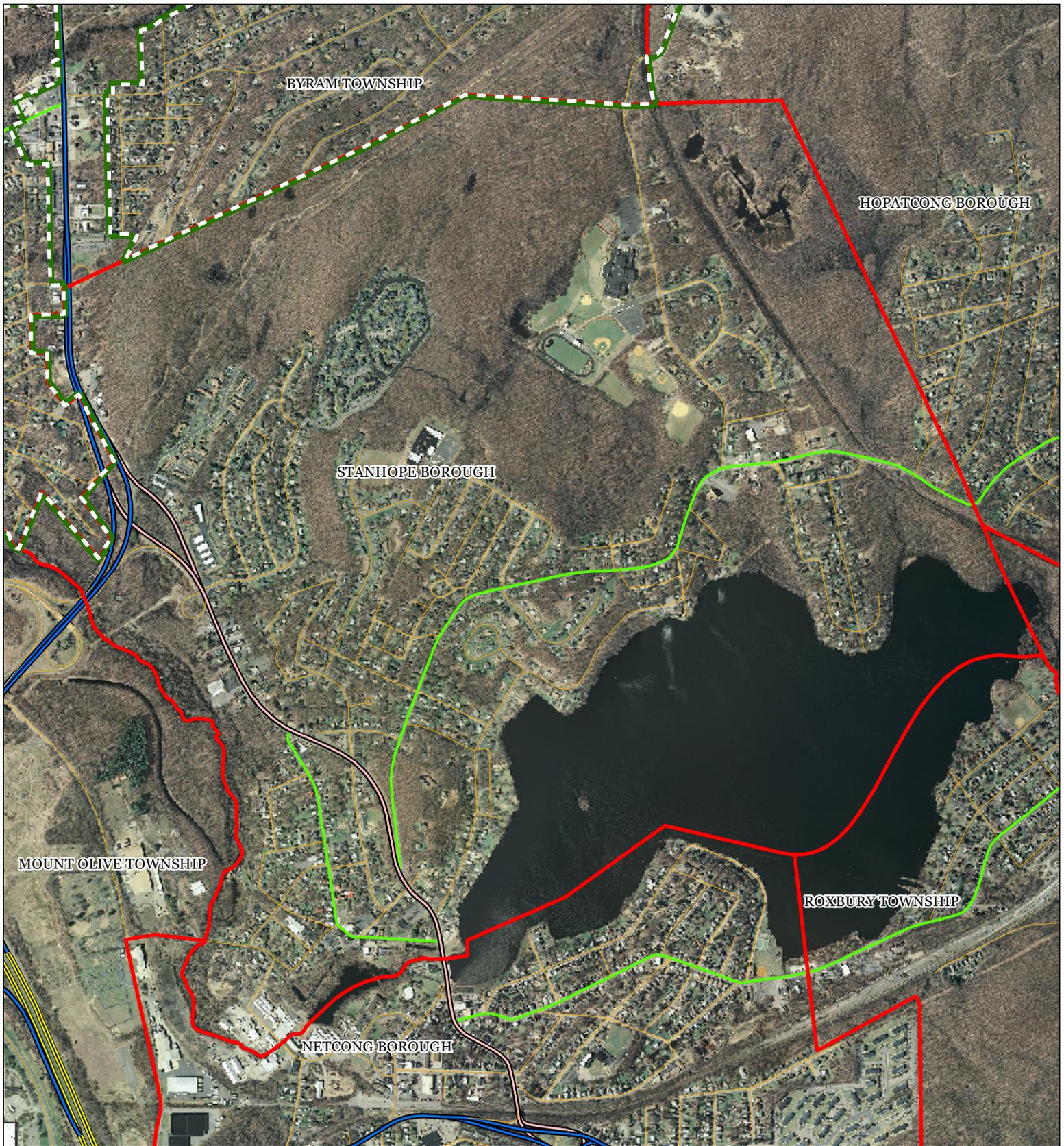
VERNON TOWNSHIP



1 inch = 1.477 miles



N

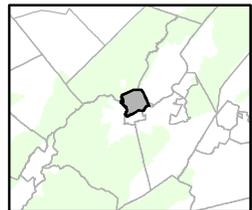
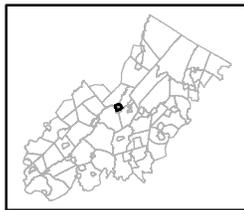


Roadway Network

-  Interstate Highways
-  U.S. Routes
-  State Routes
-  County Routes
-  Local Routes

-  Preservation Area
-  Municipal Boundaries

STANHOPE BOROUGH



1 inch = 0.248 miles



Vernon Twp, Sussex County

NJ Farmland Preservation Program

September 2009

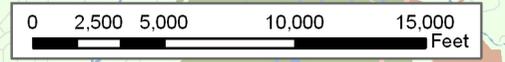
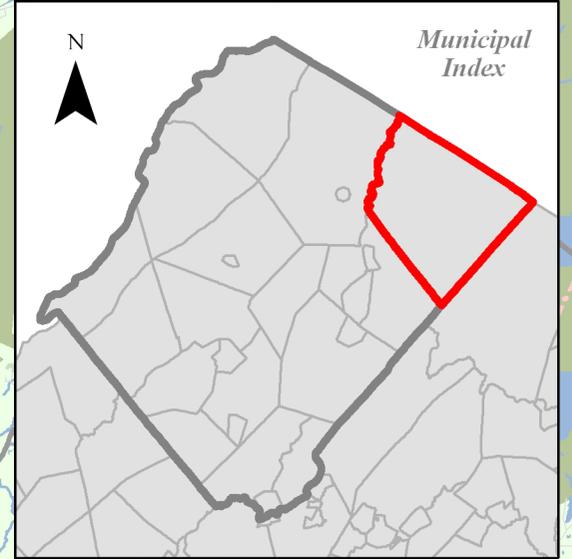
- Preserved Easements
- Current Applications

Base Map

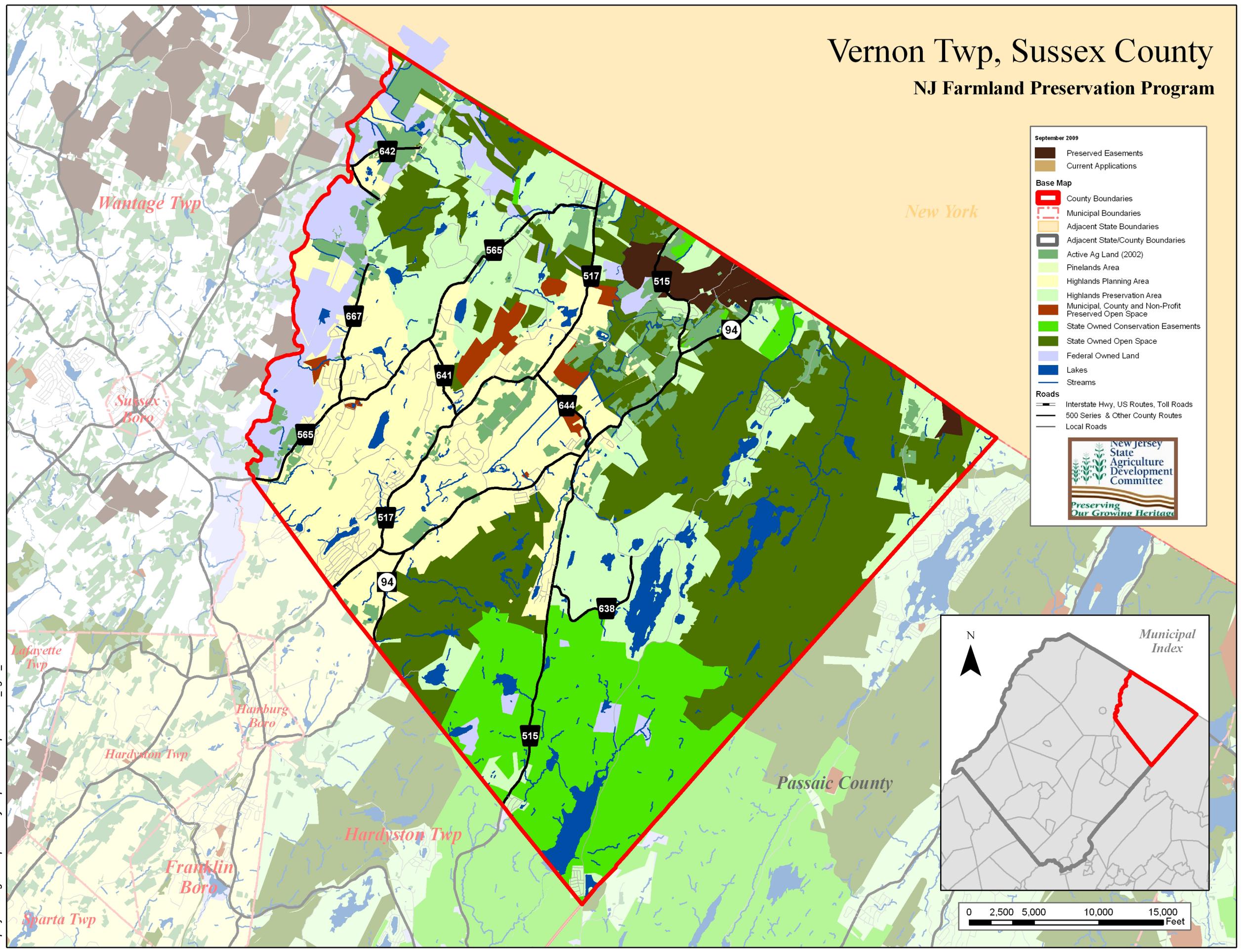
- County Boundaries
- Municipal Boundaries
- Adjacent State Boundaries
- Adjacent State/County Boundaries
- Active Ag Land (2002)
- Pinelands Area
- Highlands Planning Area
- Highlands Preservation Area
- Municipal, County and Non-Profit Preserved Open Space
- State Owned Conservation Easements
- State Owned Open Space
- Federal Owned Land
- Lakes
- Streams

Roads

- Interstate Hwy, US Routes, Toll Roads
- 500 Series & Other County Routes
- Local Roads

a:\projects\region maps\county maps\suscomaps\vernon_ag02_11x17.mxd



NJ DEPARTMENT OF TRANSPORTATION

**State Development and Redevelopment Plan
Plan Endorsement
Opportunities and Constraints Analysis**

For:

Township of Vernon, Sussex County

September 30, 2009

This document constitutes the New Jersey Department of Transportation's component of the State Opportunities and Constraints Analysis conducted as part of the Plan Endorsement process. This document provides a collection of the most recent data and information that exists in the Department pertaining to transportation features, studies, projects, grants, designations and other significant issues as applicable. The document should serve as a baseline to inform the remainder of the Plan Endorsement process. It should be understood that this assessment reflects conditions as they presently exist, and that changes may occur at any time during the Plan Endorsement process.

NJDOT has examined the following categories for pertinent data:

State Highways

Route 94 – MP 37.34 – 45.94

Straight Line Diagram sheets are attached.

State Highway Access Management Code – Access Levels and Desirable Typical Sections

According to the attached table, all segments of Route 94 from mileposts 35.15 – 45.94 are classified as Access Level 4 (driveway with provision for left turn access via left turn lane) with a desirable typical section (DTS) of 4C (four lanes, undivided, with shoulders or parking). There are no proposed Access Level or DTS technical update changes. The designation of a Center would not change the Access Levels for any portion of this segment.

Congestion Management System

According to the attached chart, part of this section of Route 94 is classified as “Very Congested”.

The analysis was done based on summer volume-to-capacity ratio (V/C), assumed to be 20% higher than the V/C maximum in this location. The actual summer V/C at this location might be higher, especially for summer weekends.

*V/C \geq 1.10 during the summer only.

Major Capital Projects/Initiatives and Mitigation Projects

The FY 2010-2011 Study and Development Program contains a project for safety improvements to County Route 515 from Route 94 to County Route 638. Proposed improvements include the addition of a 10-foot wide southbound shoulder to be utilized by slow moving traffic, the addition of a 6-foot wide shoulder on the northbound side, an emergency escape ramp, modifications to the existing roadway alignment, improving drainage, and modifications to the existing traffic signage.

The FY 2010-2011 Study and Development Program contains a project to study County Route 517 from Route 23 to Route 94. This section of roadway has severe vertical and horizontal geometry. The roadway connects two main arteries in Sussex County and carries traffic to recreational facilities in the Crystal Springs complex in Hardyston Township and has frontage and connects directly to the Mountain Creek Recreational Area in Vernon Township. The County has expressed concern about the ability of the roadway to carry the anticipated increased volumes of traffic to and from the identified recreational areas as well as the safety of those traveling this route.

Designated Transit Villages

Not Applicable

Designated Scenic Byways

Not Applicable

Open Local Aid Grant Projects

Local Aid presently does not have any active grants in Vernon Township, but has completed construction of the following projects awarded in past years:

| | |
|---|-----------|
| Bicycle Path, Phase I | \$100,000 |
| Breakneck Road | \$140,000 |
| Breakneck Road | \$500,000 |
| New Town Center Road, Phase I | \$293,274 |
| Glenwood Mountain Road | \$100,000 |
| Bicycle Path, Phase III | \$150,000 |
| New Town Center Road, Phase II | \$750,000 |
| New Town Center Road, Phase II | \$456,726 |
| Lake Pochung Road, Section 2 | \$ 75,000 |
| Bicycle Path, Phase III | \$100,000 |
| Lake Pochung Road, Phase II | \$148,000 |
| Loundsberry Hollow Road, Phase I | \$140,000 |
| Sandhill Road and Macpeek Road, Phase I | \$150,000 |

Corridor Studies

Not Applicable

Local Planning Assistance Projects

In January 2005, Vernon Township received a \$200,000 Smart Growth Grant (funds transferred from NJDOT to Office of Smart Growth) to conduct an Access Management Plan (AMP) study for Route 94 from County Route (CR) 517 north through Vernon Township to the border with Warwick, New York. The goal was to preserve the safety and operational integrity of Route 94 as two lane rural arterial, in anticipation of commercial and residential expansion resulting from construction of the Mountain Creek Resort. The report, still in draft format, received a public hearing in 2007.

The Route 94 Access Management Plan objectives include:

- Limiting the number of conflict points where the paths of vehicles cross
- Eliminating turning movements and queuing from through lanes
- Coordinating state and local approvals and long range planning
- Identifying appropriate access points for all properties along the study segment
- Encouraging alternate and shared access on appropriate parcels

The next steps in the study include re-circulation of the revised draft Access Management Plan within the Department for review of traffic signal, intersection and geometric recommendations, followed by finalization of the draft report and AMP maps and presentation to the Township Council and Planning Board for adoption. Key AMP implementation recommendations for subsequent action by the Township of Vernon include:

- Petition the Department for a change in the Route 94 desirable typical section (DTS) from 4C to 2B to preserve the character of the roadway, according to the AMP recommendations
- Increase right-of-way widths to match the 2B DTS of 92 feet
- Adoption of Township land use regulations to encourage:
 - Shared Access
 - Setback
 - Minimum Lot Frontage

Bicycle and Pedestrian Local Planning Assistance Projects

Not Applicable

Public Use/General Aviation Airports

Not Applicable

Rail Freight Lines

The New York, Susquehanna and Western Railway traverses Vernon Township. The Department has funded numerous improvements on this line, including several in nearby Sparta. The railroad has requested funding for projects that include Vernon. However, no projects in Vernon have been funded within the past three years.

Vernon Township appears more focused on eco- and agri-tourism than industrial development at this time, but if the Township does seek such development in the future, this major freight line could provide a prime location.

Traffic Engineering and Safety Initiatives

Traffic Engineering and Investigations is investigating a request to allow remote controlled preemption at the intersection of Route 94 and County Route 515. The Bureau is in the process of performing an “as-built” of the signal plan. No further actions at this location are being taken at this time.

There is a pending Traffic Regulation Order (TRO) for “No Stopping or Standing” for Route 94 in Vernon Township.

Existing and Planned Park-and-Rides

Vernon Township currently does not have a park-and-ride facility; however, the Township approached the Department a few years ago to propose that a park-and-ride be built on land currently owned by the NJDEP Division of Fish and Wildlife, located on County Route 515 about six miles from the intersection with Route 23. NJ TRANSIT advised the Township that they would conduct a park-and-ride needs study of the area (which would include about five municipalities), to determine the best location for a park-and-ride. Representatives from Fish and Wildlife did not approve of the location proposed by the Township.

To date, Sussex County has nine park-and-ride facilities – Byram, Ross’s Corner, St. John Vianney, Brantfield, Newton, Blue Heron, Sparta, American Legion Post 278 and the Sussex Municipal Lot.

Other Significant Issues

None at this time.

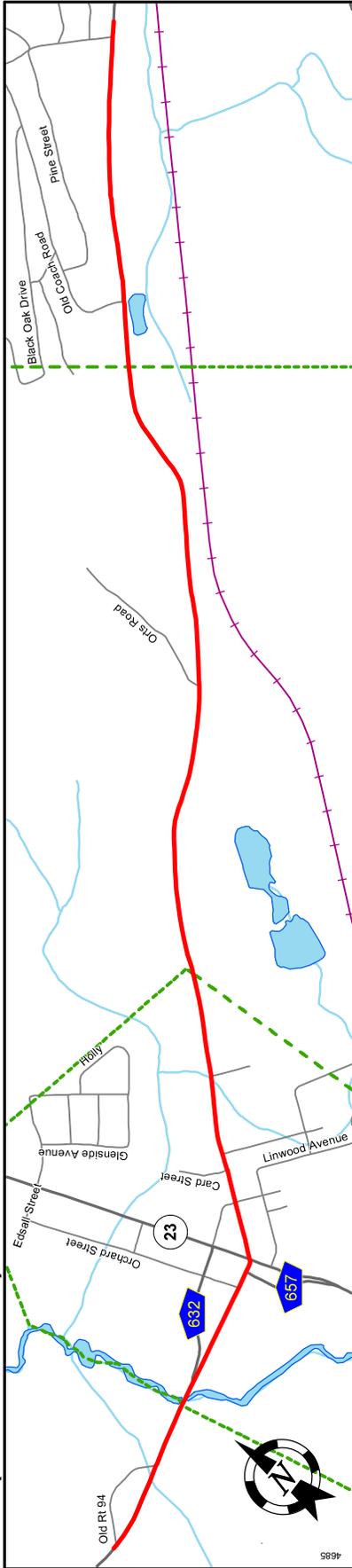
ATTACHMENTS

Straight Line Diagram Sheets
Access Classification Table
Congestion Management System Chart

NOTE: GIS data layers have been provided to the OSG GIS unit by the NJDOT GIS unit.

Mile Posts: 35.000 - 38.000

NJ 94 (South to North)



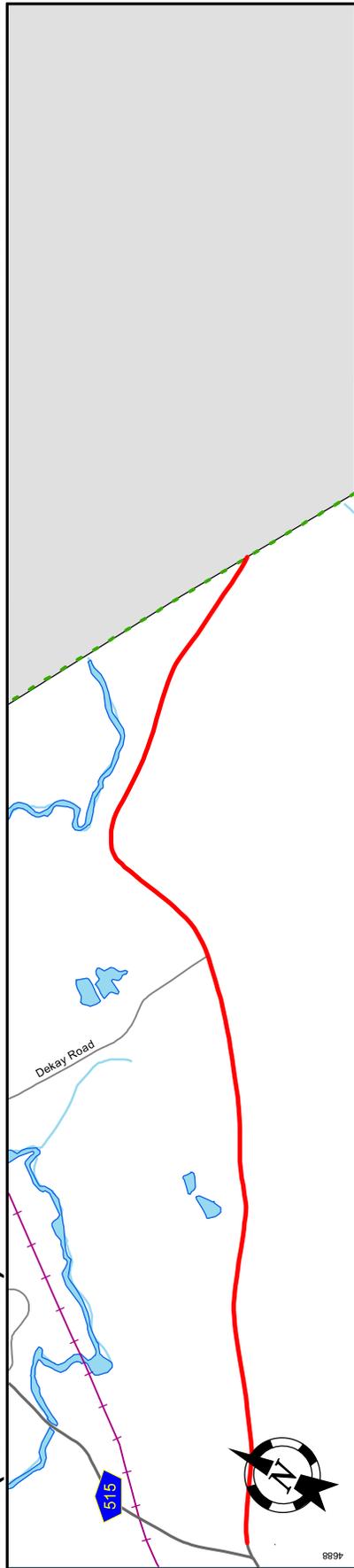
| | |
|--------------------------|--------------------------------------|
| Pavement | |
| Shoulder | |
| Number of Lanes | |
| Speed Limit | |
| Street Name | |
| Interstate Route | |
| US Route | |
| NJ Route | |
| County Road | |
| Interchange Number | |
| Grade | |
| Separated Interchange | |
| Traffic Signal | |
| Traffic Monitoring Sites | |
| Road Underpass | |
| Road Overpass | |
| Street Name | WW II 94th Infantry Division Highway |
| Jurisdiction | N.J.D.O.T. |
| Functional Class | Urban Minor Arterial |
| Federal Aid - NHS Sy | STP |
| Control Section | 1909 |
| Speed Limit | 45 |
| Number of Lanes | 35 |
| Med. Type | 2 |
| Med. Width | None |
| Pavement | 0 |
| Shoulder | 24 |
| Traffic Volume | 6 |
| Traffic Sta. ID | 3 |
| Structure No. | 192150 |
| Enlarged Views | N/A |

Date last inventoried: April 2007

SRI = 00000094

Mile Posts: 44.000 - 45.940

NJ 94 (South to North)



| | |
|--------------------------|----------------------|
| Pavement | |
| Shoulder | |
| Number of Lanes | |
| Speed Limit | |
| Street Name | |
| Interstate Route | |
| US Route | |
| NJ Route | |
| County Road | |
| Interchange Number | |
| Grade | |
| Separated Interchange | |
| Traffic Signal | |
| Traffic Monitoring Sites | |
| Road Underpass | |
| Road Overpass | |
| Street Name | Stockholm Road |
| Jurisdiction | N.J.D.O.T. |
| Functional Class | Rural Minor Arterial |
| Federal Aid - NHS Sy | STP |
| Control Section | 1910 |
| Speed Limit | 45 |
| Number of Lanes | 2 |
| Med. Type | None |
| Med. Width | 0 |
| Pavement | 24 |
| Shoulder | 3 |
| Traffic Volume | |
| Traffic Sta. ID | |
| Structure No. | |
| Enlarged Views | |

Date last inventoried: April 2007

SRI = 00000094

End NJ 94 MP=45.94

| ROUTE (SRI) | MILEPOST | | Existing Appendix B | | | Proposed Appendix B | | |
|----------------|----------|-------|---------------------|----|------|---------------------|----|------|
| | BEGIN | END | DTS | AL | CELL | DTS | AL | CELL |
| 00000094 | 35.15 | 40.13 | 4C | 4 | 35 | 4C | 4 | 35 |
| 00000094 | 40.13 | 42.02 | 4C | 4 | 35 | 4C | 4 | 11 |
| 00000094 | 42.02 | 42.49 | 4C | 4 | 35 | 4C | 4 | 8 |
| 00000094 | 42.49 | 45.76 | 4C | 4 | 35 | 4C | 4 | 35 |
| 00000094 | 45.76 | 45.94 | | | | 4C | 4 | 35 |



New Jersey Department of Transportation

Bureau of Systems Planning

CMS Priority Ranking

NJ 94 (MP 37.34 - 45.94) Vernon Twp., Sussex County

| CMS Link Number | Route | Begin Milepost | End Milepost | One-Way ADT (2006) (Veh./Day) | No. of Lanes (NB/EB) | No. of Lanes (SB/WB) | V/C Max | Overall Score | Priority Rating | System Top Percentile | County | County Top Percentile | MPO | MPO Top Percentile |
|-----------------|-------|----------------|--------------|-------------------------------|----------------------|----------------------|---------|---------------|-----------------|-----------------------|--------|-----------------------|-------|--------------------|
| 3530 | 94 | 35.90 | 38.10 | 5464 | 1 | 1 | 0.77 | 5.13 | Medium | 50 | Sussex | 39 | NJTPA | 56 |
| 3531 | 94 | 38.10 | 38.60 | 6600 | 1 | 1 | 0.93* | 6.20 | Medium | 33 | Sussex | 21 | NJTPA | 38 |
| 3532 | 94 | 38.60 | 40.50 | 5045 | 1 | 1 | 0.43 | 3.59 | Low | 76 | Sussex | 66 | NJTPA | 79 |
| 3533 | 94 | 40.50 | 41.20 | 5000 | 1 | 1 | 0.42 | 3.56 | Low | 76 | Sussex | 67 | NJTPA | 80 |
| 3534 | 94 | 41.20 | 42.00 | 5000 | 1 | 1 | 0.90 | 5.47 | Medium | 45 | Sussex | 31 | NJTPA | 50 |
| 3535 | 94 | 42.00 | 45.94 | 2720 | 1 | 1 | 0.33 | 2.32 | Low | 92 | Sussex | 85 | NJTPA | 94 |

Part of this section of roadway is "Very Congested".

The analysis was done based on Summer V/C assumed to be 20% higher than V/C Max in this section. The actual Summer V/C at this location may be higher, especially for Summer weekends.

* V/C >= 1.10 during the Summer only.

 - Highest Score in this section

The Overall Score shown above considers V/C ratio and ADT per lane. Each factor is weighted 50%.

Priority Ratings are based on the Overall Score of 0 to 10, as follows:

HIGH = 7.00+

MEDIUM = 5.00 - 6.99

LOW < 5.00

Memorandum

TO: Alan Miller
Kate Meade

FROM: Chuck Latini, PP, AICP
Vivian Baker

DATE: September 30, 2009

SUBJECT: Vernon Township (Sussex County)
Opportunities and Constraints Review

The goals listed in Vernon Township's Self Assessment do not include seeking mass transit opportunities, although there is a passing reference of working with NJDOT. NJ TRANSIT currently provides limited programmatic bus service to the Mountain Creek Ski Resort during the ski season on a limited basis.

Based upon an analysis of the Township's Self-assessment and relevant planning documents related to population, employment, zero car household density, regional location and accessibility to job centers, Vernon has a very low transit score. According to the applicable modes of transit based on area and future growth, a low score is indicative of low-density development patterns.

| TRANSIT SCORE CATEGORY | FIXED GUIDEWAY TRANSIT FEASIBILITY | BUS & OTHER TRANSIT SERVICE CRITERIA | INTERMODAL/ ACCESS TO TRANSIT |
|--------------------------|--|---|---|
| LOW (<0.5) | 1. NONE , except park-ride to existing or extended commuter rail stations which serve Marginal and above Transit Score areas. | 1. Local Bus Service-NONE. Only extensions from Marginal Transit Score areas to serve major trip generators. 2. Park-Ride access to Express Bus Service to High Transit Score areas with 60,000+ jobs 3. Local Community Social Service and Paratransit. 4. Vanpools and Vanpool Subsidies | 1. Bus/Vanpool/ Carpool surface Park-Ride. 2. Rural Park-Ride centers with bus /vanpool/ carpool parking where feasible. |

In light of the Township's self-assessment, the centers being planned for exhibits a future growth potential that may or may not work itself into an eventual higher designation. However, given the Highlands and environmental limitations due to the watershed, Vernon has little capacity for transit other than vanpools, paratransit and local social service programs. If the Township should ever seek additional transit service, it would likely be in an express bus service category toward

high density employment centers, or perhaps supplementary to seasonal needs or special programming.

It should also be noted that the Self Assessment indicated that the Township is working with NJDOT on identifying transit service. While there is no other reference or evidence of this, the Township should discuss specifically what it is they are identifying. Notwithstanding, as part of the Plan Endorsement processes moving forward, NJ TRANSIT is available to assist the Township utilize Transit Score to perform scenario planning exercises as it may eventually seek to incorporate additional transit service. Scenario planning with Transit Score will determine the likelihood, and/or feasibility, of any such planning effort.

If you have any questions or require further information, please do not hesitate to contact me at (973) 491-8597.