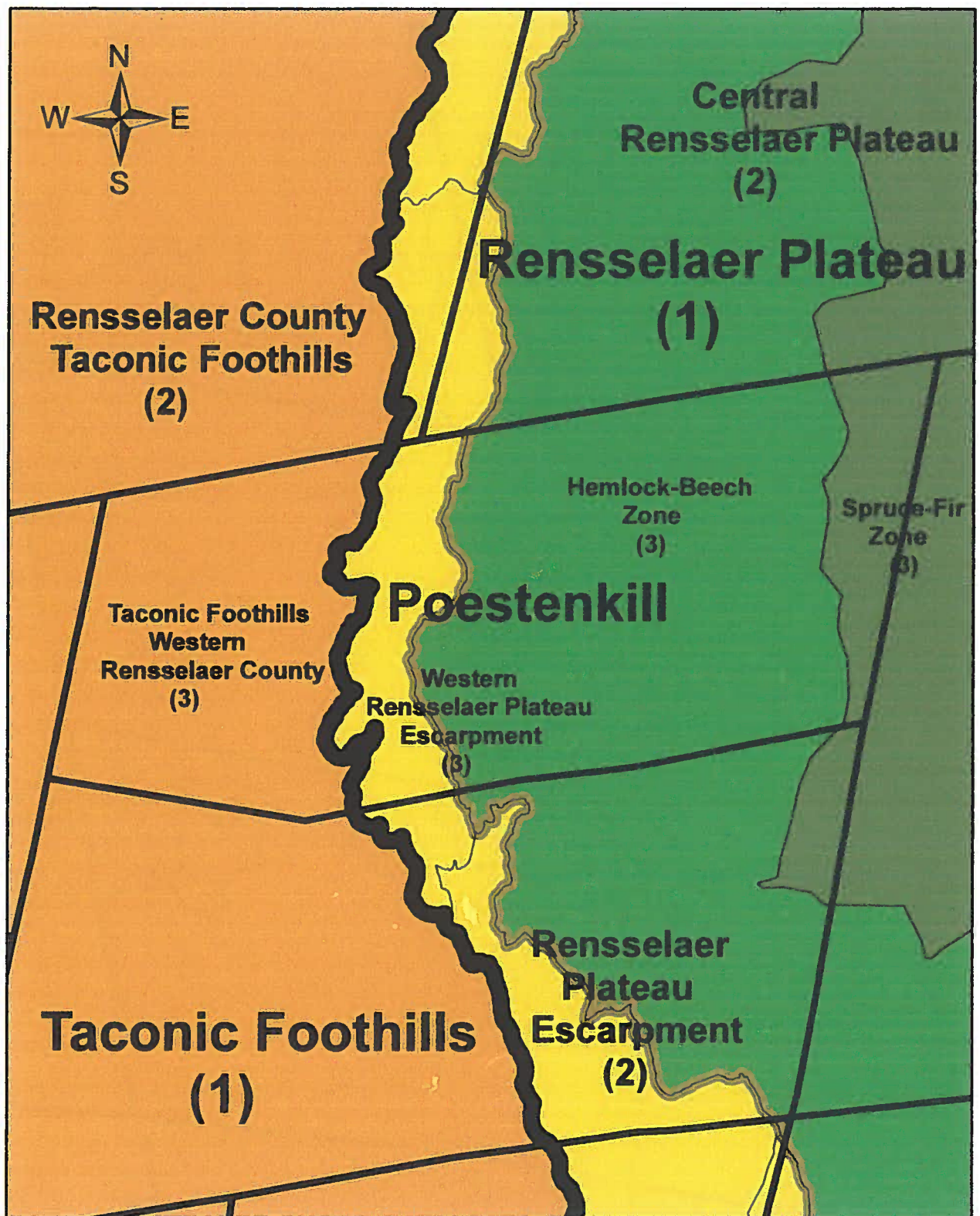
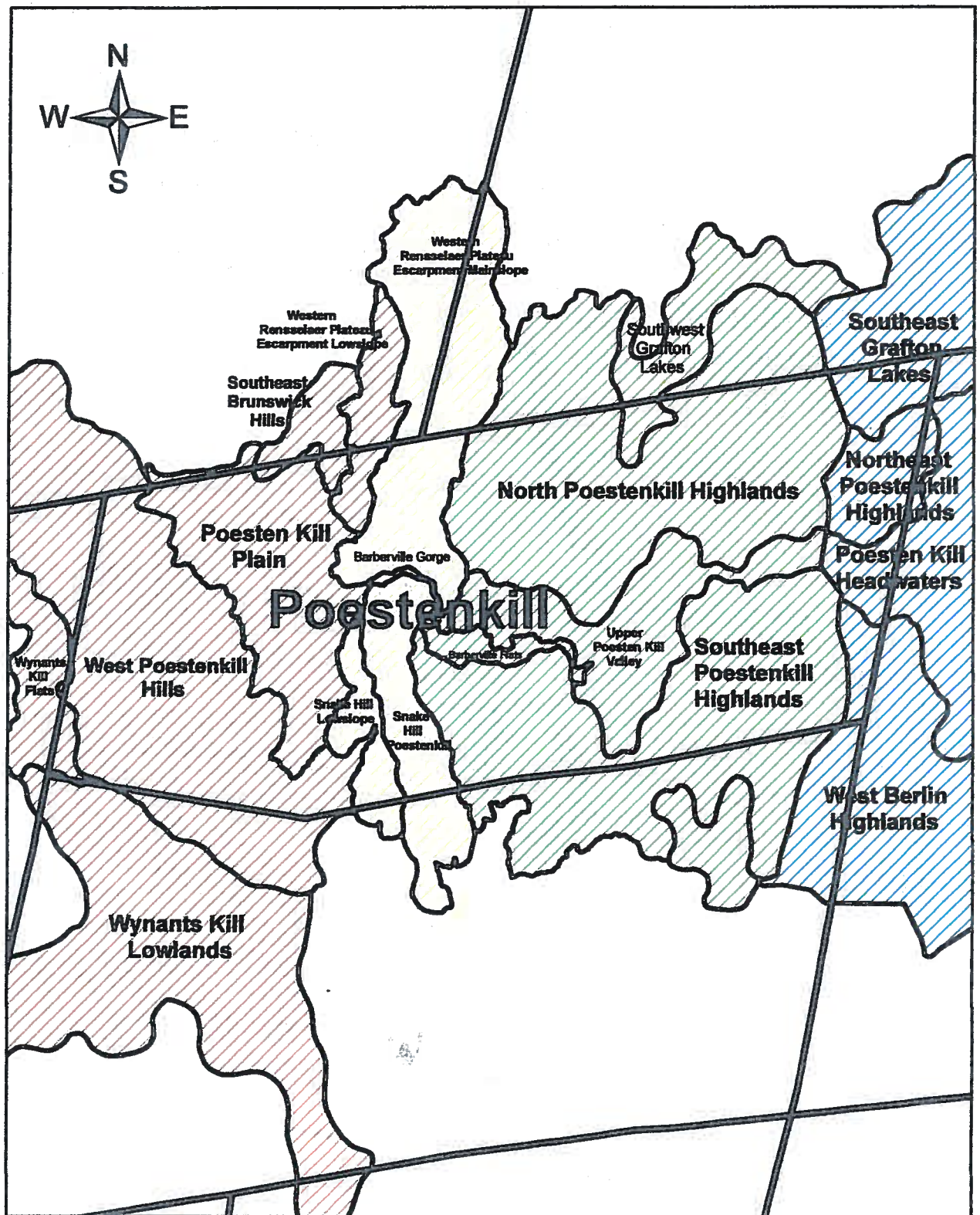


Physiographic Areas (Levels 1-3)



Physiographic Areas (Levels 4-5)



Physiographic Regions



Taconic Foothills (Level 1)



Rensselaer Plateau: Spruce-Fir Core (Level 3)



Rensselaer Plateau: Hemlock-Beech Matrix (Level 3)



Rensselaer Plateau: Plateau Escarpment (Level 2)

Town of Poestenkill: Physiographic Areas
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
June 2019

1. Introduction.

The goal for this feature, as part of the Town of Poestenkill Natural Resources Inventory, was to provide brief site descriptions for all **physiographic areas** in town. A comprehensive set of physiographic "regions" (Level-1 physiographic areas), "major subregions" (Level-2 areas), and "minor subregions" (Level-3 areas) had been previously delineated for conservation plans of the Rensselaer Plateau and Rensselaer County, as a broader context for any newly-delineated, finer-scale divisions. Work for the Town of Poestenkill in 2019 focused mostly on **14 local (Level-4 to Level-5) physiographic areas** for the Taconic Foothills region and Central Rensselaer Plateau subregion within or adjacent to the town. A de-novo preliminary delineation of these areas was done using topographic contours and associated de-novo preliminary site descriptions were drafted for the 13 of these areas in the town (both beyond the project scope). Combined with local physiographic areas of the Rensselaer Plateau Escarpment mapped in 2013, a comprehensive set of 19 local areas was created for the town (see Map 8). Associated **basic GIS information** was populated for all these local areas (beyond the project scope). No changes to previous site boundaries of larger physiographic areas or other local divisions (most in the Rensselaer Plateau Escarpment subdivision) were made. The comprehensive physiographic treatment for the Town of Poestenkill, resulted in a total of 28 areas of various levels (2 regions, 3 major subregions, 4 minor subregions, and 19 local divisions).

2. Feature Concept.

(reorganized and supplemented and modified for clarity from Hunt January 2017/Rensselaer Land Trust County Conservation Plan; see Site Delineation section for some relocated information).
(supplemented for Level-4 to Level-5 physiographic areas associated with Town of Poestenkill Natural Resource Inventory).

Inherent physiographic areas throughout Rensselaer County, New York that are reflected by different regional suites of biota (plants and animals) associated with different characteristic and/or indicative regional suites of natural communities that develop on different underlying large-scale physical combinations of bedrock and surficial geology, topography, elevation, soils, and hydrology. Level-1 and, to some degree, Level-2 physiographic areas of Rensselaer County represent mountains, plateaus, foothills, and valleys with unique combinations especially of bedrock geology and elevation that are manifested by unique floristic zones. Level-3 to Level-5 areas of the county represent more local landforms with more local combinations of geology, topography, soils, hydrology, and floristics such as escarpment slopes, small clusters of hills, local stream valleys, lowland plains, upland flats, gorges, and lake clusters.

Physiographic regions (Level-1 physiographic areas) of Rensselaer County delineated by Rensselaer County Biodiversity Greenprint Project (RCBGP) partition the county into 5 regions, each of which can be and most of which are broken down into smaller subregional units. Level-1 (and some Level-2) physiographic areas mapped at the county level were modelled from those of multiple existing regional maps ranging from a continental to state level, starting with the "classic" Fenneman map of U.S. physiographic areas dated 1933. The number, names, and shapes of discrete areas mapped for the county generally adhere to those of the 4 most commonly-used systems including those of New York State Department of Environmental Conservation (NYS DEC), The Nature Conservancy (TNC)/U.S. Forest Service (USFS), and U.S. Environmental Protection Agency (US EPA). While the county treatment for each of those groups is similar in number, names, and shapes, each of those 3 characters differ among the 3 prior treatments. All were done at broad scales, estimated at well over 1:100,000, thus they have "moderate precision". The 3 prior organizational treatments show mostly 3 to 4 zones

in the county (Taconic Mountains, Taconic Foothills, Rensselaer Plateau, and Hudson Valley). Only the EPA map suggests a second valley area within the Taconic regions like the RCBGP treatment (called the "Western New England Marble Valleys"). Level-1 areas were the finest scale mapped by US EPA and other organizations. Level-2 to Level-5 areas were all delineated by RCBGP/D.Hunt, with Level-5 areas being the finest scale mapped.

3. Site Delineation

(see Hunt January 2017/Rensselaer Land Trust County Conservation Plan for detailed site delineation methods for Level-1 to Level-3 areas; available upon request)

Physiographic areas were initially mapped by RCBGP in 2017 at 3 levels of separation/aggregation of the most similar areas, focusing on physiographic subregions of differing shape treatment among maps of the 3 major organizations (e.g., the classification of the "South Stephentown Hills" and "Central Nassau Hills"). The physiographic region (Level-1) mapping, the broadest level, parallels that of the 3 major organization maps, with 5 physiographic regions for the county. The Rensselaer Plateau region shape was that mapped by RCBGP at a "very high precision" (scale of about 1:3,000) for the Rensselaer Plateau Alliance in about 2012. The Level-2 and especially Level-3 mapping presents several finer-scale subregions not addressed in the major treatments, but useful in deciding the best delineation for Level-1 physiographic area boundaries.

The 2017 countywide GIS mapping of Level-1 and Level-2 physiographic areas by the RCBGP updated a prior RCBGP attempt at a countywide revision, dated 2011 at 1:250,000 scale on a paper map. That revision presented the concept of a "Taconic Valley", missing in most of the major treatments. Mappings by RCBGP have represented a higher level of precision than the major treatments based on 1) finer scale topographic-focused delineation and 2) knowledge of the distribution of individual biota species and floristic zones, especially reflected through the precise distribution of unique community types and/or restricted ecosystem complexes indicative of each physiographic area (e.g., ranging in elevation/climate from "Tidal River" for the Hudson Valley to "Mountain Spruce-Fir Forest" for the Taconic Mountains). Delineation from those other ecological features was facilitated by the 2017 completion of GIS mapping of exemplary sites for each natural community type in the county and important examples of all the known restricted ecosystem complex types in the county, as well as the comprehensive ecological community map for the Rensselaer Plateau in 2012. Region and subregion names mostly borrow from a consensus of the 3 major historical treatments, supplemented by others of common local usage and/or more local physiographic features (e.g., the "Hoosic Valley").

Precision for all physiographic areas mapped on GIS by RCBGP is suggested to be "moderately high", generally with delineation done at 1:24,000 to 1:50,000 scale for Level-1 to Level-3 areas (e.g., the scale at which many of the topographic transitions between areas can be clearly seen based on "escarpments", "fall lines", and abrupt slope transitions between valleys and hills). Finer scale delineations (mostly zoomed in to about 1:5,000 scale) were done in challenging local areas where the 3 prior treatments differed most and/or the actual boundary seems more "sinuous" than other areas with long straight boundaries (mostly in areas with "dissected valleys" carved back into an adjacent highland area). Although the RCBGP dataset for Level-1 physiographic areas was quickly compiled in 2017, it represents a first attempt by RCBGP to get **comprehensive countywide cover of Level-1 physiographic areas** mapped more **precisely** than the most precise known maps of 3 existing state/federal organizations into a GIS system. A similar rapid compilation was done for Level-4 to Level-5 physiographic areas in the Town of Poestenkill in 2019 to produce a precise comprehensive townwide cover of local physiographic subdivisions.

Mapping of Level-4 to Level-5 physiographic areas for the Town of Poestenkill in 2019 involved different approaches for each of the 4 major physiographic subdivisions in town:

1. Rensselaer Plateau Escarpment. previously fully mapped as components for the 2013 Rensselaer Plateau delineation.
2. Rensselaer Plateau Hemlock-Beech Matrix. fully mapped anew except for one area (Barberville Flats) mapped in 2013 as an area debatably part of the Rensselaer Plateau Escarpment.
3. Rensselaer Plateau Spruce-Fir Core. fully mapped anew.
4. Taconic Foothills. fully mapped anew except for one area (Western Rensselaer Plateau Escarpment Lowslope) mapped in 2013 as an area debatably part of the Rensselaer Plateau.

All newly mapped Level-4 to Level-5 physiographic areas were drawn on GIS using a rapid preliminary delineation based primarily on the topographic contour GIS layer (with 10 foot contours). The Taconic Foothills region (Level-1 area) is divided in Rensselaer County into Level-2 areas (Western Rensselaer County Taconic Foothills in Poestenkill) but not yet Level-3 and Level-4 areas. Eventual delineation of the most specific areas (Level-5 areas) throughout the Rensselaer County part of this physiographic region may allow further aggregation of Level-5 areas into Level-4 and Level-3 areas at a later time. The Level-5 physiographic areas within the Taconic Foothills part of Poestenkill are probably all within one Level-3 area and they may similarly all be within one Level-4 area.

4. GIS Information Available

(updated extensively from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)
(with focus on a comprehensive treatment of Level-4 and Level-5 areas for the Town of Poestenkill in 2019)

Data Tallies:

- 1) Town of Poestenkill:
 - a) Level-4 to -5 physiographic areas mapped as of 2019: 19, partitioned as shown in tallies 1b to 1d.
 - b) Level-1 physiographic areas in town: 2 {Rensselaer Plateau, Taconic Foothills}.
 - with Level-2 areas partitioned as follows: Rensselaer Plateau=2, Taconic Foothills=1.
 - with Level-3 areas partitioned as follows: Rensselaer Plateau=3, Taconic Foothills=1.
 - with Level-4 to -5 areas partitioned as follows: Rensselaer Plateau=13, Taconic Foothills=6.
 - c) Level-2 physiographic areas in town: 3.
 - {Central Rensselaer Plateau, Rensselaer Plateau Escarpment, Rensselaer County Taconic Foothills}
 - with Level-3 areas partitioned as follows:
 - Central Rensselaer Plateau=2, Rensselaer Plateau Escarpment=1, Rensselaer County Taconic Foothills=1.
 - with Level-4 to -5 areas partitioned as follows:
 - Central Rensselaer Plateau=9, Rensselaer Plateau Escarpment=4, Rensselaer County Taconic Foothills=6.
 - d) Level-3 physiographic areas in town: 4.
 - {Hemlock-Beech Matrix, Spruce-Fir Core, Western Rensselaer Plateau Escarpment, Western Rensselaer County Taconic Foothills}
 - with Level-4 to -5 areas partitioned as follows:
 - Central Rensselaer Plateau: Hemlock-Beech Matrix=5, Spruce-Fir Core=4.
 - Western Rensselaer Plateau Escarpment=4.
 - Western Rensselaer County Taconic Foothills=6.
- 2) Rensselaer County/county-level analyses: see Hunt January 2017/Rensselaer Land Trust County Conservation Plan.

File Names:

Physiographic_Areas_Local_Poestenkill

(*newly created May 2019; contains all local areas for the town including newly-mapped areas of the Taconic Foothills and Central Rensselaer Plateau plus local areas of the Rensselaer Plateau Escarpment delineated in 2013 [the latter not provided for the 2017 RLT county conservation plan]).

RensCo_PhysRegs_Level1_RCBGP (physiographic regions)

RensCo_PhysRegs_Level2_RCBGP (physiographic major subregions)

RensCo_PhysRegs_Level3_RCBGP (physiographic minor subregions)

Physiographic_Areas_2013_RP_Subdivision3 (Level-4 Rensselaer Plateau Escarpment divisions)

other relevant layers: see Hunt January 2017/Rensselaer Land Trust County Conservation Plan.

Important Fields for Users:

(shown only for Physiographic_Areas_Local_Poestenkill)

(field for other files: see Hunt January 2017/Rensselaer Land Trust County Conservation Plan).

* = newly added and populated field for Town of Poestenkill Natural Resources Inventory.

** = values newly populated for Town of Poestenkill Natural Resources Inventory.

*** = metadata updated for Town of Poestenkill Natural Resources Inventory.

1. Physiographic Area Identity Fields.

Phys_Area^{*,**,*}:

local (Level-4 to Level-5) physiographic area name; assigned by RCBGP/D.Hunt based on topographic contour GIS layer.

PA_Hier^{*,**,*}:

hierarchical level of physiographic unit: Region (Level-1 area), Subregion 1 (Level-2 area), Subregion 2 (Level-3 area), Subregion 3 (Level-4 area), Subregion 4 (Level-5 area).

PA_Hier_tx^{*,**,*}: hierarchical physiographic unit type, brief textual description. (all "Local Division").

Hier_Level^{*,**,*}:

numerical hierarchical level of aggregation of physiographic areas (from a county perspective): Level-1 being the broadest/coarsest scale unit at a county level; Level-1 (region), Level-2 (Level-1/major subregion), Level-3 (Level-2/minor subregion), Level-4 to Level-5 (local subdivisions); note: our Level-1 units correspond to Level-4 units of the US EPA classification.

2. Physiographic Area Relationship Fields.

Phys_Reg^{*,**,*}: Level-1 physiographic unit in which the area is embedded. (formerly "Levl_Site").

Phys_Sub1^{*,**,*}:

larger Level-2 (Subdivision 1) physiographic unit in which the area is embedded. (formerly "Lev2_Site").

Phys_Sub2^{*,**,*}: larger Level-3 (Subdivision 2) physiographic unit in which the area is embedded.

Phys_Sub3^{*,**,*}:

larger Level-4 (Subdivision 3) physiographic unit in which the area is embedded, if applicable; "undesigned" if Subdivision 3 unit pending conceptualization, designation, and delineation.

3. Physiographic Area Characteristics.

Acreage^{*,**,*}: size of site in acres.

Co_Percent^{*,**,*}: portion of Rensselaer County occupied by the physiographic area.

Bndy_Vers^{*,**,*}: date of delineation of area boundary.

5. Ecological Interpretation Summary.

(modified for clarity and thoroughness from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

The Level-1 to Level-3 physiographic area layers are used as background context for biodiversity conservation decisions for larger-scale landscape features of Rensselaer County, New York. Stratification of smaller-scale ecological features, such as the most intact upland and aquatic landscapes, by relatively large physiographic areas, is a common practice following standard ecological & conservation principles, such as conservation of enough examples of each ecological type in each physiographic region (i.e., spread out across multiple zones). The 5 physiographic regions of Rensselaer County are all well represented in the county, and 3 have a substantial overall proportion of their area in the county. In fact, one, the Rensselaer Plateau, is entirely within the county and has features that are unique well beyond the county, being most comparable in physiography to the Tug Hill Plateau and Berkshire Plateau.

Supplemental 2019 information on Level-4 to Level-5 physiographic areas: Use of local (Level-4 and Level-5) physiographic areas can be theoretically helpful in developing a neighborhood/community identity and a deeper sense of place. Different parts of the Town of Poestenkill may "feel" different to town residents and visitors and there are physiographic distinctions that can be described to capture the uniqueness of each area.

6. Site Summaries.

The specific goal for this feature for the Town of Poestenkill Natural Resource Inventory was to produce a brief 1-paragraph site description/fact summary for every designated physiographic area in town, at a minimum those previously designated for the 2017 Rensselaer County Conservation Plan. In addition, site descriptions were provided for all newly-designated local physiographic subdivisions in town (beyond the project scope, but thought useful for local planning efforts), and these areas were newly drawn on GIS to provide a comprehensive delineation at that scale for the town (see Map 8). Site descriptions are provided using fine print. They are longer for the larger and more complex areas of higher physiographic level plus sites that had more lengthy

historical description documents. Descriptions are arrayed by physiographic area hierarchy level. Local area descriptions are arrayed, in turn, by the corresponding Level-1 to Level-3 units in which they are embedded. Documents were integrated from all readily available prior electronic files of the Rensselaer County Biodiversity Greenprint Project (see below) or newly drafted for newly-designated areas. The document format was attempted to be as consistent as possible across all Level-4 to Level-5 sites, to allow meaningful site comparisons. These descriptions and the accompanying maps showing the location of physiographic areas, especially local areas, are intended to be "first iteration" drafts for public use to provide the following:

1. a visual image of the nature of each site, especially beyond just its name.
2. a concise summary of the ecological characteristics and geographic position of each site.
3. a pilot model which could be followed for local physiographic areas in other towns of the county, striving for an eventual comprehensive delineation and description of all local (Level-5) areas for the entire county.

Because most of the site concepts (boundaries and associated ecological characteristics) were envisioned by the Rensselaer County Biodiversity Greenprint Project, especially all Level-4 to Level-5 sites, it is thought that the most informative description of each site to date is represented in this product. Future improvements, requiring more time beyond the project scope, could involve:

1. refinement of site boundaries, especially for Level-4 to Level-5 areas, based on other information used for Level-1 to Level-3 areas of the Rensselaer Plateau (e.g., geology, soils, floristics).
2. population of additional GIS fields abbreviated from information in the site descriptions.
3. review and consensus of concepts and boundaries among local naturalist experts.
4. delineation of all remaining unmapped Level-3 and Level-4 physiographic areas within the Taconic Foothills and Central Rensselaer Plateau portions of Poestenkill.

Sources (2019 update):

1. Rensselaer County Conservation Plan documents.
(prepared for Rensselaer Land Trust 2017 including GIS datalayer, summary memo, cover memo).
2. Rensselaer Plateau Conservation Plan documents.
(especially Hunt 2018: Rensselaer Plateau Ecological Features Documentation Series: Volume 2.

Town of Poestenkill: Physiographic Areas
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PART A. LEVEL-5 PHYSIOGRAPHIC AREAS. (19 sites)

A1. Central Rensselaer Plateau: Hemlock-Beech Matrix.

5 areas. status: most newly delineated and described April 2019.

Barberville Flats

Municipality: Town of Poestenkill (central part).

Location: along the Poesten Kill upstream of Barberville Falls.

Site Description: gently-sloping mid-elevation flats & wide valley along W-flowing Poesten Kill above Barberville Falls.

Site Synonyms/Inclusions: includes part of East Poestenkill Flats (see Ecosystem Complexes).

Site Relations: This site, along with Barberville Gorge, is part of a larger lowland area eroded from the western half of the plateau by the Poesten Kill that might be termed "Barberville Hollow". part of the larger Hemlock-Beech Matrix zone of the Central Plateau; also part of an undesignated larger area of flats (Physiographic Subdivision-Level 3) within the broader Hemlock-Beech Zone that surrounds the Upper Poesten Kill and might be termed the "Upper Poesten Kill Flats" (2019 note: the latter site would also include the newly delineated Upper Poesten Kill Valley).

Edition: modified slightly from Rensselaer Plateau conservation plan documents, Hunt 2018.

North Poestenkill Highlands

Municipality: Towns of Poestenkill (N to NE part) and Grafton (S to SW part).

Location: generally N of Plank Road and S of Madonna Lake Road, surrounding Blue Factory Road, North Road, and Fifty-Six Road.

Site Description: undulating, steeply-sloping, N/S oriented ridges on the high slope of the Rensselaer Plateau with moderate topographic relief.

Site Relations: distinct from adjacent lowland areas to NE & S; distinguished from an undelineated area of similar ridges (tentatively called the "West Grafton Highlands") to the N by pattern of narrower ridges plus more S and W aspect; separated from that area by the Poesten Kill-Quacken Kill watershed divide.

Edition: June 14, 2019 (after initial April 16 draft).

Southeast Poestenkill Highlands

Municipality: Towns of Poestenkill (SE part) and Sand Lake (NE part).

Location: S of Plank Road and N of Taborton Road, surrounding Legenbauer Road, Catlin Road, Oak Hill Road Poestenkill, Bermas Road, and Lynn Road.

Site Description: undulating, steeply-sloping, N/S-oriented ridges on the high slope of the Rensselaer Plateau with moderate topographic relief.

Site Relations: distinct from adjacent lowland areas to N & SE; distinguished from an undelineated area of similar ridges (tentatively called the "East Sand Lake Highlands") to the S by pattern of narrower ridges and more NW aspect; separated from that area by Horse Heaven Brook.

Edition: June 14, 2019 (after initial April 16 draft).

Southwest Grafton Lakes

Municipality: Towns of Grafton (S-central part) and Poestenkill (N-central part).

Location: surrounding Madonna Lake Road and the SW end of South Road Grafton.

Site Description: high elevation mixture of kettlehole basins with lakes and peatlands plus surrounding low hills within the lowland flats near the source of Bonesteel Creek.

Site Relations: distinct from steeper hills to N, W & S; distinguished from adjacent Southeast Grafton Lakes to E by floristics (the latter in the different Spruce-Fir Zone).

Edition: June 14, 2019 (after initial April 16 draft).

Upper Poesten Kill Valley

Municipality: Town of Poestenkill (E-central part).

Location: surrounding Columbia Hill Road, Plank Road, and Swankey Road.

Site Description: W-facing, gently-sloping, low cut valley of the Poesten Kill from Pine Ridge downstream to about Powers Road, bordered by low hills.

Site Relations: distinct from steeper hills to N & S; distinguished from two adjacent areas along the Poesten Kill Corridor (Poesten Kill Headwaters to E, Barberville Flats to W) by steeper longitudinal slopes.

Edition: June 14, 2019 (after initial April 16 draft).

A2. Central Rensselaer Plateau: Spruce-Fir Core.

4 areas. status: most newly delineated and described April 2019.

Northeast Poestenkill Highlands

Municipality: Towns of Poestenkill (NE part) and Berlin (NW part).

Location: E central part of Poesten Kill Headwaters Block S of Fifty-Six Road, W of Dyken Pond Road Berlin, and N of Plank Road.

Site Description: gently-sloping, S- and W-facing, high level area near the center of the Rensselaer Plateau with relatively low topographic relief.

Site Relations: distinct from adjacent lowland areas to the N, E, & S based on steeper slopes and more upland areas; distinguished from adjacent North Poestenkill Highlands to W by floristics (the latter in the different Hemlock-Beech Zone).

Edition: June 14, 2019 (after initial April 16 draft).

Part A. Level-5 Physiographic Areas. (continued)

A2. Central Rensselaer Plateau: Spruce-Fir Core. (continued)

Poesten Kill Headwaters

Municipality: Towns of Berlin (NW part) and Poestenkill (E-central part).

Location: along the Poesten Kill and its tributaries surrounding Plank Road, Dutch Church Road (N), and Dyken Pond Road Berlin.

Site Description: extensive high elevation moist to wet flats at the center of the Rensselaer Plateau with very low topographic relief.

Site Relations: distinguished from similar lowland/flats area to N (Southeast Grafton Lakes) based on 1) greater abundance of wetlands over lakes and 2) more extensive area of flatter relief; more distinct from adjacent hillier areas to the W, S, & E.

Edition: June 25, 2019 (after initial April 16 draft).

Southeast Grafton Lakes

Municipality: Towns of Grafton (SE part), Berlin (NW corner), and Poestenkill (NE corner).

Location: SE of South Road Grafton, SW of Taconic Lake Road, N of Fifty-Six Road, and W of Pond View Road.

Site Description: high elevation mixture of kettlehole basins with lakes and peatlands plus surrounding low hills near the center of the Rensselaer Plateau with low topographic relief.

Site Relations: distinguished from similar lowland/flats area to S (Poesten Kill Headwaters) based on 1) greater abundance of lakes over wetlands and 2) more topographic relief, mixed with some low hills; more distinct from adjacent hillier areas on most sides including an undelineated area of more relief and steeper N-facing slopes (tentatively called the "Central Grafton Highlands") to the N.

Edition: June 25, 2019 (after initial April 16 draft).

West Berlin Highlands

Municipality: Towns of Berlin (NW to W-central parts), Sand Lake (NE corner), Poestenkill (SE corner), and Grafton (SE corner).

Location: Surrounding Dutch Church Road (S), Taborton Road (E), Plank Road, Miller Road, and the upper part of Bly Hollow Road, mostly in the Town of Berlin.

Site Description: gently- to moderate sloping, SW- to SE-facing, highslope area near the center of the Rensselaer Plateau with much local topographic relief associated with glacially-eroded ridges.

Site Relations: distinguished from adjacent Spruce-Fir Zone areas based on much greater topographic relief, especially N/S-oriented glacially-dissected ridges; might be further divided and/or distinguished from undelineated areas to E and NE (tentatively called the "Dutch Church High Level" and "Northwest Berlin Highlands") based on the degree of topographic relief and dominant slope aspect; distinguished from other nearby steeply-sloping areas based on floristic differences (outside the Spruce-Fir Zone).

Edition: June 25, 2019 (after initial April 16 draft).

A3. Rensselaer Plateau Escarpment.

4 areas. status: all delineated for Rensselaer Plateau Conservation Plan in 2013 and described in Hunt 2018.

Barberville Gorge

Municipality: Town of Poestenkill (central part).

Location: along the Poesten Kill downstream of Barberville Falls.

Site Description: steep-sided gorge/hollow cut into the Western Plateau Escarpment along the lowermost reaches of the W-flowing Poesten Kill, a large river, on the plateau downstream of and including Barberville Falls, one of the largest waterfalls in the county.

Site Synonyms/Inclusions: This site has also been historically called the "Poesten Kill Gorge" and "Poesten Kill Falls" (Dale 1891), contrasting with the accepted modern-day "Poesten Kill Gorge" site located further downstream in Troy. It corresponds closely with the Poesten Kill Barberville ecosystem complex (see Ecosystem Complex section).

Site Relations: The site, along with Barberville Flats, is part of a larger lowland area eroded from the western half of the plateau by the Poesten Kill that might be termed "Barberville Hollow".

Edition: from Rensselaer Plateau conservation plan documents, Hunt 2018.

Snake Hill Lowslope

Municipality: Town of Poestenkill (S part) > Town of Sand Lake (N part).

Location: W of Snake Hill Road.

Site Description: forested W-facing lowslope of the Western Plateau Escarpment.

Site Synonyms/Inclusions: was tentatively referred to as "Lower Snake Hill".

Site Relations: lowslope shelf of Snake Hill Poestenkill to the east.

Edition: from Rensselaer Plateau conservation plan documents, Hunt 2018.

Snake Hill Poestenkill

Municipality: Town of Poestenkill (S-central part) > Town of Sand Lake (N-central part).

Location: E of Snake Hill Road between Plank Road and Taborton Road.

Site Description: a long, forested N-S ridge at the crest of the Western Plateau Escarpment and prominently elevated from an adjacent lowslope valley of the Poesten Kill to the north.

Site Relations: grades into Snake Hill Lowslope to the west.

Edition: from Rensselaer Plateau conservation plan documents, Hunt 2018.

Western Rensselaer Plateau Escarpment Mainslope

Municipality: Towns of Brunswick (SE part), Grafton (SW part), & Poestenkill (N-central part).

Location: E of NY Route 351 between NY Route 2 and County Route 40 (Plank Road).

Site Description: the wide, long, steep forested W-facing midslopes of the Western Plateau Escarpment.

Site Relations: new 2019: imperceptibly grading to the lowslopes of the Western Plateau Escarpment (Western Rensselaer Plateau Escarpment Lowslope) to the W, but with steeper topography and likely floristics of different Level-1 physiographic area, the Rensselaer Plateau.

Edition: modified slightly from Rensselaer Plateau conservation plan documents, Hunt 2018.

Part A. Level-5 Physiographic Areas. (continued)

A4. Taconic Foothills

6 areas. all newly delineated and most newly described April 2019.

Poesten Kill Plain

Municipality: Towns of Poestenkill (W-central part) and Brunswick (S-central edge).

Location: surrounding NY Route 351, Snyders Corners Road, Main Street Poestenkill, and Garfield Road Poestenkill.

Site Description: wide lowland flats surrounding the Poesten Kill and Newfoundland Creek, with scattered relatively low and small hills.

Site Relations: distinct from steeper hills surrounding on most sides including one undelineated area to N (tentatively called "South Brunswick Hills"); distinguished from two adjacent areas along Poesten Kill Corridor (tentatively the undelineated "Eagle Mills Flats" to the NW, Barberville Gorge to the E) by flatter topography and broader river floodplain.

Edition: June 25, 2019 (after initial April 16 draft).

Southeast Brunswick Hills

Municipality: Towns of Brunswick (SE part) and Poestenkill (NW-central part).

Location: W of NY Route 351, S of Dearstyne Road, E of Dater Hill Road.

Site Description: mid elevation W- to S-facing lowslope to toeslope of low foothills E of the Lower Quacken Kill and W of the Rensselaer Plateau.

Site Relations: distinct from lowlands to S and undelineated lowlands to W (tentatively called the "Lower Quacken Kill Valley"); may grade imperceptibly into Western Rensselaer Plateau Escarpment Lowslope to E; tentatively with N boundary delineated based on W to S slope aspect, but area to N with W to N-facing slopes and E of the Quacken Kill (tentatively called the "East Brunswick Hills") may be combined with this area to expand it.

Edition: June 14, 2019 (after initial April 16 draft).

West Poestenkill Hills

Municipality: Towns of Poestenkill (W part), Brunswick (SW part), North Greenbush (NE corner), Sand Lake (NW part), and City of Troy (SE corner).

Location: surrounding NY Route 66, Spring Avenue, and Weatherwax Road.

Site Description: broad area of densely clustered, low to moderate-sized rolling hills with scattered embedded kettlehole basins containing lakes and peatlands.

Site Relations: distinct from lowlands of the Poesten Kill and Wynants Kill Corridors to the NE & SW including two undelineated areas to the N in Brunswick associated with the Poesten Kill Corridor that might be called the "Eagle Mills Flats" (to the NE with moderately flat slopes) and the "Lower Poesten Kill Valley" (to the N with steep valley slopes forming a ravine) plus an undelineated area to the SE in Sand Lake associated with the Wynants Kill Corridor that might be called the "Upper Wynants Kill Lakes" (with abundant lakes within moderately-steep local basins); separated from other nearby similarly hilly areas by all these lowland areas.

Edition: June 25, 2019 (after initial April 16 draft).

Western Rensselaer Plateau Escarpment Lowslope

Municipality: Towns of Brunswick (SE part) and Poestenkill (N-central part).

Location: E of NY Route 351 near Penny Royal Lane and Reichards Farm Road.

Site Description: gently-sloping, W-facing, lowslope shelves at the base of the escarpment just W of the plateau.

Site Relations: (modified 2019) imperceptibly grading to the midslopes of the Western Plateau Escarpment (Western Rensselaer Plateau Escarpment Mainslope) to the E, but likely with floristics of a different physiographic region, the Taconic Foothills.

Edition: slightly modified from Rensselaer Plateau conservation plan documents, Hunt 2018.

Wynants Kill Flats

Municipality: Towns of North Greenbush (NE part) and Poestenkill (SW corner) >> City of Troy (SE corner), Sand Lake (NW corner), Brunswick (SW corner).

Location: surrounding NY Route 66 between Stop 13 Road and Winter Street Troy.

Site Description: wide lowland flats surrounding the Wynants Kill, with scattered relatively low and small hills.

Site Relations: distinct from the surrounding hillier areas including a relatively large undelineated area to the SW (tentatively called the "Greenbush Hills"); distinguished from an adjacent upstream area along the Wynants Kill Corridor (Wynants Kill Lowlands) to the SE by flatter topography, broader river floodplain, and an unconfined geomorphology.

Edition: June 14, 2019 (after initial April 16 draft).

Wynants Kill Lowlands

Municipality: Towns of Sand Lake (W part), East Greenbush (NE corner), North Greenbush (E-central edge), Nassau (NW part) >> Poestenkill (SW corner).

Location: surrounding NY Route 150, NY Route 43, Shaver Road, and Sheer Road.

Site Description: mixture of undulating low to moderate-sized rolling hills and moderately-small basins associated with the Wynants Kill Valley.

Site Relations: distinct from the surrounding hillier areas including a relatively large undelineated area to the W (tentatively called the "Greenbush Hills"), a moderately large undelineated area to the SW in the Moordener Kill Watershed (tentatively called the "Moordener Kill Hills"), and a moderately large undelineated area to the SE in the Valatie Kill Watershed (tentatively called the "Valatie Kill Hills"); distinguished from two adjacent areas along the Wynants Kill Corridor: 1) Wynants Kill Flats to the NW by more topographic relief, narrower river floodplain, and more confined geomorphology plus 2) an undelineated area to the SE that might be called the "Upper Wynants Kill Lakes" with more abundant lakes within steeper local basins.

Edition: June 25, 2019 (after initial April 16 draft).

Town of Poestenkill: Physiographic Areas

P. 4

PART B. LEVEL-1 PHYSIOGRAPHIC AREAS. (descriptions from US EPA).

RENSSELAER PLATEAU. (from Bryce et al. 2010)

Description: elevated plateau with a rolling surface clearly defined by perimeter escarpment and deep valleys to the east. High density of wetlands and ponds. Moderate to high gradient cool water streams with boulder/cobble substrate and numerous waterfalls at plateau escarpment.

TACONIC FOOTHILLS. (from Bryce et al. 2010)

Description: rolling hills with convex tops and steep side-slopes. Narrow valleys. Moderate gradient bedrock, boulder, and cobble bottomed trout streams. Some natural lakes and ponds.

PART C. LEVEL-2 PHYSIOGRAPHIC AREAS.

CENTRAL RENSSELAER PLATEAU. (modified from Hunt 2000, 2006)

Description: The Central Rensselaer Plateau, or "Central Plateau" for short, is one of the two largest subdivisions of the Rensselaer Plateau. As mapped, this area totals 65,473 acres in size and covers more than half (55%) of the plateau. It represents the large, relatively flat, centralized high-elevation top of the plateau. Characteristic slopes are flat to gentle (0 to 10 degrees), with only local areas having moderately-steep slopes (15 to 25 degrees). Elevations range from 790 feet to 2109 feet, with the average lower boundary at about 1350 feet. The Central Rensselaer Plateau is dominated by "Northern Appalachian" (Adirondack) forest types, both boreal and north temperate. This physiographic subregion is divided into two floristic zones, an outer Hemlock-Beech zone and an inner Spruce-Fir zone (see Level-2 subdivisions below). The Central Plateau and Plateau Escarpment are best distinguished by ecological community types, elevation, and landforms. A description of the general biodiversity of this site, referred to as the Central Rensselaer Plateau Forest, is provided in a separate appendix of the general Biodiversity Sections of this report series.

RENSSELAER PLATEAU ESCARPMENT. (modified from Hunt 2000, 2006)

Description: The Rensselaer Plateau Escarpment, or "Plateau Escarpment" for short, is one of the two largest subdivisions of the Rensselaer Plateau. As mapped, the escarpment totals 52,847 acres in size and covers nearly half (45%) of the plateau. It represents the variably-sloping sides surrounding the Central Rensselaer Plateau in all directions and includes a set of several steep escarpments. On average, it is steeply sloping and occurs at lower elevations than the Central Plateau. Characteristic slopes are moderately steep (15 to 25 degrees), with local steep areas (30 to 55 degrees). Elevations range from 480 feet to 2050 feet, the latter on the E side of the plateau. The average upper elevation is about 1350 feet. Many portions of the Plateau Escarpment, especially its S and N sides, have been heavily dissected from glacial and recent erosion, thus the slopes of this subdivision are variable. Two different landforms dominate this subdivision: 1) very steep-sloping escarpments that have undergone relatively little erosion and 2) flatter hollows that have undergone much erosion, especially from the largest streams draining the plateau which typically flow through the middle of them. As mapped, this physiographic subregion is also divided geographically into 4 major escarpments (see Level-2 subdivisions below) and 8 minor escarpments (see Level-3 subdivisions below) based on different slope aspects, dominant vegetation types, and degrees of erosional dissection. The most prominent of these escarpments are on the W, N, and E faces of the plateau. The Rensselaer Plateau Escarpment is comparable to the Tug Hill Transition subdivision of the Tug Hill Ecozone of NYS DEC (see Reschke 1990), representing the outer ring of steeply-sloped escarpments that surround the flatter central plateau of that ecozone. Thus, an alternative name considered was the "Rensselaer Plateau Transition". Our peer review group thought it best to preserve the name "Rensselaer Plateau Escarpment", as it has been in common local use since at least the mid-1990s. The Central Plateau and Plateau Escarpment are best distinguished by ecological community types, elevation, and landforms. A description of the general biodiversity of this site is provided in a separate appendix of the general Biodiversity Sections of this report series.

PART D. LEVEL-3 PHYSIOGRAPHIC AREAS.

D1. Central Rensselaer Plateau subdivisions. (floristic zones)

SPRUCE-FIR CORE.

Description: The 18,640-acre Spruce-Fir Core of the Central Plateau represents the innermost zone of the plateau where "boreal" communities dominate, thus it most resembles the Central Lowlands ("Boreal Lowland") of the Adirondacks. It has also been referred to as the "Boreal Core" of the plateau. It was delineated based on our comprehensive ecological community map of the plateau (see Section NC). Although locally low and wet, it occurs at the highest elevations of the plateau, ranging from 1345 to 2109 feet, with an average outer boundary of about 1540 feet. Only about 30% of the Central Plateau has a spruce-fir dominated landscape, the rest being dominated by hemlock and beech (see below). Differentiation of this zone highlights two aspects of the plateau: 1) a boreal floristic characteristic that gives the plateau its regional uniqueness and 2) the area of greatest vulnerability to global warming impacts because of limited high-elevation habitat available for cold-dependent boreal biota. The two forest zones of the Central Plateau seem best distinguished by ecological community types, then secondarily by elevation.

HEMLOCK-BEECH MATRIX.

Description: The 46,833-acre Hemlock-Beech Matrix represents simply the remaining and predominant part of the Central Plateau after the Spruce-Fir Core is removed. Like all of the Central Plateau, this zone is dominated by "Northern Appalachian" (Adirondack) forest types. Unlike the Spruce-Fir Zone, this zone resembles more the wide middle zone or ring of the Adirondacks, which has abundant northern hardwood- and hemlock-dominated forests. The two forest zones of the Central Plateau seem best distinguished by ecological community types, then secondarily by elevation. Because the Hemlock-Beech Matrix extends outward on the Central Plateau to the crest of the Plateau Escarpment, it borders on or includes some areas at the leading or cutting edge of the erosion that is occurring throughout the escarpment area. Thus, some "hollows" either extend to the edge of the Hemlock-Beech Zone or may be cutting into this zone, as it was delineated for this study. Areas that may be cut into this zone which are generally not delineated here as separate physiographic areas within this zone include: Quacken Kill Gorge, Middle & Upper Black River Hollows, Upper Dill Brook Hollow, and possibly one or more areas along the middle reaches of Tsatsawassa Creek near The Gipfel. Barberville Flats along the Poesten Kill within this zone is the exception, as it was delineated and is included among the description of Level-4 physiographic areas below.

Part D. Level-3 Physiographic Areas. (continued)

D2. Rensselaer Plateau Escarpment subdivisions.

WESTERN RENSSELAER PLATEAU ESCARPMENT (major)

Description: The Western Rensselaer Plateau Escarpment, or the "Western Plateau Escarpment" or "Western Escarpment" for short is one of three well-defined of four major escarpments of the plateau, forming a relatively long, straight, and narrow set of escarpments spanning the western edge of the plateau. This area is mapped at 10,709 acres (9.1% of the plateau). It is characterized by steep slopes and mostly local areas of erosion from riparian corridors that are situated within a few small hollows or gorges. The dominant forest types are acidic to circumneutral Central Appalachian types, with only sparse local areas of richer forest types. Scattered areas of open canopy rocky summits and slopes are characteristic of this subdivision. The Western Plateau Escarpment is made up of two minor escarpments, the Western Escarpment and Southwest Escarpment, with their mainslopes separated by Horse Heaven Hollow (Figure PH47). A description of the general biodiversity of this site is provided in a separate appendix of the general Biodiversity Sections of this report series.

PART E. LEVEL-4 PHYSIOGRAPHIC AREAS.

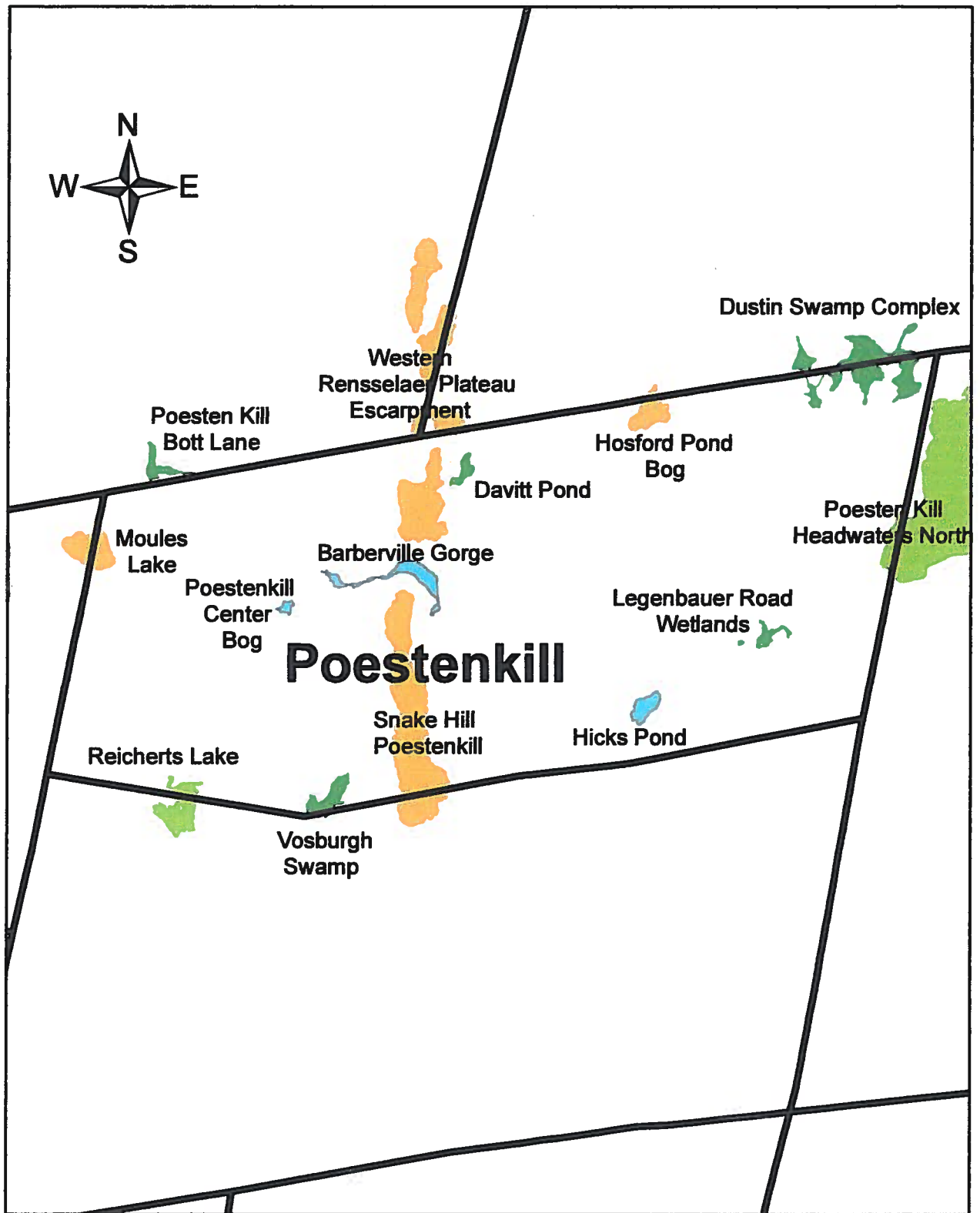
WESTERN RENSSELAER PLATEAU ESCARPMENT (minor)

Description: The Western Rensselaer Plateau (minor) Escarpment is one of several well-defined specific minor escarpments among the eight designated for the plateau. It is one of two minor escarpments designated for the larger (major) Western Escarpment. It is typical of this major escarpment, with steep W-facing slopes and subtle erosion localized in a few small hollows and gorges. This area is mapped as 4,744 acres. It consists of 4 smaller physiographic areas (see below): the typical and predominant mainslope (Western Rensselaer Plateau Escarpment Mainslope), a large ridge/hill (Snake Hill Poestenkill), the lowslope of that hill (Snake Hill Lowslope), and a large gorge cut by the Poesten Kill (Barberville Gorge). The Western Rensselaer Plateau Escarpment ecosystem complex, with its open canopy rocky slope/summit, typifies this site. Albrights soils are relatively common on the plateau only within this minor escarpment.

Sources:

- Bryce, Sandra A., Glenn E. Griffith, James M. Omernik, Greg Edinger, Steven Indrick, Olga Vargas, and Doug Carlson. 2010. Ecoregions of New York. Reston, VA. U.S. Geological Survey. 1:1,250,000.
- Hunt, David M. 2018. Rensselaer Plateau: The Physical Setting. Physiography and Physical Features of the Rensselaer Plateau. Rensselaer Plateau Ecological Features Documentation Series: Volume 2. Ecological Intuition & Medicine.

Rare Plant Concentration Areas



Rensselaer County Importance



Town of Poestenkill: Rare Plant Concentration Areas
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
June 2019

1. Introduction.

The goal for this feature, as part of the Town of Poestenkill Natural Resources Inventory, was to provide site descriptions for **all known plant concentration area sites** in town (see Map 6), especially those identified for the 2017 Rensselaer County Conservation Plan (compiled by the Rensselaer Land Trust), and especially providing a list of associated rare species for each site. The 2017 collective of sites represents the first attempt of RCBGP to design a **comprehensive, carefully, and accurately determined countywide set of rare plant concentration areas** into a GIS system. That effort expanded upon a preliminary (first draft) list in 2003, when this feature was first conceptualized, of countywide sites known to contain numerous county-rare plants, as requested by local botanists. Although this initial set was comprehensive for the county, showing tallies of known rare plant species for concentration area sites at that time, sites were coarsely-mapped (1:150,000 scale) on paper copies. Only 4 sites were designated for the Town of Poestenkill then (see site fact sheets for this historical perspective). The feature concept was solidified as "rare plant concentration areas" in 2016 for the countywide RLT county conservation plan efforts.

Work for the Town of Poestenkill in 2019 focused mostly on consolidation of information for rare plant concentration areas into concise site descriptions and review of previously-prepared GIS information. Only minor refinements were made to prior GIS information, mostly updating of the tallies of rare species for different rarity categories for sites with post-2017 field visits. Minor boundary refinements were made for only one site (Legenbauer Road Wetlands). Only one supplementary concentration site was suggested (Poestenkill Center Bog), and 6 others were considered as potential concentration areas (see Part 7 below). Although the site concept is precisely defined and was accurately analyzed in 2016 and now again in 2019, and although the set of designated sites for the town is likely relatively stable, future additions are possible depending on any new information gathered from previously-unexplored sites, especially sites in town identified as important for restricted ecosystem complex and rarer natural community features, as coarse filters for rare species (e.g., Coopers Pond Complex).

2. Feature Concept.

(modified slightly for grammar from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

Rare plant concentration areas of Rensselaer County, New York represent all sites throughout the county with known concentrations of rare plants. "Rare" plants are broadly interpreted to include those rare at a global, state, and especially county level, as determined by rarity lists maintained by the New York Natural Heritage Program (for global and state rare species) and the Rensselaer County Biodiversity Greenprint Project (for county rare species). "Rare plant concentration areas" are broadly defined as sites with generally at least 5 species of at least county rare status, ideally many more. Most sites were determined from recent observations of rare plant species (in the last 25 years, since 1990). However, other sites with historical specimens (e.g., from the 1930s) of many rare plant species that have not been field checked were included among the important area set, especially for areas correlated with suspected rare community types and determined to be in good condition from air photo interpretation.

3. Source Compilation.

(see Hunt January 2017/Rensselaer Land Trust County Conservation Plan; available upon request)

an additional key source was a previous internal draft of a preliminary site tally of rare plant concentration areas for the Town of Poestenkill, dated December 13, 2016, was compiled in RCBGP files for the county conservation plan).

4. Site Assembly and Prioritization Methods.

(see Hunt January 2017/Rensselaer Land Trust County Conservation Plan for basic methods; available upon request)
includes extensive details on: Site Boundary Method Summary, Prioritization Status Determination Method Summary.

5. GIS Information Available

(updated slightly from Hunt January 2017; for Rensselaer Land Trust County Conservation Plan)
(with minor updates catered to Town of Poestenkill in 2019)

Data Tallies:

- 1) Town of Poestenkill: total of 13 rare plant concentration areas mapped in 2017, 14 in 2019.
- 2) Rensselaer County/county-level analyses: see Hunt January 2017/Rensselaer Land Trust County Conservation Plan.

File Names:

Rare_Plant_Conc_Areas_Poestenkill

(modified and supplemented from a town subset of Rare_Plant_Conc_Areas_RensCo)

Important Fields for Users:

- * = newly added and populated field for Town of Poestenkill Natural Resources Inventory.
 - ** = values newly populated (or changed) for previous sites for Town of Poestenkill Natural Resources Inventory.
 - *** = metadata updated for Town of Poestenkill Natural Resources Inventory.
- note: values for all fields were populated for the 1 new site (Poestenkill Center Bog).

1. Location/Site Identity Fields.

Site_Name: local placename; assigned mostly by RCBGP/D.Hunt using NHP methodology.

Site_Code*,**,*: Site Code. county-specific code assigned to each site.

format: "RPCA" + unique number; 2019: assigned for RPCA1-RPCA14 as the first sites with codes in the county.

Town***: name of town(s) [or "cities"] in which site is located, ordered by towns with the most site area.

Site Hierarchy Fields***

1) larger site [SuperSites] in which concentration area may be embedded; 2) smaller sites [EmbedSites] embedded within the concentration area (for larger areas); 2019: could be further populated in future.

2. Site Priority Fields.

Conc_Level**: Concentration Level Designation. qualitative terms expressing concentration level.

2019: updated for 1 site with changed priority level..

Extremely High:

extremely high level of concentration (100 or more known rare plant populations).

Very High:

very high level of concentration (50-99 known rare plant populations).

High:

high level of concentration (15-49 known rare plant populations).

Concentrated:

average level of concentration (10-14 known rare plant populations).

Moderately Concentrated:

moderate level of concentration (5-9 known rare plant populations).

Probable:

with less than 5 known rare plant populations, but strongly suspected to contain 5 or more rare plant populations; usually with 3 to 4 known rare plant populations and with large area of rare community types; usually weighted more highly if a state or global rare species is present.

Possible:

with less than 5 known rare plant populations, but suspected to possibly contain 5 or more rare plant populations; usually with 2 to 3 known rare plant populations and at least a small area of moderately rare community types; sometimes weighted more highly if a state or global rare species is present.

Conc_Prior**: Priority Level. conversion of exemplary status modifiers into a numerical priority:

Extremely High=1, Very High=2, High=3, Concentrated=4, Moderately Concentrated=5, Probable=6, Possible=7

2019: updated for 1 site with changed priority level.

Co_Prior: site priority order within county region.

only for the "Top 30" sites (31 actually assigned); 999=lower priority sites not yet ranked for county priority; see algorithm mentioned above for determination methods.

TownPrior: site priority order within town/city.

for all sites within the municipality, with up to 22 sites per municipality. (from 2017 RLT Plan)

TownPr2017*,**,*: preserves assignments from 2017 RLT Plan for comparison to later changes.

TownPr2019*,**,*: newly-reordered site priority order for the Town of Poestenkill in 2019.

based on information on newly-designated sites and new known rare species plus more refined and rigorous comparative site analyses including a more precise differentiation of 2017 assignments for sites with equivalent priority ranks.

3. Site Characteristics.

Rarity Type Tally Fields.

1. tallies per site of county, state, and global rare plant species populations; state rare tallies include State-Active, State-Watch, and State-Review species, but not the State-Delisted category; similarly, county rare tallies include County-Active and County-Watch species, but not the County-Delisted category.

Fields: NumGlRare (global rare tally), NumStRare (state rare tally), NumCoRare (county rare tally).

2. tallies per site of County-Active and County-Watch species, with a separate field for County-Sole populations, representing the only known or essentially viable population of a species in the county.

Fields: Num_CoAct (county active list tally), Num_CoWat (county watch list tally), Num_CoDel (county delisted tally), Co_Sole (sole county population tally).

3. tallies per site of State-Active, State-Watch, and State-Review species, plus "State-Delisted" species, the latter category for previously tracked species that have been removed from the state rare species lists. Species on the "State Rare Moss List" are treated under the State-Active category.

Fields: Num_StAct (state active list tally), Num_StWat (state watch list tally), Num_StRev (state review list tally), Num_StDel (state delisted tally).

4. tallies per site of Global-Watch species (G3 and G3G4 rarity ranks); note: no extant populations of Global-Active species (G1 to G2G3 rarity ranks) are known from the county.

Fields: Num_GlWat (global watch list tally).

5. tallies per site of number of species recorded in the databases of NY Natural Heritage Program; includes "historical" populations.

Fields: NumNYHP_EO (NYNHP occurrence tally).

Acres: size of site in acres.

Site Boundary Quality Fields: site location accuracy and boundary precision notes.

Fields: LocatAccur (location accuracy), BndyPrecis (boundary precision).

Other Potentially Useful Fields not yet fully populated.

TallyNotes: special cases, with information from the site fact sheets.

any site "ranking" fields.

Town Percentage field.

Site Relations fields.

Town Priority 2017. exclusively for the Town of Poestenkill instead of the main/primary town.

6. Ecological Interpretation Summary.

(slightly modified for clarity from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

The rare plant concentration area layer was used to map larger-scale landscape features of Rensselaer County, New York, especially ecosystem complexes, aquatic networks, and priority conservation sites. While this layer shows a fair correlation with county-exemplary natural community sites, it reflects more the distribution of rarer community types in the county. The county-wide display of rare plant concentration areas, especially a display showing priority levels, reveals a pattern that reflects many sites of the county long recommended as the highest priority for conservation: the Rensselaer Plateau, Taconic Mountains, the Hudson River and Hoosic River Corridors, and scattered rich sites of the Taconic Valley. Multiple rare plant concentration areas are present in all of these regions, especially portions of them with rare community types.

7. Site Products.

The specific goal for this feature for the Town of Poestenkill Natural Resource Inventory was to produce separate 1-page site descriptions and site fact sheets for each of the 14 rare plant concentration area sites in town, especially the 13 sites designated for the 2017 Rensselaer County Conservation Plan. Site information is provided mostly using fine print. Documents are longer for the larger and more complex sites plus sites from which more rare plants are known. Documents were integrated, condensed, and polished from all readily available prior electronic files of the Rensselaer County Biodiversity Greenprint Project (see below). Information from manual files gathered after the 2017 RLT county plan, especially for about 5 sites (Newfoundland Creek Headwaters, Legenbauer Road Wetlands, Poestenkill Center Bog, Moules Lake, and Bonesteel Creek Forest), was reviewed carefully for changing the shape of any previously-designated areas (only Legenbauer Road Wetlands; see below), adding any newly-designated rare plant concentration areas (only Poestenkill Center Bog; see below), and especially the expanding rare species lists for each site (which, in turn, is related to the site priority assessments and treatments). Because extensive lists of rare plants were compiled for some sites, it was decided to present summary information in two formats per site:

1. a 1-page site fact sheet with abbreviated GIS-compatible information, especially for site importance, detailed rare species tallies and species composition lists. species-level information includes: species names, rarity level, rarity ranks, population characteristics, and observation recency.
2. a 1-page site description with longer textual descriptions of site aspects including ecological characteristics, inventory and mapping effort status, plus conservation status of each site. these documents were made for only 4 smaller sites (see below).

Component rare plant species within a site are arrayed in site fact sheets by rarity level priority. For sites overlapping town boundaries, the focus was on populations within the Town of Poestenkill, although town presence was not always certain for populations near the town border. For species populations known to be only in other towns within broader sites that extend into Poestenkill (e.g., Reicherts Lake, Western Rensselaer Plateau Escarpment, Poestenkill Headwaters), lists were made with abbreviated information. Full details for these sites are available upon request. The document formats were attempted to be as consistent as possible across all 14 sites, to allow meaningful site comparisons. These documents are intended to be "first iteration" drafts for public use to provide the following:

1. a visual image of the nature of each site, especially beyond just its name.
2. concise documents with consolidated but detailed information on the ecological characteristics, regional importance, geography, and conservation status of each site.
3. templates which can be refined with more detailed information in the future, especially to fill in any information gaps.
4. pilot models which could be followed for rare plant concentration area sites in other towns of the county.

While site fact sheets were created for all 14 concentration areas in town, site descriptions were drafted for only 4 sites (Davitt Pond, Hicks Pond, Legenbauer Road Wetlands, Poesten Kill Bott Lane), those without corresponding ecosystem complex sites. These sites are too small, not diverse enough, and/or not well studied enough to warrant a county-important restricted ecosystem complex site. For the other 10 sites, site descriptions of corresponding ecosystem complex sites were deemed sufficient to reflect aspects of the site related to rare plant concentrations. Like the site descriptions of rare plant concentration areas, descriptions for ecosystem complexes also note site ecological characteristics and conservation status.

Because many of these site concepts (boundaries and associated ecological characteristics), as biodiversity conservation sites, were envisioned by the Rensselaer County Biodiversity Greenprint Project, it is thought that the most informative description of each site to date is represented in this product. Future improvements, requiring more time beyond the project scope, could involve:

1. refinement of site boundaries for sites in the Taconic Foothills region, where no community base maps were available and only rapid air photo review was used for delineations, especially via more precise field evaluations.
2. population of additional GIS fields abbreviated from information in the site documents.
3. further review of manual files of the Rensselaer County Biodiversity Greenprint Project, especially for any post-2017 information on additional rare plant species; review for this project is estimated to be about 90% complete.
4. review and integration of any documents of other organizations.

Sources (2019 update):

1. Rensselaer County Conservation Plan documents.
(prepared for Rensselaer Land Trust 2017 including GIS datalayer, summary memo, cover memo).
2. Rensselaer County Biodiversity Greenprint Project electronic site files.
(raw species compilations for Poestenkill and adjacent towns in an extensive county-rare plant document by town).
(see individual sites for relevant references, especially site community-species matrices).

For convenience, the major site-level changes made for this feature are summarized as follows:

1. Rare Plant Concentration Areas with Boundary Refinements.

<u>Site</u>	<u>Boundary Change</u>
Legenbauer Road Wetlands	addition of one wetland patch

2. Newly-Designated Rare Plant Concentration Areas.

<u>Site</u>	<u>Products</u>	<u>Boundary basis</u>
Poestenkill Center Bog	site fact sheet*	ecosystem complex
*see corresponding ecosystem complex for more detailed site description.		

3. Potential Rare Plant Concentration Areas.

<u>Site</u>	<u>Rare Plant Tally</u>	<u>Surrogate Sites with Related Products</u>
2019 Additions.		
Newfoundland Creek Headwaters	2 CW plants	ecosystem complex documents
Poesten Kill Headwaters NW	2 CW plants	ecosystem complex documents
Original 2017 List of Alternate Sites.		
Common Farms	1 CA plants	isolated site (compare to W RP Escarpment)
Pine Ridge Center Fen	2 CW plants	isolated site (compare to Poesten Kill Headwaters NW)
East Poestenkill Forest	2 CW plants	isolated site (compare to Poesten Kill Headwaters Outlet)
Snake Hill West/Snake Hill West Block	2 CW plants	isolated site (compare to Snake Hill Poestenkill)

These 6 sites with few rare species were considered for "rare plant concentration area" status, but a rapid evaluation suggested that rare plant species are not abundant enough at these sites to warrant that designation. Thus, no related site fact sheets or GIS entry population was provided. Details on county rare species for these sites are available upon request.

· Attachment Set RP1.

Town of Poestenkill:
Rare Plant Concentration Area Site Composition
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
Draft 1: June 26, 2019

Sites are listed by Concentration Priority, by County Priority, by Town Priority

1. Site: Snake Hill Poestenkill (continued)

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs
State-A	Fernald's Sedge Notes: Source: B.Ingalls report via T.Phillips with T.Reznicek verification; only site known in county per BI. Subsite = Snake Hill North.	Carex merriitt-fernaldii	SA/CA-1	G5/S2S3/C1	20i	recent
State-A	Slender Knotweed Notes: Sources: historic reports based on specimen NYS H796 (1933) (NYHP log) and Gordinier & Howe (1894); not found in Snake Hill North subsite after several searches. Subsite = Snake Hill North.	Polygonum tenue	SA/CA-H	G5/S3/C1	extirpated? 1933	
State-D	Hay Sedge Notes: Subsite = Snake Hill North.	Carex argyrantha	SD/CA	G5/S2/C1	50i	2004/2000
County-A	Red Pine Notes: native EO. Subsites: Barberville Cliffs, Snake Hill Road Cliffs.	Pinus resinosa	CA	C1NC5E	10i	recent
County-A	Four-leaf Milkweed Notes: considering change to rarer C1 rank as of 2017. Subsite = Snake Hill North.	Asclepias quadrifolia	CA	C1C2/C1	10i/2i	2004/2000
County-A	Venus' Looking Glass Notes: var. perfoliata. considering change to rarer C1 rank as of 2017. Subsite = Snake Hill North.	Triodanis perfoliata	CA	C1C2/C1	50i	recent
County-A	Early Blue Violet Notes: considering change to rarer C1 rank as of 2017. Subsite = Snake Hill North.	Viola palmata	CA	C1C2/C1	1i/2i	2004/2000
County-A	Slender Wheatgrass Notes: subspecies not determined; (=Agropyron); considering rarer C1 rank as of 2017. Subsite = Snake Hill North.	Elymus trachycaulus	CA	C1C2/C1	50i/20i	2000/1998
County-A	Hairy Bush Clover Notes: Subsite = Snake Hill North.	Lespedeza hirta	CA	C1C2	10i	recent
County-A	Rock Spikemoss Notes: Subsite = Snake Hill North.	Selaginella rupestris	CA	C1C2	20i	recent
County-A	Bashful Clubrush Subsites = Snake Hill North (several), Snake Hill West (40i).	Scirpus vervecundus	CA	C1C2	see notes	recent
County-A	Trumpet Honeysuckle Notes: considering downranking to watch list (C2) as of 2017. Subsite = Snake Hill North.	Lonicera sempervirens	CA	C1C2/C2		
County-A	Mountain Buttercup Notes: species identity uncertain (R. cf. alleghaniensis); treat as "possible lead". Subsite = Snake Hill West.	Ranunculus alleghaniensis	CA	C1C2	1i	recent
County-A	Large-leaf Aster Notes: species identity questionable (A. cf. schreberi); suspect A. macrophyllus (C4). treated as "questionable lead" and not counted in site tally. Subsite = Snake Hill North.	Aster schreberi	CA	C1C2	10ic	recent
County-A	Rock Greenshield Notes: T.Phillips (pers.com) report.	Flavoparmelia baltimorensis	CNA?	C1?	-	-
County-W	Sicklepod Notes: Subsite = Snake Hill North.	Arabis canadensis	CW	C2	10i	recent
County-W	Ribbed Sedge Notes: Subsite = Snake Hill North.	Carex virescens	CW	C2	no count	recent
County-W	Scrub Oak Notes: Subsite = Snake Hill North.	Quercus ilicifolia	CW	C2	no count	recent
County-W	Poverty Panic Grass Notes: species id uncertain (P. cf. depauperatum) but probable (correct habitat); if not, probably a county-rare Panicum. treated as "probable lead". Subsite = Snake Hill North.	Panicum depauperatum	CW	C2	100i	recent
County-W	Common Wild Licorice Notes: variety not determined; both varieties rare, if not C2C3 variety, then rarer C1C3-W variety. Subsite = Snake Hill North.	Galium circaeazans	CW	C2C3-	-	recent
County-W	Big Bluestem Notes: considering change to rarer C2 rank as of 2017. Subsite = Snake Hill North.	Andropogon gerardii	CW	C2C3/C2	50i/20i	2000/1998?
County-W	Wavy-leaf Aster Notes: Subsite = Snake Hill North.	Aster undulatus	CW	C2C3	no count	recent
County-W	Rattlesnake Weed Notes: Subsite = Snake Hill North.	Hieracium venosum	CW	C2C3	400i/200i	2004/2000
County-W	Tall Cinquefoil Notes: Subsite = Snake Hill North.	Potentilla arguta	CW	C2C3	10i	recent
County-W	Oval-Headed Sedge Notes: Subsite = Snake Hill North.	Carex cephalophora	CW	C2C3	-	recent
County-W	Cancer-root Notes: Subsite = Snake Hill North.	Orobanche uniflora	CW	C2C3	1i	recent
County-W	Flowering Dogwood Notes: Subsite = Snake Hill West.	Cornus florida	CW	C2C3	3i	recent
County-W	Roundleaf Ragwort Notes: Subsite = Snake Hill West.	Senecio obovatus	CW	C2C3	200i	recent
County-W	Bush Juneberry Notes: species id uncertain (cf. stolonifera) but probable (correct habitat); if not, probably a county-rare Amelanchier. treated as "probable lead". Subsite = Snake Hill North.	Amelanchier stolonifera	CW	C2C3	-	recent
County-W	Rusty Woodsia Notes: considering delisting to lower rank (C3) as of 2017. Subsite = Snake Hill North.	Woodsia ilvensis	CW	C2C3/C3	-	recent
County-W	Plantain-Leaved Sedge Notes: considering for delisting (C3) as of 2016. Subsite = Snake Hill West.	Carex plantaginea	CW+	C2C3/C3	-	recent
County-N-	Sweetfern Notes: considering change to rarer C2C3 rank as of 2017. Subsite = Snake Hill North.	Comptonia peregrina	CN	C3/C2C3	1i	recent
County-N-	Rock Harlequin Notes: considering change to rarer C2C3 rank as of 2017. Subsite = Snake Hill North.	Corydalis sempervirens	CN	C3/C2C3	-	recent

1. Site: **Snake Hill Poestenkill** (continued)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-D	Deerberry	Vaccinium stamineum	CD	C3d	no count	
	Notes: Subsites = Snake Hill North, Snake Hill West.					
County-D	Early Saxifrage	Saxifraga virginensis	CD	C3d		
	Notes: Subsite = Snake Hill North.					
County-D	Northern Downy Violet	Viola sagittata	CD	C3d		
	Notes: Subsite = Snake Hill North.					

Possibly County-Rare Non-Vascular Plants (pending any systematic rare lists for county)

Needle-leaf Lantern Moss	Andraea rothii	pending	recent
Notes: check with T.Phillips if rare bryophyte.			

Other interesting vascular plants that may be moderately county uncommon.

<u>C Rank</u>	<u>Common Name/Scientific Name</u>	<u>Subsite</u>
C3:	Ebony Spleenwort/Asplenium platyneuron	Snake Hill North (3i)
	False Shagbark Hickory/Carya ovalis	Snake Hill North, Snake Hill West
	Toadflax/Comandra umbellata	Snake Hill North
	Gray Goldenrod/Solidago nemoralis	Snake Hill North
	Downy Arrowwood/Viburnum rafinesquianum	Snake Hill North, Snake Hill West
	Cow-Wheat/Melampyrum lineare	Snake Hill North
	Perfoliate Bellwort/Uvularia perfoliata	Snake Hill North
	Long-Spurred Violet/Viola cf. rostrata	Snake Hill West
C3C4:	Prickly Gooseberry/Ribes cynos-bati	Snake Hill North, Snake Hill West
	Woodland Sunflower/Helianthus divaricatus	Snake Hill North
	Plantain-Leaved Pussy-Toes/Antennaria plantaginifolia	Snake Hill North, Snake Hill West
	Whorled Loosestrife/Lysimachia quadrifolia	Snake Hill North
	Black Huckleberry/Gaylussacia baccata	Snake Hill North
	Early Azalea/Rhododendron prinophyllum	Snake Hill North
	American Hazelnut/Corylus americana	Snake Hill North
	Torrey's Wild Licorice/Galium lanceolatum	Snake Hill North, Snake Hill West
C4:	Fringed Polygala/Polygala paucifolia	Snake Hill North, Snake Hill West
	Trailing Arbutus/Epigaea repens	Snake Hill North
	American Chestnut/Castanea dentata	Snake Hill West
	Pasture Rose/Rosa carolina	Snake Hill West

2. Site: Western Rensselaer Plateau Escarpment (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites:

Western Rensselaer Plateau Escarpment Ledges (Level-1) (Poestenkill)
part of Kirchner Easement (=Pattison Preserve) (Level-2) (Poestenkill)
part of Common Farms (Level-2) (Poestenkill)
part of Camp Rotary Woods (Level-2) (Poestenkill + Grafton)
Penny Royal Lane Slopes (Level-1) (Brunswick + Grafton)
Wheeler Mountain (Level-1) (Brunswick)

Excluded but Related/Overlapping Sites:

Camp Rotary Woods (= Davitt Pond Woods; Camp Rotary)
Barberville Gorge
Common Farms
Kirchner Easement

Related County-Important Ecological Features:

Priority Conservation Site: Rensselaer Plateau Forest (embedded within)
Forest Landscape: Rensselaer Plateau Forest (embedded within)
Ecosystem Complex: Western Rensselaer Plateau Escarpment (equivalent)
Important Animal Habitat: Western Rensselaer Plateau Escarpment (equivalent)
Exemplary Communities: Western Rensselaer Plateau Escarpment (contained & overlapping)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): #18.

Town Priority:

Poestenkill Town Plan (2019): #2; County Plan (2017): #2 (for Brunswick/Poestenkill=#2 adjusted); Brunswick Town Plan (2012): #2 (Wheeler Mountain subsite); County Tally (2003): #3 (for Brunswick).

C. Site Description.

Site Configuration:

Size: 415 acres. Shape/Boundary: relatively stable concept, but some of rarer plant populations may extend, in Poestenkill, closer towards Common Farms and Davitt Pond outside of typical (mapped) rocky summit/slope complex. with 4 patches.

Town Location: Brunswick > Poestenkill (43%) > Grafton. part of 2 of 4 patches in Poestenkill.

Descriptive Account:

see Western Rensselaer Plateau Escarpment ecosystem complex (similar boundary & concept).

D. Plant Rarity Tallies.

total active watch review delisted notes
March 2019 (Draft 4): (for Town Plan). 2 refinements from Draft 3 information.

Global Rare:	1	0	1	NA	-	
State Rare:	2	1	0	1	1	1 NYNHP EO
County Rare:	25	14	11	NA	3	

December 2016 (Draft 3): (from RLT County Plan).

Global Rare:	1	0	1	NA	-	
State Rare:	2	1	0	1	1	1 NYNHP EO
County Rare:	23	12	11	NA	-	

October 2003 (Draft 2): (from first Countywide Site Tally). not included (0 state and county rare plants).

October 1998 (Draft 1): (from Poestenkill Town Plan). not listed.

--Poestenkill Portion (2016)	8C/0S	2CA/6CW, 1SD
--Poestenkill Portion (2019)	10C/0S	4CA/6CW, 1SD
--Grafton Portion (2016)	1C/0S	1CA
--Brunswick Portion (2016)	14C/2S/1G	9CA/5CW, 1SA/1SR, 1GW

Rarity Accuracy:

only a limited part of site explored, likely many more characteristic rare plants of various rarity levels, including possible additional state-rare plants and at least 1 county sole EO.

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

Note: list divided into those known or potential from Poestenkill versus species known only from the other two site patches to the N, thus not in Poestenkill.

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs	Town
State-D	Hay Sedge	Carex argyrantha	SD/CA	G5/S2/C1	3i	recent	Br-Gr>Pk

Notes: subsite = Western Rensselaer Plateau Escarpment Ledges.

2. Site: Western Rensselaer Plateau Escarpment (continued)

E. Rare Plant Composition. (continued)

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs	Town
County-A	Squawroot	Conopholis americana	CA	C1		2012	Pk
Notes: Source: N. Conrad (pers. com.) observation 2012. subsite = Common Farms. not in 2016 tally (perhaps assumed then outside site concept).							
County-A	Arrow-leaf Aster	Aster sagittifolius	CA	C1C2	10i	recent	Br-Gr>Pk
Notes: subsite = Western Rensselaer Plateau Escarpment Ledges.							
County-A	Bashful Clubrush	Scirpus verecundus	CA	C1C2	no count	recent	PK
Notes: genus & species identity uncertain (cf. Scirpus verecundus), but suspected (correct habitat). treated as "probable lead". subsite = Common Farms. not in 2016 tally (perhaps assumed then outside site concept).							
County-A	Pinkster-Flower	Rhododendron periclymenoides	CA	C1	10i	recent	PK
Notes: species identity uncertain (R. cf. periclymenoides), need ID comparison to R. prinophyllum; treated as "possible lead", thus not included in site tally. subsite = Common Farms.							
County-W	White-Topped Aster	Aster paternus	CW-	C2		1994	Pk/Gr
Notes: species identity uncertain (A. cf. paternus), if not, then rarer (C1C2) A. patens; treat as "probable lead". subsite = Camp Rotary Woods (NRP Upland 507)							
County-W	Bottlebrush grass	Elymus hystrix	CW-	C2C3-	20+i	recent	Br-Gr>Pk
Notes: variety undetermined but all varieties are rare. subsite = Western Rensselaer Plateau Escarpment Ledges.							
County-W	Sicklepod	Arabis canadensis	CW	C2	1i	recent	Br-Gr>Pk
Notes: species ID uncertain (A. cf. canadensis) but suspected (correct habitat); treated as "probable lead". subsite = Western Rensselaer Plateau Escarpment Ledges.							
County-W	Sharp-lobed Liverleaf	Hepatica nobilis	CW	C2C3	no count	recent	Br-Gr>Pk
Notes: var. acuta. subsite = Western Rensselaer Plateau Escarpment Ledges.							
County-W	Pinesap	Monotropa hypopithys	CW	C2C3		2007	Pk/Gr
Notes: Source: D. Blanchet (pers. com.) report. subsite = Camp Rotary Woods							
County-W	Black Ash	Fraxinus nigra	CW+	C2C3/C3		1994	Gr/Pk
Notes: species identity uncertain (F. cf. nigra), but suspected (correct habitat); track as "probable lead". considering delisting to C3 as of 2017. subsite = Camp Rotary Woods (NRP Wetland 306).							
County-W	Nimble-Will	Muhlenbergia schreberi	CW	C2C3		recent	Br-Gr>Pk
Notes: species identity very uncertain (M. cf. schreberi); treated as "possible lead". subsite = Western Rensselaer Plateau Escarpment Ledges.							
County-N	Rock Harlequin	Corydalis sempervirens	CN-	C3/C2C3		recent	Br-Gr>Pk
Notes: considering change to rarer C2C3 rank as of 2017. subsite = Western Rensselaer Plateau Escarpment Ledges.							
County-N	Sweetfern	Comptonia peregrina	CN-	C3/C2C3	30i	recent	(Gr/Pk)
Notes: considering change to rarer C2C3 rank as of 2017. subsite = Camp Rotary Woods							
County-N	Panicled Hawkweed	Hieracium paniculatum	CN-	C3/C2C3		recent	(Gr/Pk)
Notes: considering change to rarer C2C3 rank as of 2017. subsite = Camp Rotary Woods.							
County-N	Hairy Wood-Rush	Luzula acuminata	CN-	C3/C2C3	220i	recent	PK
Notes: species ID uncertain (L. cf. acuminata), but suspected (correct habitat). treated as "probable lead". considering change to rarer C2C3 rank as of 2017. subsite = Common Farms.							
County-D	Deerberry	Vaccinium stamineum	CD	C3d	SEE NOTES	recent	PK
Notes: subsites = Common Farms (abundant), Western Rensselaer Plateau Escarpment Ledges (20i Br-Gr>Pk), Camp Rotary Woods (100si, Gr/Pk).							
County-D	Early Saxifrage	Saxifraga virginensis	CD	C3d		recent	Br-Gr>Pk
Notes: subsite = Western Rensselaer Plateau Escarpment Ledges.							
County-D	Northern Downy Violet	Viola sagittata	CD	C3d		recent	(Gr/Pk)
Notes: subsite = Camp Rotary Woods.							
Possibly County-Rare Non-Vascular Plants (pending any systematic rare lists for county)							
	Hemlock Reishi	Ganoderma tsugae					
Notes: subsite = Western Rensselaer Plateau Escarpment Ledges. (polypore on rotting hemlock).							
Other interesting vascular plants that may be moderately county uncommon.							
C Rank	Common Name/Scientific Name	Subsite/Notes					
C2C4:	Pale White Violet/Viola cf. macloskeyi ssp. pallens	Camp Rotary Woods (Gr/Pk), probable lead.					
C3:	Long-Spurred Violet/Viola rostrata	Common Farms (6+i)					
	False Shagbark Hickory/Carya ovalis	Western Rensselaer Plateau Escarpment Ledges.					
	Toadflax/Comandra umbellata	Western Rensselaer Plateau Escarpment Ledges.					
	Gray Goldenrod/Solidago nemoralis	Camp Rotary Woods (Gr/Pk)					
C3C4:	Three-Spiked Ground Cedar/Lycopodium tristachyum	Camp Rotary Woods (Gr/Pk)					
	Hazelnut Corylus sp.	Common Farms					
	Yellow Violet/Viola cf. pubescens	Common Farms, probable lead.					
	Southern Hairgrass/Agrostis cf. hyemalis	W Rensselaer Plateau Escarpment Ledges. possible lead.					
	Prickly Gooseberry/Ribes cynos-bati	Western Rensselaer Plateau Escarpment Ledges.					
	Black Huckleberry/Gaylussacia baccata	Camp Rotary Woods (Gr/Pk)					
	Pink Lady's-Slipper/Cypripedium acaule	Camp Rotary Woods (Gr/Pk)					
	Dewey's Sedge/Carex deweyana	Camp Rotary Woods (Gr/Pk)					
	Round-leaf Dogwood/Cornus rugosa	Camp Rotary Woods (Gr/Pk)					
C4:	Trailing Arbutus/Epigaea repens	Common Farms, W Rensselaer Plateau Escarpment Ledges.					
	Blunt-lobed Liverleaf/Hepatica nobilis var. obtusa	Western Rensselaer Plateau Escarpment Ledges.					
	Hop Sedge/Carex lupulina	Camp Rotary Woods (NRP Wetland 309) (Gr>Pk)					

2. Site: **Western Rensselaer Plateau Escarpment** (continued)

E. Rare Plant Composition. (continued)

Other rare species from Brunswick & Grafton Patches

Wheeler Mountain (Brunswick)

Penny Royal Lane Slopes (Grafton)

concise list without source, abundance, and recency information.

Global-W	Ginseng	<i>Panax quinquefolius</i>	GW/SR/CA	G3G4/S3S4/C1C2	Wheeler Mountain
State-A	Bent Sedge	<i>Carex styloflexa</i>	SA/CA-1	S1/C1	Wheeler Mountain
County-A	Squawroot	<i>Conopholis americana</i>	CA	C1	Wheeler Mountain
County-A	Mountain Ricegrass	<i>Oryzopsis racemosa</i>	CA	C1	Wheeler Mountain
County-A	(moss)	<i>Ctenidium molluscum</i>	CA	C1	Wheeler Mountain
County-A	White Cushion Moss	<i>Leucobryum albidum</i>	CA	C1	Wheeler Mountain
County-A	(moss)	<i>Pylaisiadelphina tenuirostris</i>	CA	C1	Wheeler Mountain
County-A	(moss)	<i>Thamnobryum alleghaniense</i>	CA	C1	Wheeler Mountain
County-A	Umbel-like sedge	<i>Carex umbellata</i>	CA	C1C2	Wheeler Mountain
County-A	Canada Lousewort	<i>Pedicularis canadensis</i>	CA	C1C2	Penny Royal Lane Slope
County-A	Rock Greenshield	<i>Flavoparmelia baltimorensis</i>	CNA?	C1?	Wheeler Mountain
County-W	Lyre-leaf Rock Cress	<i>Arabis lyrata</i>	CW	C2	Wheeler Mountain
County-W	Squirrel-Corn	<i>Dicentra canadensis</i>	CW	C2	Wheeler Mountain
County-W	Dutchman's-Breeches	<i>Dicentra cucullata</i>	CW	C2C3	Wheeler Mountain
County-W	Plantain-Leaf Sedge	<i>Carex plantaginea</i>	CW	C2C3/C3	Wheeler Mountain
County-W	False Melic	<i>Schizachne purpurascens</i>	CW	C2C3?	Wheeler Mountain
County-N-	Rock Harlequin	<i>Corydalis sempervirens</i>	CN-	C3/C2C3	Wheeler Mountain
County-N-	Canada Violet	<i>Viola canadensis</i>	CN-	C3/C2C3	Wheeler Mt/Penny Royal Lane Slope
County-N-	Hairy Wood-Rush	<i>Luzula acuminata</i>	CN-	C3/C2C3	Penny Royal Lane Slope
County-D	Deerberry	<i>Vaccinium stamineum</i>	CD	C3d	Wheeler Mountain
County-D	Early Saxifrage	<i>Saxifraga virginiana</i>	CD	C3d	Wheeler Mountain
Potentially rare non-vascular plants					
	Hemlock Reishi	<i>Ganoderma tsugae</i>	?		Wheeler Mountain

3. Site: **Hosford Pond Bog** (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms: Poestenkill Bog (NYSM 1932 collection)
Included Subsites: Hosford Pond
Excluded but Related/Overlapping Sites: -
Related County-Important Ecological Features: -
Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)
Forest Landscape: Rensselaer Plateau Forest (embedded within)
Aquatic Network: Bonesteel Creek Network (embedded within)
Ecosystem Complex: Hosford Pond Bog (embedded within)
Important Animal Habitat: Hosford Pond Bog (contained)
Exemplary Communities: Hosford Pond Bog (contained)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): #22.

Town Priority:

Poestenkill Town Plan (2019): #3; County Plan (2017): #2 (for Poestenkill; =#3 adjusted); County Tally (2003): #2 (Poestenkill).

C. Site Description.

Site Configuration: Size: 53 acres; Shape/Boundary: relatively stable concept.

Town Location: Poestenkill (90%) > Grafton (10%).

all rare plants known from Poestenkill part of site.

Descriptive Account:

see Hosford Pond Bog ecosystem complex (similar boundary & concept).

D. Plant Rarity Tallies.

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>review</u>	<u>delisted</u>	<u>notes</u>
March 2019 (Draft 4):						(for Town Plan). No change from Draft 3.
December 2016 (Draft 3):						(from RLT County Plan).
Global Rare:	0	0	0	NA	-	
State Rare:	1	1	0	0	0	0 NYNHP EOs
County Rare:	16	8	8	NA	[1]	1 county sole EO
October 2003 (Draft 2):						(from first Countywide Site Tally).
State Rare:	0					
County Rare:	9					
October 1998 (Draft 1):						(from Poestenkill Town Plan). not listed.

Rarity Accuracy:

much of site historically explored, but still likely more rare plants of various rarity levels to be found.

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
State-A	Podgrass	Scheuchzeria palustris	SA/CA	G5/S3/CH	extirpated?	1932
	Notes: ssp. americana; Source: NYSM collection: NYS R264 from "Poestenkill Bog"; uncertain if this site, if not, may be Poestenkill Center Bog; EO tracked as H/X? rank for site; treated as "probable lead" (correct habitat).					
County-A	Bog Rush	Cladium mariscoides	CA-1	C1	no count	1996/1998
	Notes: Source: NYSM collections: NYS A22704 (1996) & NYS A28621 (1998), county sole EO.					
County-A	Water Clubrush	Scirpus subterminalis	CA	C1	10i/50i	recent
County-A	Water Heart	Nymphoides cordata	CA	C1		recent
	Notes: Source: Hosford Pond Adirondack Lake Survey report (high reliability).					
County-A	Grass Pink	Calopogon tuberosus	CA	C1C2/C1	1i	recent
	Notes: considered rarer C1 rank in 2017 based on few populations. mistaken for state-rare Dragon's-Mouth/Arctostaphylos bulbosa (Dale Blanchet report: 1995).					
County-A	Northern Yellow-Eyed Grass	Xyris montana	CA	C1C2>C1	500i	recent
	Notes: considered rarer C1 rank in 2017 based on few populations.					
County-A	Bog Buckbean	Menyanthes trifoliata	CA	C1C2	no count	recent
	Notes: var. minor.					
County-A	Sharp-Scaled Mannagrass	Glyceria acutiflora	CA	C1C2		1932
	Notes: Source: NYS collection R377 (1932).					

3. Site: Hosford Pond Bog (continued)

E. Rare Plant Composition: (continued)

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs
County-W	Narrow-leaf Sundew	<i>Drosera intermedia</i>	CW	C2	no count	recent
County-W	Slender Sedge	<i>Carex lasiocarpa</i>	CW	C2 50i		recent
County-W	Bog Sedge	<i>Carex paupercula</i>	CW	C2/C2C3	no count	recent
	Notes: ssp. americana; originally mistakenly suspected to be <i>Carex lacustris</i> (C4C5). Notes: variety undetermined (cf. <i>irrigua</i>), but all varieties are rare; tracked as "probable lead" (correct habitat); probable identity of "C.limosa" record below. considering lowering rank to C2C3 as of 2017.					
County-W	Bog Rosemary	<i>Andromeda glaucophylla</i>	CW	C2C3	1000i	recent
County-W	Bog Laurel	<i>Kalmia polifolia</i>	CW	C2C3	no count	recent
County-W	Horned Bladderwort	<i>Utricularia cornuta</i>	CW	C2C3	no count	recent
County-W	Water Sedge	<i>Carex aquatilis</i>	CW	C2C3		recent
	Notes: species ID uncertain (C. cf. <i>aquatilis</i>), but suspected (correct habitat); tracked as "probable lead".					
County-W	Floating Bur-reed	<i>Sparganium fluctuans</i>	CW+	C2C3/C3		recent
	Notes: apparently expanding in county since 1990; being considered for delisting (C3 rank) if continued expansion.					
County-D	Water Shield	<i>Brasenia schreberi</i>	CD	C3d		recent
	Notes: Source: also in Hosford Pond Adirondack Lake Survey report.					

Possibly County-Rare Non-Vascular Plants (pending any systematic rare lists for county)

liverwort/ *Cladopodiella* cf. *fluitans*
liverwort/ *Pallavicinia lyellii*
liverwort/ *Mylia anomala*

Other interesting vascular plants that may be moderately county uncommon.

C Rank	Common Name/Scientific Name	Notes
C3:	American Larch/ <i>Larix laricina</i>	
	Pitcher Plant/ <i>Sarracenia purpurea</i>	10i
	Water Horsetail/ <i>Equisetum fluviatile</i>	
	Small-leaf Cranberry/ <i>Vaccinium oxycoccus</i> var. <i>oxycoccus</i>	
	Round-leaf Sundew/ <i>Drosera rotundifolia</i>	
C3C4:	Sweetgale/ <i>Myrica gale</i>	
	Black Huckleberry/ <i>Gaylussacia baccata</i>	
	Waterwillow/ <i>Decodon verticillatus</i>	
	Tawny Cottongrass/ <i>Eriophorum virginicum</i>	
	White Beakrush/ <i>Rhynchospora alba</i>	
C4:	Common Bladderwort/ <i>Utricularia macrorhiza</i>	
	Ostrich Fern/ <i>Matteucia strutheropteris</i>	
	Bristly Sedge/ <i>Carex</i> cf. <i>comosa</i>	

Questionable Reports

Mud Sedge/*Carex limosa* (County-A: C1C2)

Notes: from historic species list; species ID questionable (per D.Hunt): probably *C. paupercula*. treated as "questionable lead" and not included in site tally.

4. Site: **Moules Lake** (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms: -
Included Subsites: -
Excluded but Related/Overlapping Sites: -
Related County-Important Ecological Features:
Priority Conservation Sites: Wynants Kill Corridor (embedded within)
Ecosystem Complex: Moules Lake (contained)
Exemplary Communities: Moules Lake (contained)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): #>50.

Town Priority:

Poestenkill Town Plan (2019): ~#4; County Plan (2017): #2 (North Greenbush/Poestenkill=#4 adjusted); County Tally (2003): #2 (North Greenbush).

C. Site Description.

Site Configuration: Size: 87 acres; Shape/Boundary: relatively stable concept.

Town Location: North Greenbush (55%) > Poestenkill (45%).

town location currently uncertain for many rare plants; estimate equal chance of being in either town. more analysis of recent field observations might determine precise town location for some species.

Descriptive Account:

see Moules Lake ecosystem complex: (similar boundary & concept).

D. Plant Rarity Tallies.

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>review</u>	<u>delisted</u>	<u>notes</u>
March 2019 (Draft 4):						(for Town Plan). updated from 2018 field trip & thorough review of original notes.
Global Rare:	1	0	1	NA	-	
State Rare:	1	0	1	0	0	
County Rare:	17	8	9	NA	1	1 county sole EO
December 2016 (Draft 3):						(from RLT County Plan).
Global Rare:	0	0	0	NA	-	
State Rare:	0	0	0	0	0	
County Rare:	15	7	8	NA	-	
October 2003 (Draft 2):						(from first Countywide Site Tally). listed under North Greenbush.
State Rare:	0					
County Rare:	1+					
October 1998 (Draft 1):						(from Poestenkill Town Plan).
County Rare:	present					

Rarity Accuracy:

only limited part of site explored in recent years, likely many more rare plants of county rarity to be found, but some of historic rare plants may have become extirpated due to recent developmental displacement and hydrologic impacts; high priority for site monitoring/demographic studies at town & county level.

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>	<u>Town</u>
Global	Butternut	Juglans cinerea	GW?/SW/CW	G4/S4/C2C3NC3E		1980s	?
	Notes: changed to C2C3>=C3 in 2016 because of global rarity listing (consistently manifested disease threat), despite agreement among county experts that it is of C3 rank in terms of sheer numbers.						
	Notes: Source: written report from reliable expert.						
County-A	Yellow Bartonian	Bartonia virginica	CA-1	C1		1980s	?
	Notes: Source: written report from reliable expert.						
County-A	Black Gum	Nyssa sylvatica	CA	C1/C1C2		recent	PK?/NGr
	Notes: considering for lower rank (C1C2) as of 2016.						
County-A	New Jersey Tea	Ceanothus americanus	CA	C1/C1C2		recent	PK?/NGr
	Notes: considering for lower rank (C1C2) as of 2016.						
County-A	Grass Pink	Calopogon tuberosus	CA	C1C2/C1		1980s	?
	Notes: considering for higher rank (C1) as of 2016. Source: written report from reliable expert.						
County-A	Zig-zag Aster	Aster prenanthoides	CA	C1C2		1980s	?
	Notes: Source: written report from reliable expert.						
County-A	Low Nutsedge	Cyperus diandrus	CA	C1C2		1980s	?
	Notes: Source: written report from reliable expert.						
County-A	Horsemint	Monarda fistulosa	CA	C1C2		1980s	?
	Notes: Source: written report from reliable expert.						
County-A	Hairy Bedstraw	Galium pilosum	CA	C1C2		1980s	PK?/NGr
	Notes: Source: written report from reliable expert. overlooked on 2017 tally.						
County-A	Bog Twayblade	Liparis loeselii	CA-1	C1		recent	PK?/NGr
	Notes: uncertain genus/species identity (unusual orchid; cf. Liparis loeselii); treated as "possible lead" and not tallied for site.						

4. Site: Moules Lake (continued)

E. Rare Plant Composition: (continued)

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs	Town
County-W	Water Stargrass	Heteranthera dubia	CW	C2		1980s	?
	Notes: Source: written report from reliable expert.						
County-W	Scrub Oak	Quercus ilicifolia	CW	C2		1980s	?
	Notes: Source: written report from reliable expert.						
County-W	Poison Sumac	Toxicodendron vernix	CW	C2		1980s	?
	Notes: Source: written report from reliable expert.						
County-W	Rattlesnake Fern	Botrychium virginicum	CW	C2C3		1980s	?
	Notes: Source: written report from reliable expert.						
County-W	Flowering Dogwood	Cornus florida	CW	C2C3		1980s	?
	Notes: Source: written report from reliable expert.						
County-W	Scarlet Oak	Quercus coccinea	CW	C2C3		1980s	?
	Notes: Source: written report from reliable expert.						
County-W	Rue Anemone	Thalictrum thalictroides	CW	C2C3		1980s	?
	Notes: Source: written report from reliable expert.						
County-W	Cutleaf Goldenrod	Solidago arguta	CW	C2C3>C3		1980s	?
	Notes: considered for higher rank (C2C3) in 2016. Source: written report from reliable expert. Not in 2016 site tally.						

County-N-	Hairy Wood-Rush	Luzula acuminata	CN-	C3/C2C3	220i	2018	PK
	Notes: considering for higher rank (C2C3) as of 2016.						
County-N-	Bristle-Stalked Sedge	Carex leptalea	CN-	C3>=C2C3		recent	PK?/NGr
	Notes: considering for higher rank (C2C3) as of 2016.						
County-N-	Rose Pogonia	Pogonia ophioglossoides	CN-	C3>C2C3		1980s	?
	Notes: considering for higher rank (C2C3) as of 2016. Source: written report from reliable expert.						
County-N-	Porcupine Sedge	Carex hystericina	CN-	C3C4/C2C3			
	Notes: considering for higher rank (C2C3) as of 2016. Source: written report from reliable expert.						
County-N-	Bush Clover	Lespedeza spp.	CN-	C3-		1980s	?
	Notes: species unknown; probably native and probably L.capitata (C3); other native Lespedeza species are much rarer in county. Source: written report from reliable expert. tracked as "probable lead".						

County-D	Maleberry	Lyonia ligustrina	CD	C3d		1980s	?
	Notes: Source: written report from reliable expert. Not in 2016 site tally.						

Other interesting vascular plants that may be moderately county uncommon.							
<u>C Rank</u>	<u>Common Name/Scientific Name</u>	<u>Source/Notes</u>					
C2C4:	Fragile Fern/Cystopteris fragilis	reliable written report					
C3:	Roundleaf Sundew/Drosera rotundifolia						
	Labrador Tea/Rhododendron groenlandicum						
	Pitcher Plant/Sarracenia purpurea						
	Small-leaved Cranberry/Vaccinium oxycoccus						
	Horsebalm/Collinsonia canadensis	5i					
	Northern Mannagrass/Glyceria cf. borealis						
	Cow-Wheat/Melampyrum lineare						
	American Larch/Larix laricina	reliable written report					
C3C4:	Waterwillow/Decodon verticillatus						
	Tawny Cottongrass/Eriophorum virginicum						
	Black Huckleberry/Gaylussacia baccata						
	White Beakrush/Rhynchospora alba						
	Large-leaved Cranberry/Vaccinium macrocarpon						
	Mayapple/Podophyllum peltatum						
	Black Spruce/Picea mariana	reliable written report					
	White Beakrush/Rhynchospora alba	reliable written report					
	Giant Tick-Trefoil/Desmodium canadense	reliable written report					
	Prickly Gooseberry/Ribes cynos-bati	reliable written report					
	Round-leaf Dogwood/Cornus rugosa	reliable written report					
	Early Azalea/Rhododendron prinophyllum	reliable written report					
C4:	Marsh Marigold/Caltha palustris	reliable written report					
	Common Bladderwort/Utricularia macrorhiza	reliable written report					
	Buttonbush/Cephalanthus occidentalis	reliable written report					
	Blunt-lobed Liverleaf/Hepatica nobilis var. obtusa	reliable written report					

5. Site: **Poesten Kill Headwaters North** (Site Fact Sheet)

Exemplary Communities: Poesten Kill Headwaters (overlapping)

County Tally (2003): #3 for Poestenkill/#4 for Berlin.

all or most of site in Berlin, but Bucks Corner Swamp subsite partly in Poestenkill.

includes: Bucks Corner Swamp and town line bog in Poestenkill.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>	<u>Town</u>
County-W	Bog Sedge	Carex paupercula	CW	C2/C2C3	no count	recent	Ber/Pk
	Notes: var. irrigua; historically noted as "C. limosa". considered for lower rank (C2C3) in 2016.						
County-W	Snowberry	Gaultheria hispidula	CW+	C2C3>=C3	no count	recent	Ber/Pk
	Notes: considered for delisting (C3) in 2016.						
County-W	American Mountain Ash	Sorbus americana	CW+	C2C3/C3	no count	recent	Ber/Pk
	Notes: considered for delisting (C3) in 2016.						
County-W	Swamp Azalea	Rhododendron viscosum	CW	C2	no count	recent	Ber/Pk
	Notes: species ID (R. cf. viscosum) questionable (habitat seems too boreal, although definitely a wetland), probably needs confirmation; tracked as "questionable lead" and not tallied yet.						

5. Site: **Poesten Kill Headwaters North** (continued)

E. Rare Plant Composition. (continued)

Possibly County-Rare Non-Vascular Plants (pending any systematic rare lists for county) (Bucks Corner Swamp)

<u>Common Name</u>	<u>Scientific Name</u>
Pom-Pom Peat Moss	Sphagnum wolfianum
Beard Lichen	cf. Usnea sp.

Other interesting vascular plants that may be moderately county uncommon. (Bucks Corner Swamp)

<u>C Rank</u>	<u>Common Name/Scientific Name</u>
C2C4:	Pale White Violet/Viola macloskeyi ssp. pallens
C3:	Labrador Tea/Rhododendron groenlandicum
	Roundleaf Sundew/Drosera rotundifolia
C3>C3C4:	Black Spruce/Picea mariana
C3C4:	Black Huckleberry/Gaylussacia baccata
	Highbush Cranberry/Viburnum opulus var. americanum
C4:	Bunchberry/Cornus canadensis

Edition: Draft 1: June 26, 2019.

6. Site: Reicherts Lake (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms: Reichart Lake; Reicharts Lake; Raquet Lake; Raquette Lake.

Included Subsites: -

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Priority Conservation Sites: Wynants Kill Corridor/Sand Lake Lakes (embedded within)

Aquatic Network: Wynants Kill Network (embedded within)

Ecosystem Complex: Reicharts Lake (overlapping)

Exemplary Communities: Reicharts Lake (contained & overlapping)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): #>50.

Town Priority:

Poestenkill Town Plan (2019): #6 (but mostly in Sand Lake); County Plan (2017): #4 (for Sand Lake/Poestenkill=#6 adjusted); County Tally (2003): #1 (for Sand Lake).

C. Site Description.

Site Configuration: Size: 94 acres; Shape/Boundary: relatively stable concept.

Town Location: Sand Lake (75%) > Poestenkill (25%).

rare plant list relevant most to Sand Lake, lower priority for Poestenkill.

all rare plants known from Sand Lake part of site.

all rare plants known from habitats not in Poestenkill.

Descriptive Account:

see Reicherts Lake ecosystem complex: similar boundary & concept, but only half of which is a known rare plant concentration area, the other half is located exclusively in the Town of Sand Lake.

D. Plant Rarity Tallies.

March 2019 (Draft 4): (for Town Plan). only minor refinement from Draft 3.

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>review</u>	<u>delisted</u>	<u>notes</u>
Global Rare:	0	0	0	NA	-	
State Rare:	0	0	0	0	0	
County Rare:	12	5	7	NA	1	2 county sole EOs

December 2016 (Draft 3): (from RLT County Plan).

Global Rare:	0	0	0	NA	-
State Rare:	0	0	0	0	0
County Rare:	12	5	7	NA	-

October 2003 (Draft 2): (from first Countywide Site Tally). listed under Sand Lake.

State Rare:	0
County Rare:	9

October 1998 (Draft 1): (from Poestenkill Town Plan).

State Rare:	-1
County Rare:	present

Rarity Accuracy:

only a limited part of the site explored, none in Poestenkill; likely more rare plants of county rarity level.

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>	<u>Town</u>
County-A	Twayblade	Liparis loeselii	CA-1	C1		historic (NYS specimen)	
County-A	White Fringed Orchid	Platanthera blephariglottis	CA-1	C1		1980s	
County-A	Black Gum	Nyssa sylvatica	CA	C1C2>C1	1i	recent	
County-A	Small Pondweed	Potamogeton pusillus var. —	CA	C1C2-		recent	
County-A	Tufted Loosestrife	Lysimachia thyrsifolia	CA	C1C2	10i	recent	

County-W	Water Stargrass	Heteranthera dubia	CW	C2		recent	
County-W	Poison Sumac	Toxicodendron vernix	CW	C2	250i	recent	
County-W	Swamp Azalea	Rhododendron viscosum	CW	C2	300i	recent	
County-W	Coontail	Ceratophyllum demersum	CW	C2C3		recent	
County-W	Giant Duckweed	Spirodela polyrrhiza	CW	C2C3		recent	
County-W	Flat-Stem Pondweed	Potamogeton cf. zosteriformis	CW	C2C3		recent	
County-W	Black Ash	Fraxinus nigra	CW+	C2C3/C3	20i	recent	

County-N-	Porcupine Sedge	Carex hystericina	CN-	C3C4/C2C3		recent	

County-D	Massachusetts Fern	Thelypteris simulata	CD	C3d>=C2C3		recent	

Full list can be developed from Sand Lake information (all observed rare species are from the Sand Lake part of the site); this coarse draft is limited to only CA, CW, CN-, and CD species of certain or probable identity.

C. Concentration Importance (Priority 5: moderately concentrated)

7. Site: **Legenbauer Road Wetlands** (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites: Big Beaver Bog Complex/Big Beaver Bog

Excluded but Related/Overlapping Sites:

Legenbauer Road Woods (larger concept) (=Poestenkill Community Forest, =RPA Community Forest)

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Exemplary Communities: Upper Poesten Kill (overlapping)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): #>50.

2019: county priority level changed from 6 to 5 based on an increased number of known rare plants.

Town Priority:

Poestenkill Town Plan (2019): ~#7; County Plan (2017): #7 (for Poestenkill; #13 adjusted); County Tally (2003): not listed. town priority raised due to additional known CA plants.

C. Site Description.

Site Configuration:

Size: 24 acres; Shape/Boundary: concept is wetlands containing rarest plants; two associated wetlands known to date contain multiple rare plants; none known in Little Beaver Bog, but if any are there, the site might be expanded to include that area; nearby uplands with moderately rare plants (on sandy soils) are currently excluded.

Town Location: Poestenkill (100%).

Descriptive Account:

wetlands containing rarest plants, especially peatland communities (see 1-page species habitat site description summary).

D. Plant Rarity Tallies.

March 2019 total active watch review delisted notes
(Draft 4): (for Town Plan). updated information from 2018 field visit.

Global Rare:	0	0	0	NA	-
State Rare:	0	0	0	0	0
County Rare:	7	4	3	NA	-

December 2016 (Draft 3): (from RLT County Plan).

NOTE: 2016 GIS data entry error: reversed with Hicks Pond; fixed here.

Global Rare:	0	0	0	NA	-
State Rare:	0	0	0	0	0
County Rare:	4	2	2	NA	-

October 2003 (Draft 2): (from first Countywide Site Tally). not included (0 state and county rare plants).

October 1998 (Draft 1): (from Poestenkill Town Plan). not listed.

Rarity Accuracy:

site very well explored in recent years by multiple experts, likely only few more rare plants of county rarity level at most; unlikely to have state-rare plants.

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs
County-A	Pale Coralroot	Corallorhiza trifida	CA	C1	1i	2016
	Notes: Tom Phillips (pers.com.) report from Hemlock-Hardwood Swamp.					
County-A	Black Gum	Nyssa sylvatica	CA	C1/C1C2	4i	recent
	Notes: considering for lower rank (C1C2) as of 2016. Subsite = Big Beaver Bog complex.					
County-A	Bog Clubmoss	Lycopodiella inundata	CA	C1C2>C2	30i	recent
	Notes: considering for lower rank (C2) as of 2016. Subsite = Big Beaver Bog complex.					
County-NA	Common Down Liverwort	Trichocolea tomentella	CNA	C1C2	5i	2018
	Notes: on rare non-vascular plant subset list for Rensselaer Plateau.					
County-W	Bog Sedge	Carex paupercula	CW	C2/C2C3	50i	recent
	Notes: Subsite = Big Beaver Bog complex.					
County-W	Snowberry	Gaultheria hispidula	CW	C2C3	~10i	recent
	Notes: Spruce-Fir Swamp N of Big Beaver Bog complex.					
County-W	Purple Avens	Geum rivale	CW	C2C3	5i	2018
Possibly County-Rare Non-Vascular Plants (pending any systematic rare lists for county)						
	Woolly Haircap Moss	Polytrichum strictum	not ranked		50i	recent
	Notes: Subsite = Big Beaver Bog complex.					

Other interesting vascular plants that may be moderately county uncommon.

C Rank	Common Name/Scientific Name	Subsite/Notes
C3:	Roundleaf Sundew/Drosera rotundifolia	Big Beaver Bog complex (300i)
C3C4:	Tawny Cottongrass/Eriophorum virginicum	Big Beaver Bog complex (100si)
C4:	Green Woodland Orchid/Platanthera clavellata	
	Bunchberry/Cornus canadensis	
	Doll's-Eye/Actaea pachypoda	
	Purple-Stem Swamp Beggar's Tick/Bidens cf. connata	

8. Site: **Davitt Pond** (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites: -

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Important Animal Habitat: Davitt Pond (equivalent)

Exemplary Communities: Davitt Pond (equivalent)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): #>50.

Town Priority:

Poestenkill Town Plan (2019): #8; County Plan (2017): #3 (for Poestenkill; #7 adjusted); County Tally (2003): not listed.

C. Site Description.

Site Configuration: Size: 23 acres; Shape/Boundary: relatively stable concept.

Town Location: Poestenkill (100%).

Descriptive Account:

lake and associated lakeshore. see 1-page species habitat site description summary.

D. Plant Rarity Tallies.

March 2019 (Draft 4): (for Town Plan). No change from Draft 3.

December 2016 (Draft 3): (from RLT County Plan).

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>review</u>	<u>delisted</u>	<u>notes</u>
Global Rare:	0	0	0	NA	-	
State Rare:	0	0	0	0	0	
County Rare:	6	2	4	NA	[1]	

October 2003 (Draft 2): (from first Countywide Site Tally). not included (0 state and county rare plants).

October 1998 (Draft 1): (from Poestenkill Town Plan). not listed.

Rarity Accuracy:

much of site explored via canoe and underwater snorkeling observations, but still likely more rare aquatic and shoreline plants of county rarity to be found. greatest need is in accurately identifying uncertain unusual aquatic plants, including ones with collected specimens. Rensselaer County EMC report on Aquatic & Shoreline Vegetation (W.Broderick 1988) available but not yet reviewed.

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-A	Black Gum	Nyssa sylvatica	CA	C1/C1C2	4i	recent
	Notes: considering for lower rank (C1C2) as of 2016.					
County-A	Sharp-Scaled Mannagrass	Glyceria acutiflora	CA	C1C2	-	recent
	Notes: species uncertain (G. cf. acutiflora), but suspected (correct habitat). tracked as "probable lead".					
County-A	Leafy Pondweed	Potamogeton foliosus	CA	C1C2	no count	recent
	Notes: species uncertain (P. cf. foliosus); need careful evaluation. tracked as "possible lead", thus not counted in site tally.					

County-W	Stiff Quillwort	Isoetes echinospora	CW	C2C3-	abundant	recent
	Notes: species uncertain (I. cf. echinospora), but suspected; tracked as "probable lead" (correct habitat).					
County-W	Lesser Waterweed	Elatine minima	CW	C2C3	1% cover	recent
	Notes: genus uncertain (cf. Elatine), but suspected (correct habitat); If not E.minima, then rarer E.americana (state rare and C1); tracked as "probable lead".					
County-W	Slender Naiad	Najas flexilis	CW	C2C3-	abundant	recent
	Notes: species uncertain (N. cf. flexilis); if not N.flexilis, then likely rarer Najas (C1C3); tracked as "probable lead" (correct habitat).					
County-W	Floating Bur-reed	Sparganium fluctuans	CW+	C2C3/C3	abundant	recent
	Notes: apparently expanding in county since 1990; being considered for delisting (C3 rank) if continued expansion.					
County-W	Spiral Pondweed	Potamogeton spirillus	CW	C2	abundant	recent
	Notes: species uncertain (P. cf. spirillus); need careful evaluation. tracked as "possible lead", thus not counted in site tally.					

County-D	Nuttall's Pondweed	Potamogeton epihydrus	CD	C2C4d	abundant	recent

Other interesting vascular plants that may be moderately county uncommon.

<u>C Rank</u>	<u>Common Name/Scientific Name</u>
C4:	American Chestnut/Castanea dentata

9. Site: Poesten Kill Bott Lane (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms: -
Included Subsites: -
Excluded but Related/Overlapping Sites: Poesten Kill Midreach
Related County-Important Ecological Features:
Priority Conservation Sites: Poesten Kill Midreach Corridor/Network (embedded within)
Aquatic Network: Poesten Kill Midreach Network (embedded within)
Exemplary Communities: Poesten Kill Midreach (overlapping)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): #>50.
Town Priority:
Poestenkill Town Plan (2019): #9 (but mostly in Brunswick); County Plan (2017): #6 (for Brunswick/Poestenkill=#9 adjusted); Brunswick Town Plan (2012): #7 (for Brunswick); County Tally (2003): not listed.

C. Site Description.

Site Configuration: Size: 34 acres; Shape/Boundary: relatively stable concept.
Town Location: Brunswick (99%) > Poestenkill (1%).
all or most rare plants in Brunswick; lower priority for Poestenkill.

Descriptive Account:

riparian wetland and river terrace. see 1-page species habitat site description summary.
see also Poesten Kill Midreach aquatic network.

D. Plant Rarity Tallies.

total active watch review delisted notes
March 2019 (Draft 5): (for Town Plan). No change from Draft 4.

December 2016 (Draft 4): (from RLT County Plan).

Global Rare:	1	0	1	NA	-	
State Rare:	1	0	1	0	0	0 NYNHP EOs
County Rare:	5	1	4	NA	[1]	

March 2012 (Draft 3): (from Brunswick Town Plan).

Global Rare:	0	0	0	NA	-	
State Rare:	1	0	1	0	0	0 NYNHP EOs
County Rare:	4	1	3	NA	-	

October 2003 (Draft 2): (from first Countywide Site Tally). not included (0 state and county rare plants).

October 1998 (Draft 1): (from Poestenkill Town Plan). not listed.

Rarity Accuracy: site moderately well explored, likely more rare plants of county rarity level.

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs	Town
Global	Butternut	Juglans cinerea	GW?/SW/CW	G4/S4/C2C3NC3E	5i	recent	Br>Pk
Notes: changed to C2C3>=C3 in 2016 because of global rarity listing (consistently manifested disease threat), despite agreement among county experts that it is of C3 rank in terms of sheer numbers. most dying to standing dead.							
County-A	Long-Stalked Sedge	Carex pedunculata	CA	C1C2	20i	recent	Br
County-W	Wild Leek	Allium tricoccum	CW	C2C3	1000si	recent	Br>>Pk
Notes: var. tricoccum.							
County-W	Cut-leaf Toothwort	Cardamine concatenata	CW	C2C3	1000i	recent	Br>>Pk
County-W	Dutchman's-Breeches	Dicentra cucullaria	CW	C2C3	10i	recent	Br>Pk
County-N	Canada Violet	Viola canadensis	CN-	C3/C2C3	20i	recent	Br>Pk
Notes: considering for higher rank (C2C3) as of 2016.							
County-N	Hairy Wood-Rush	Luzula acuminata	CN-	C3/C2C3	20i	recent	Br>Pk
Notes: considering for higher rank (C2C3) as of 2016.							
County-D	Bitternut Hickory	Carya cordiformis	CD	C3d	20i	recent	Br>Pk

Other interesting vascular plants that may be moderately county uncommon.

C Rank	Common Name/Scientific Name
C3:	American Dog Violet/Viola conspersa
	New England Sedge/Carex cf. novae-angliae
C3C4:	Bloodroot/Sanguinaria canadensis
	Prickly Gooseberry/Ribes cynos-bati
	Wood Nettle/Laportea canadensis
C4>=C3C4:	Ostrich Fern/Matteucia strutheriopteris

10. Site: **Dustin Swamp Complex** (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites:

Dustin Swamp (Grafton/Poestenkill)

Ash Swamp (mostly Grafton/little in Poestenkill) (=Dyken Pond Road Swamp, N Rensselaer Plateau Wetland Site 211a)

Teal Brook (Grafton) (~NRP Wetland Site 210a)

Dyken Pond Road Marshes #2 (=NRP Wetland 218).

Excluded but Related/Overlapping Sites:

Dyken Pond Wetlands, Dyken Pond Center.

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Ecosystem Complex: Dustin Swamp Complex (equivalent)

Important Animal Habitat: Dustin Swamp Complex (equivalent)

Exemplary Communities: Dustin Swamp Complex (contained & overlapping)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): #>50.

Town Priority:

Poestenkill Town Plan (2019): #10; County Plan (2017): #16 (for Grafton/Poestenkill=#10 adjusted); County Tally (2003): not explicitly listed (for Grafton, lumped with Dyken Pond Center).

C. Site Description.

Site Configuration: Size: 244 acres; Shape/Boundary: relatively stable concept.

Town Location: Grafton (45) ~ Poestenkill (55%).

most rare plants in Grafton, some in Poestenkill (especially S of Dustin Swamp boardwalk).

Descriptive Account:

see Dustin Swamp Complex ecosystem complex (same boundary & concept).

D. Plant Rarity Tallies.

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>review</u>	<u>delisted</u>	<u>notes</u>
March 2019 (Draft 4) :			(for Town Plan).	No change	from Draft 3.	

December 2016 (Draft 3): (from RLT County Plan).

Global Rare:	0	0	0	NA	-
State Rare:	0	0	0	0	0
County Rare:	7	0	7	NA	[1]

October 2003 (Draft 2): (from first Countywide Site Tally). not explicitly listed.

(lumped under Dyken Pond Preserve, Town of Grafton)

October 1998 (Draft 1): (from Poestenkill Town Plan). not listed.

Rarity Accuracy:

site moderately well explored, possibly more rare plants of county rarity level; largest uncertainty may be in continued presence of historic observations (due to frequent and rapid changes in habitat correlated with beaver activity). key unexplored areas mostly in Town of Poestenkill.

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>	<u>Town</u>
County-A	Milfoil Bladderwort Notes: Source: NYS collection A25301; identity somewhat skeptical per D.Hunt (wrong habitat), track as "possible lead", thus not counted in site tally. Subsite: Dustin Swamp.	Utricularia intermedia	CA	C1	abundant?	1997	Gr>Pk
County-A	Branching Bur-reed Notes: Source: NYS collection A22720; 2008 field evaluation suggests S.americanum (D.Hunt); track as "questionable lead", thus not in counted site tally. Subsite: Dustin Swamp.	Sparganium angrocladum	CA	C1C2	no count	1996	Gr-
<hr/>							
County-W	Bog Sedge Notes: var. irrigua; considering for lower rank (C2C3) as of 2016. subsite = Dustin Swamp.	Carex paupercula	CW	C2/C2C3	no count	recent	Gr/Pk
County-W	Bog Rosemary Notes: subsite = Dustin Swamp.	Andromeda glaucophylla	CW	C2C3	9i	recent	Gr/Pk
County-W	Bog Laurel Notes: subsite = Dustin Swamp.	Kalmia polifolia	CW	C2C3	no count	recent	Gr/Pk
County-W	Water Sedge Notes: species identity uncertain (C. cf. aquatilis), but suspected (correct habitat); tracked as "probable lead". subsites = Dustin Swamp, Teal Brook.	Carex aquatilis	CW	C2C3		recent	Gr/Pk
County-W	Snowberry Notes: considering for delisting (C3) as of 2016. subsites = Dustin Swamp (100i,recent,Pk), Ash Swamp (1000si,2008,Gr), and Teal Brook (30i,recent,Gr).	Gaultheria hispidula	CW+	C2C3>=C3	SEE NOTES	recent	Gr/Pk
County-W	American Mountain Ash Notes: considering for delisting (C3) as of 2016. subsite = Dustin Swamp.	Sorbus americana	CW+	C2C3/C3	4i	recent	Gr/Pk
County-W	Black Ash Notes: species identity uncertain (F. cf. nigra), but suspected; listed, likely incorrectly (based on habitat type), as F. pennsylvanica in NRP wetland survey. tracked as "probable lead". subsite = Ash Swamp. considering for delisting (C3) as of 2016.	Fraxinus nigra	CW+	C2C3/C3	no count	1994	Gr

10. Site: Dustin Swamp Complex (continued)

E. Rare Plant Composition. (continued)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>	<u>Town</u>
County-D	Maleberry	Lyonia ligustrina	CD	C3d	see notes	recent	Gr
Notes: Subsites = Ash Swamp, Teal Brook (50i).							
Possibly County-Rare Non-Vascular Plants (pending any systematic rare lists for county)							
	Red Bog Moss	Sphagnum rubellum					
Notes: subsite=Dustin Swamp. see T.Phillips for rarity assessment.							
	Beard Lichen	Usnea sp.					
Notes: genus uncertain (cf. Usnea); may instead be Evernia mesomorpha. subsite=Dustin Swamp. see T.Phillips for rarity assessment.							
Other interesting vascular plants that may be moderately county uncommon. (town not yet specified)							
<u>C Rank</u>	<u>Common Name/Scientific Name</u>		<u>Subsite</u>				
C3:	American Larch/Larix laricina		Dustin Swamp, Dyken Pond Road Marshes				
	Labrador Tea/Rhododendron groenlandicum		Dustin Swamp				
	Pitcher Plant/Sarracenia purpurea		Dustin Swamp				
	Roundleaf Sundew/Drosera rotundifolia		Dyken Pond Road Marshes				
	Velvetleaf Blueberry/Vaccinium myrtilloides		Dustin Swamp				
C3C4:	Black Huckleberry/Gaylussacia baccata		Dustin Swamp				
C4:	Bunchberry/Cornus canadensis		Dustin Swamp				
Excluded Species							
	Bog Aster/Oclemena nemoralis (SW/CA: S3/C1C2)						
Notes: planted/introduced/adventive at Teal Brook subsite.							

Edition: Draft 1: June 26, 2019.

11. Site: Vosburgh Swamp (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms: Vosburgh Pond & Vicinity (RLT County Plan 2017)

Included Subsites: Vosburgh Pond

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Priority Conservation Sites: Poesten Kill Midreach Corridor/Network (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Newfoundland Creek Network (embedded within)

Ecosystem Complex: Vosburgh Swamp (contained)

Important Animal Habitat: Vosburgh Swamp (contained)

Exemplary Communities: Vosburgh Swamp (contained & overlapping)

B. Site Priority

Regional Priority: County Priority (County Plan 2017): #>50.

Town Priority:

Poestenkill Town Plan (2019): #11; County Plan (2017): #4 (for Poestenkill; #8 adjusted); County Tally (2003): not listed.

C. Site Description

Site Configuration: Size: 59 acres; Shape/Boundary: relatively stable concept.

Town Location: Poestenkill (90%) > Sand Lake (10%).

all rare plants known from Poestenkill part of site.

Descriptive Account:

see Vosburgh Swamp ecosystem complex: (similar boundary & concept).

D. Plant Rarity Tallies.

total active watch review delisted notes
March 2019 (Draft 4): (for Town Plan). No change from Draft 3.

December 2016 (Draft 3): (from RLT County Plan).

Global Rare: 0 0 0 NA -

State Rare: 0 0 0 0 0

County Rare: 5 0 5 NA -

October 2003 (Draft 2): (from first Countywide Site Tally). not included (0 state and county rare plants).

October 1998 (Draft 1): (from Poestenkill Town Plan). not listed.

Rarity Accuracy:

site moderately well explored; likely up to a few more rare plants of county rarity level expected.

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-W	Bottlebrush Grass	Elymus hystrix	CW-	C2C3-		recent
	Notes: variety undetermined; either C2C3 rank or rarer.					
County-W	Ditch Stonecrop	Penthorum sedoides	CW	C2/C2C3		recent
	Notes: considering for lower rank (C2C3) as of 2016.					
County-W	Flowering Dogwood	Cornus florida	CW	C2C3		recent
County-W	Giant Duckweed	Spirodela polyrhiza	CW	C2C3	50i	recent
County-W	Black Ash	Fraxinus nigra	CW+	C2C3/C3		recent
	Notes: considering for lower rank (C3) as of 2016. species uncertain (F. cf. nigra), but suspected (correct habitat); tracked as "probable lead".					

Other interesting vascular plants that may be moderately county uncommon.

C Rank Common Name/Scientific Name
C3C4: Slender Spikerush/Eleocharis acicularis

12. Site: **Barberville Gorge** (Site Fact Sheet)

Exemplary Communities: Barberville Falls (contained), Poesten Kill Midreach (overlapping)

Poestenkill Town Plan (2019): #12; County Plan (2017): #5 (for Poestenkill; #11 adjusted); County Tally (2003): #4 (for Poestenkill).

Town Location: Poestenkill (100%).

see Poesten Kill Barberville ecosystem complex (similar boundary & concept).

October 1998 (Draft 1): (from Poestenkill Town Plan). not listed.

much of site explored, but still likely more rare plants of county rarity to be found. TNC preserve list also likely & should be sought for review.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs
County-A	Leatherwood	Dirca palustris	CA	C1	5i/7i	-2016/2009
County-A	Red Pine	Pinus resinosa	CA	C1NC5E	10i	recent
	Notes: apparently native, one of few native sites in county (heavily planted in plantations elsewhere).					
County-A	Pinkster-Flower	Rhododendron periclymenoides	CA	C1	uncommon	recent
	Notes: species identity uncertain (R. cf. periclymenoides); need identity comparison to R. prinophyllum. tracked as "possible lead", thus not counted in site tally. near periphery of gorge.					
County-A	Rock Spikemoss	Selaginella rupestris	CA	C1C2		recent
	Notes: genus & species identity uncertain (cf. Selaginella); need to confirm possible field observation. tracked as "possible lead", thus not counted in site tally.					

County-W	American Yew	Taxus canadensis	CW	C2C3/C2	1+i/30i	recent/2009
	Notes: considering for higher rank (C2) as of 2016.					
County-W	Common Wild Licorice	Galium circaezans	CW	C2C3-		recent
	Notes: identity uncertain among two varieties (var. cf. circaezans), both rare; rarer variety tracked as C1C3-W.					
County-W	Plantain-Leaved Sedge	Carex plantaginea	CW+	C2C3/C3		recent
	Notes: species identity uncertain (C. cf. plantaginea); need to confirm possible field observation; if not, then C.platyphylla. tracked as "possible lead", thus not counted in site tally. near periphery of gorge. considering for delisting (C3) as of 2016.					

12. Site: **Barberville Gorge** (continued)

E. Rare Plant Composition. (continued)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-N-	Twisted-Stalk	<i>Streptopus roseus</i>	CN-	C3/C2C3	3i	recent
	Notes: species ID uncertain (<i>S. cf. roseus</i>); identity probable (otherwise rarer <i>S. amplexifolius</i> [C1]). track as "probable lead". considering for rank change C3 to C2C3 as of 2016, thus watch list; needs peer review.					
County-N-	Hairy Wood-Rush	<i>Luzula acuminata</i>	CN-	C3/C2C3	200i	recent
	Notes: species ID uncertain (<i>L. cf. acuminata</i>), but suspected (correct habitat); identity probable (otherwise more common species). track as "probable lead". considering for rank change C3 to C2C3 as of 2016, thus watch list; needs peer review.					

Possibly County-Rare Non-Vascular Plants (pending any systematic rare lists for county)

Pigtail Moss	<i>Weissia</i> sp.
Notes: rare? see T. Phillips (>1 species possible for county)	
Cup Moss	<i>cf. Gymnostomum</i> sp.
Notes: rare? see T. Phillips (>1 species possible for county)	
Bog Moss	<i>Aulacomnium heterophyllum</i>
Notes: rare? see T. Phillips	

Other interesting vascular plants that may be moderately county uncommon.

<u>C Rank</u>	<u>Common Name/Scientific Name</u>	<u>Notes</u>
C2C4:	Fragile Fern/ <i>cf. Cystopteris fragilis</i>	probable lead
C3:	Horsebalm/ <i>Collinsonia canadensis</i>	3i
	Cow-Wheat/ <i>Melampyrum lineare</i>	20i
	Blue Cohosh/ <i>Caulophyllum thalictroides</i>	uncommon
	Long-Spurred Violet/ <i>Viola rostrata</i>	
	Miterwort/ <i>Mitella diphylla</i>	second-hand report, probable lead
C3C4:	Plantain-Leaved Pussy-Toes/ <i>Antennaria plantaginifolia</i>	
	Two-leaf Toothwort/ <i>Cardamine diphylla</i>	
	American Hazelnut/ <i>Corylus americana</i>	probable lead
	Common Scouring Rush/ <i>Equisetum hyemale</i> var. <i>affine</i>	50i
	Pink Lady's-Slipper/ <i>Cypripedium acaule</i>	
	Torrey's Wild Licorice/ <i>Galium lanceolatum</i>	probable lead
C3C4/C4:	Fibrous-Rooted Sedge/ <i>Carex communis</i>	probable lead
C4:	Trailing Arbutus/ <i>Epigaea repens</i>	
	Fringed Polygala/ <i>Polygala paucifolia</i>	3++i
	American Chestnut/ <i>Castanea dentata</i>	

13. Site: **Hicks Pond** (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms:

Hicks Pond & Vicinity (County Plan 2017)

Hicks Pond Woods

"Hack's Pond East Poestenkill" (Gordinier & Howe 1894)

Included Subsites: Hicks Pond (sensu stricto)

Excluded but Related/Overlapping Sites:

Hicks Pond Road/Swankey Road/Tymeson Road Woods

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Exemplary Communities: Hicks Pond (contained)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): >#50.

Town Priority:

Poestenkill Town Plan (2019): #13; County Plan (2017): #6 (for Poestenkill; #12 adjusted); County Tally (2003): not listed.

C. Site Description.

Site Configuration: Size: 40 acres; Shape/Boundary: relatively stable concept.

Town Location: Poestenkill (100%).

Descriptive Account:

pond, pondshore, and associated pine-dominated sand/lakeshore woods. see 1-page species habitat site description summary.

D. Plant Rarity Tallies.

March 2019 (Draft 4): (for Town Plan). No change from Draft 3.

December 2016 (Draft 3): (from RLT County Plan).

NOTE: 2016 GIS data entry error: reversed with Legenbauer Road Woods; fixed here.

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>review</u>	<u>delisted</u>	<u>notes</u>
Global Rare:	0	0	0	NA	-	
State Rare:	0	0	0	0	0	
County Rare:	3	2	1	NA	[1]	1 county-sole EO

October 2003 (Draft 2): (from first Countywide Site Tally). not included (0 state and county rare plants).

October 1998 (Draft 1): (from Poestenkill Town Plan). not listed.

Rarity Accuracy:

very poorly explored site, especially the pond; with rarest plants mostly submergent aquatics associated with the pond. likely more rare plants of county rarity level. very high inventory priority for town and county (especially via mask & snorkel observations).

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-A	Slender Water Milfoil	Myriophyllum tenellum	CA-1/H	C1	-	1894
	Notes: historic record of county-sole EO; Source: Gordinier & Howe (1894) report from "Hack's Pond East Poestenkill"; uncertain if still present/probably depends much on water quality changes since 1894; high-priority inventory site for town & county. Subsite = Hicks Pond.					
County-A	Water Lobelia	Lobelia dortmanna	CA/H	C1	-	1894
	Notes: historic record; Source: Gordinier & Howe (1894) report from "Hack's Pond East Poestenkill"; uncertain if still present/probably depends much on water quality changes since 1894; high-priority inventory site for town & county. Subsite = Hicks Pond.					
County-W	Grass-leaf Rush	Juncus marginatus	CW	C2	no count	recent
	Notes: species identity uncertain (J. cf. marginatus), if so, then var. marginatus; treated as "probable lead". Subsite = Hicks Pond Woods.					
County-N-	Panicled Hawkweed	Hieracium paniculatum	CN-	C3/C2C3	<5% cover	recent
	Notes: Subsite = Hicks Pond Woods.					
County-N-	Tick-Trefoil	Desmodium sp.	CN-	C3-	<5% cover	recent
	Notes: genus identity uncertain (cf. Desmodium); if correct, then probably a county-rare species as rare as C1. treated as "possible lead". Subsite = Hicks Pond Woods.					
County-D	Water Shield	Brasenia schreberi	CD	C3d	-	1980s
	Notes: Source: Adirondack Lake Survey report for Hicks Pond. Subsite = Hicks Pond.					

Other interesting vascular plants that may be moderately county uncommon.

<u>C Rank</u>	<u>Common Name/Scientific Name</u>	<u>Subsite/Notes</u>
C3C4/C3:	Bristly Sarsaparilla/Aralia hispida	Hicks Pond Woods
C3C4:	Black Huckleberry/Gaylussacia baccata	Hicks Pond Woods
C4:	American Chestnut/Castanea dentata	Hicks Pond Woods (3i)

14..Site: Poestenkill Center Bog (Site Fact Sheet)

A. Site Nomenclature & Concepts.

Site Synonyms: Poestenkill Center Southwest Bog
 Included Subsites: -
 Excluded but Related/Overlapping Sites: -
 Related County-Important Ecological Features:
 Exemplary Communities: Poestenkill Center Bog (equivalent)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): not listed.
 Town Priority:
 Poestenkill Town Plan (2019): #14; County Plan (2017): alternate site (Poestenkill). County Tally (2003): not listed.

C. Site Description.

Site Configuration: Size: 10 acres; Shape/Boundary: relatively stable concept.
 Town Location: Poestenkill (100%).

Descriptive Account:

peatland complex. see Poestenkill Center Bog ecosystem complex (similar boundary & concept).

D. Plant Rarity Tallies.

total active watch review delisted notes
 March 2019 (Draft 4): (for Town Plan). updated information from 2018 visit.

Global Rare:	0	0	0	NA	-
State Rare:	0	0	0	0	0
County Rare:	3	1	2	NA	-

December 2016 (Draft 3): (from RLT County Plan).

Global Rare:	0	0	0	NA	-
State Rare:	0	0	0	0	0
County Rare:	0	0	1	NA	-

October 2003 (Draft 2): (from first Countywide Site Tally). not included (0 state and county rare plants).

October 1998 (Draft 1): (from Poestenkill Town Plan). not listed.

Rarity Accuracy:

site well explored in 2018; detailed 1980s report by expert naturalist; peatland is suspected to have succeeded since the 1980s so that habitat is less favorable to rare open peatland plants. possibly with a few more rare plants of county rarity.

E. Rare Plant Composition.

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-A	Swamp Dock	Rumex verticellatus	CA	C1C2	-	2018
	Notes: species ID uncertain (R. cf. verticellatus), but suspected (correct habitat). treated as "probable lead".					
County-A	Small Beggar's-Ticks	Bidens discoidea	CA	C1	-	2018
	Notes: species ID uncertain (B. cf. discoidea). treated as "possible lead", thus not counted in site tally.					
County-A	Smooth Winterberry	Ilex laevigata	CA	C1	-	2018
	Notes: species ID uncertain (I. cf. laevigata). treated as "possible lead", thus not counted in site tally.					

County-W	Swamp Azalea	Rhododendron viscosum	CW	C2	-	2018
County-W	Bog Laurel	Kalmia polifolia	CW	C2C3	extirpated?	1981
	Notes: Source: 1981 species list (Wiley).					

Possibly County-Rare Non-Vascular Plants (pending any systematic rare lists for county)						
	Wooly Haircap Moss	Polytrichum strictum	not ranked	-	-	2018

Other interesting vascular plants that may be moderately county uncommon.

C Rank	Common Name/Scientific Name	Notes
C3:	Pitcher Plant/Sarracenia purpurea	20+1
	Small Cranberry/Vaccinium oxycoccus	
C3C4:	Tawny Cottongrass/Eriophorum cf. virginicum	probable lead; historic
	Water-Willow/Decodon verticillatus	
	Black Huckleberry/Gaylussacia baccata	
C4:	Buttonbush/Cephalanthus occidentalis	

Town of Poestenkill Rare Plant Concentration Areas.
Site Fact Sheet Legend (rapid preliminary version):

Part A.

Field Values.

Included Subsites. *sensu latu* in the broad sense; *sensu stricto* = in the strict sense.

Part D.

Field Values.

delisted. [] = without a GIS field for this metric in 2017 datalayer; thus value was in the raw 2017 data but not entered on GIS then.

notes. EO = "element occurrence", an example of an element such as a rare plant species; for species: often corresponding to populations.

Part E.

Field Header Abbreviations & Definitions.

Last Obs. last observation date.

C Rank. county rank.

Field Values.

ranks. d = delisted, H = historic, x = extirpated; "not ranked" for some non-vascular plants.

Abundance & notes. "i" = individuals.

explanations for other values, such as rarity ranks, should be available elsewhere.

Site: **Davitt Pond** (Species Habitat Site Description)

Ecosystem Complex Type: lake complex

Complex Subtype Hierarchy: acidic (Northern Appalachian variant) (Level 4-5 types)

Physiographic Setting: Rensselaer Plateau (Central Rensselaer Plateau).

Descriptive Account (Ecosystem & Ecological Community Composition).

A moderate-sized lake complex, not diverse enough to warrant regional importance as an ecosystem complex, but with multiple known rare plants, thus important as a rare plant concentration area. Serves as a good local example of a lake complex, especially within the context of the Central Rensselaer Plateau. It qualifies as an acidic and dimictic lake with typical associated natural community types such as Inland Non-Calcareous Lakeshore plus aquatic and lakeshore species. Regionally-important community examples include 1) the lake, a BC-ranked (good to fair) Oligotrophic Dimictic Lake (County Occurrence ODL8), suspected to be state significant and with county potential near exemplary status, and 2) the lakeshore, a BC-ranked (good to fair) Inland Non-Calcareous Lakeshore (County Occurrence INL11), designated as county significant for the county conservation plan. Although no fisheries information was found and rapid underwater field observations revealed only one fish species, the site is tracked as a possible fish concentration area. The site concept is currently limited to the lake and its immediate shoreline. Nearby uplands support more common plant species.

Rare Species Synopsis.

The lake complex supports multiple regionally-rare aquatic plants and one regionally-rare aquatic animal characteristic of the littoral zone of lakes as well as regionally-rare lakeshore plants. These include trees, herbs, graminoids, pteridophytes, emergent aquatics, floating aquatics, submergent aquatics, and an aquatic invertebrate.

Landscape Context.

The local landscape surrounding the lake complex is essentially unfragmented forest within a large roadless block, and much larger forest landscape. in good (B-ranked) condition.

Ecological Integrity.

in very good condition, with only minor disturbances, the largest of which is a small cultural/artificial beach made from imported sand.

Inventory Status (Species).

rapid preliminary underwater study for rare species. possible additional rare plants.

Mapping Status.

precisely delineated, as part of a regional comprehensive ecological community map, from typical air photo signatures for lake and lakeshore communities with known rare plants.

Conservation Status.

apparently adequately protected by Boy Scouts organization and private lakeshore residents.

Sources:

GIS layers (Rensselaer Plateau: communities; Rensselaer County: important features).

pending more thorough review: field notes (Capital District Friday Field Group survey) and especially the Rensselaer County EMC report on Aquatic & Shoreline Vegetation (W.Broderick 1988).

Site: **Hicks Pond** (Species Habitat Site Description)

Ecosystem Complex Type: lake complex

Complex Subtype Hierarchy: acidic (Northern Appalachian variant) (Level 4-5 types)

Physiographic Setting: Rensselaer Plateau (Central Rensselaer Plateau).

Descriptive Account (Ecosystem & Ecological Community Composition).

A small lake complex, not large and diverse enough to warrant regional importance as an ecosystem complex, but with multiple known rare plants, thus important as a rare plant concentration area. The site serves as a good local example of a lake complex, especially within the context of the Poesten Kill Headwaters Network and Central Rensselaer Plateau. It qualifies as an acidic and monomictic lake with typical associated natural community types such as Inland Non-Calcareous Lakeshore, Deep Emergent Marsh, Shallow Emergent Marsh, and Shrub Swamp, all supporting aquatic and lakeshore species. A narrow associated zone of pine-dominated dry, sandy woods bordering the SE side of the lake represents a good regional example of the lakeshore variant of Pine-Northern Hardwood Forest, a boreal forest type. Regionally-important community examples within this site include 1) the lake, a moderately large (23-acre), B-ranked (good) Oligotrophic Pond (County Occurrence OP5), suspected to be state significant and designated with county potential near exemplary status, 2) a small, C-ranked (fair) Inland Poor Fen (County Occurrence IP13), designated as county significant, 3) the lakeshore, a moderately small, C-ranked (fair) Inland Non-Calcareous Lakeshore (County Occurrence INL12), suspected to be of local significance, and 4) the dry forest, a small, D-ranked (poor) Pine-Northern Hardwood Forest (County Occurrence PNH12), suspected to be of local significance. Other wetland types associated with this site include Hemlock-Hardwood Swamp. Fisheries information (Adirondack Lake Survey) suggests that the lake supports both a good diversity of fish species (6) and abundance of fish. The site concept is currently essentially limited to the lake, bordering wetlands, and a surrounding dry sandy-soil pine co-dominated forest zone SE of the lake. Upland areas outside of this forest support more common plant species.

Rare Species Synopsis.

The lake complex supports multiple regionally-rare aquatic plants characteristic of the littoral zone of lakes as well as dry, sandy-soil forests. These include herbs, graminoids, emergent aquatics, floating aquatics, and submergent aquatics. No rare animals are known.

Landscape Context.

The local landscape surrounding the lake complex is essentially unfragmented forest within a large roadless block and a much larger regional forest landscape. The site also forms a small headwater part of the Poesten Kill Headwaters Network. in good (B-ranked) condition.

Ecological Integrity.

apparently in very good condition.

Inventory Status (Species).

only rapid casual above-water survey for rare plants. additional rare aquatic plants suspected.

Mapping Status.

precisely delineated, as part of a comprehensive regional ecological community map, from typical air photo signatures for lake and lake flats patches with known rare plants plus associated wetlands.

Conservation Status.

unknown. apparently long-term protection by private landowners.

Sources:

GIS layers (Rensselaer Plateau: communities; Rensselaer County: important features).

Adirondack Lake Survey. Hicks Pond.

pending more thorough review: field notes (Rensselaer-Taconic Land Conservancy hike).

Site: **Legenbauer Road Wetlands** (Species Habitat Site Description)

Ecosystem Complex Type: peatland complex

Complex Subtype Hierarchy: acidic (Northern Appalachian variant) (Level 3 & 4 types)

Physiographic Setting: Rensselaer Plateau (Central Rensselaer Plateau).

Descriptive Account (Ecosystem & Ecological Community Composition).

A small peatland complex, commonly known as "Big Beaver Bog", not large enough to warrant regional importance as an ecosystem complex, but with multiple known rare plants, thus important as a rare plant concentration area. Serves as a good local example of a peatland complex, especially within the context of the Poesten Kill Headwaters Network. It qualifies as an acidic (boreal) peatland with typical associated natural community types such as Dwarf Shrub Bog plus peatland species. Suspected state-significant community examples include 1) two patches of Sedge Meadow (County Occurrence SM13), one of which forms the core of the Big Beaver Bog complex on the tract, and 2) a series of five Oligotrophic Pond patches (County Occurrence OP12), two of which occur within Big Beaver Bog on the tract. Community examples of suspected more local significance include a patch of Dwarf Shrub Bog (County Occurrence DSB29), also within the Big Beaver Bog complex. Other wetland types associated with this concentration area include Hemlock-Hardwood Swamp, a forested mineral soil type represented by one isolated patch. The site concept is currently limited to wetlands containing the rarest plants. Thus, it contains only two associated wetlands known to date to contain multiple rare plants. No rare plants are known in Little Beaver Bog, but if any are there, the site might be expanded to include that area; nearby uplands with moderately rare plants (on sandy soils) are currently excluded from the site concept.

Rare Species Synopsis.

The wetland complex supports multiple regionally-rare plants characteristic of peatlands including trees, herbs, graminoids, pteridophytes, and bryophytes. Some of the rare species are indicative of open peatlands, others are suggestive of slightly enriched forested wetland conditions (in the Hemlock-Hardwood Swamp) and acidic forested wetland conditions (in the Spruce-Fir Swamp).

Landscape Context.

The local landscape surrounding the wetland complex is essentially unfragmented forest within a large forest-interior area, larger roadless block, and much larger forest landscape.

Ecological Integrity.

Only minor human disturbances were noted in association with the peatland including a small confined population of the invasive wetland plant common reedgrass.

Inventory Status (Species).

moderately well, but not thoroughly, studied for rare plants. The associated Little Beaver Bog wetland has not been as carefully evaluated.

Mapping Status.

precisely delineated, as part of a comprehensive regional ecological community map, from typical air photo signatures for peatland and wetland patches that have known rare plants; subsequently thoroughly field confirmed.

Conservation Status.

well protected as a community forest owned by a regional conservation organization but with surrounding uplands reportedly partly maintained as working forest.

Sources:

Hunt, David M. 2017. Poestenkill Community Forest. Important Biodiversity Features, Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine: Rensselaer County Biodiversity Greenprint Project. December 7. (modified from).

GIS layers (Rensselaer Plateau: communities; Rensselaer County: important features).

Draft: D.M.Hunt. April 23, 2019.

Site: **Poesten Kill Bott Lane** (Species Habitat Site Description)

Ecosystem Complex Type: riparian complex

Complex Subtype Hierarchy: circumneutral floodplain (LNE/GL variant). (Level 6-8 types)

Physiographic Setting: Taconic Foothills region (Western Rensselaer County).

Descriptive Account (Ecosystem & Ecological Community Composition).

A moderate-sized riparian complex, not diverse enough to warrant regional importance as an ecosystem complex, but with multiple known rare plants, thus important as a rare plant concentration area. Serves as a good local example of a riparian complex, especially within the context of the Poesten Kill Midreach Network and the Middle Poesten Kill. The larger Middle Poesten Kill site contains a moderately large river with mostly unconfined configuration, silty to gravelly substrate, and a wide, flat associated riparian buffer. The local Poesten Kill Bott Lane site includes an undeveloped river floodplain and calcareous to circumneutral soils typical of the middle to lower segments of the Poesten Kill Valley. The site qualifies as a circumneutral variant of a riparian complex, with typical associated natural community types such as Floodplain Forest and Maple-Basswood Rich Mesic Forest on river terraces plus rich soil and a few riparian species. Besides the large central river, a Confined River, regionally-important community examples include 1) a moderately-small, C-ranked (fair) patch of Floodplain Forest of suspected state significance and 2) a moderately-small, BC-ranked (good to fair) example of Backwater Slough of suspected state significance. The bordering uplands are dominated by Maple-Basswood Rich Mesic Forest and narrow strips of Riverside Sand/Gravel Bar line the stream. Although the Poesten Kill bisects the site, the site concept is intended to be focused on riparian wetlands, upland terraces, and lowslopes of the river valley adjacent to the Poesten Kill. The site consists of only one riparian patch known to date to contain multiple rare plants. Nearby riparian patches upstream and downstream have not been surveyed, but if any rare species occur there, the site might be expanded to include those areas. The river and especially uplands outside of the immediate river corridor apparently support more common and non-native species.

Rare Species Synopsis.

The riparian complex supports multiple regionally-rare plants characteristic of rich river terraces including trees, herbs, and graminoids. Among these rare species are several spring wildflowers. At least one rare animal is known from the site, and a few more rare species are suspected.

Landscape Context.

The local landscape surrounding the riparian complex is a mix of agricultural land and heavily fragmented forests, with forests concentrated along the river corridor. The site is also integrally situated within the Poesten Kill Midreach Network. in good to fair (BC-ranked) condition.

Ecological Integrity.

moderately good local condition, especially for the Taconic Foothills region.

Inventory Status (Species).

Moderately well studied for rare plants in central part of site. additional rare species suspected.

Mapping Status.

Precisely delineated, as a county-important site, from typical air photo signatures for floodplain and river terrace patches with known rare plants.

Conservation Status.

protection commitment by at least one current landowner.

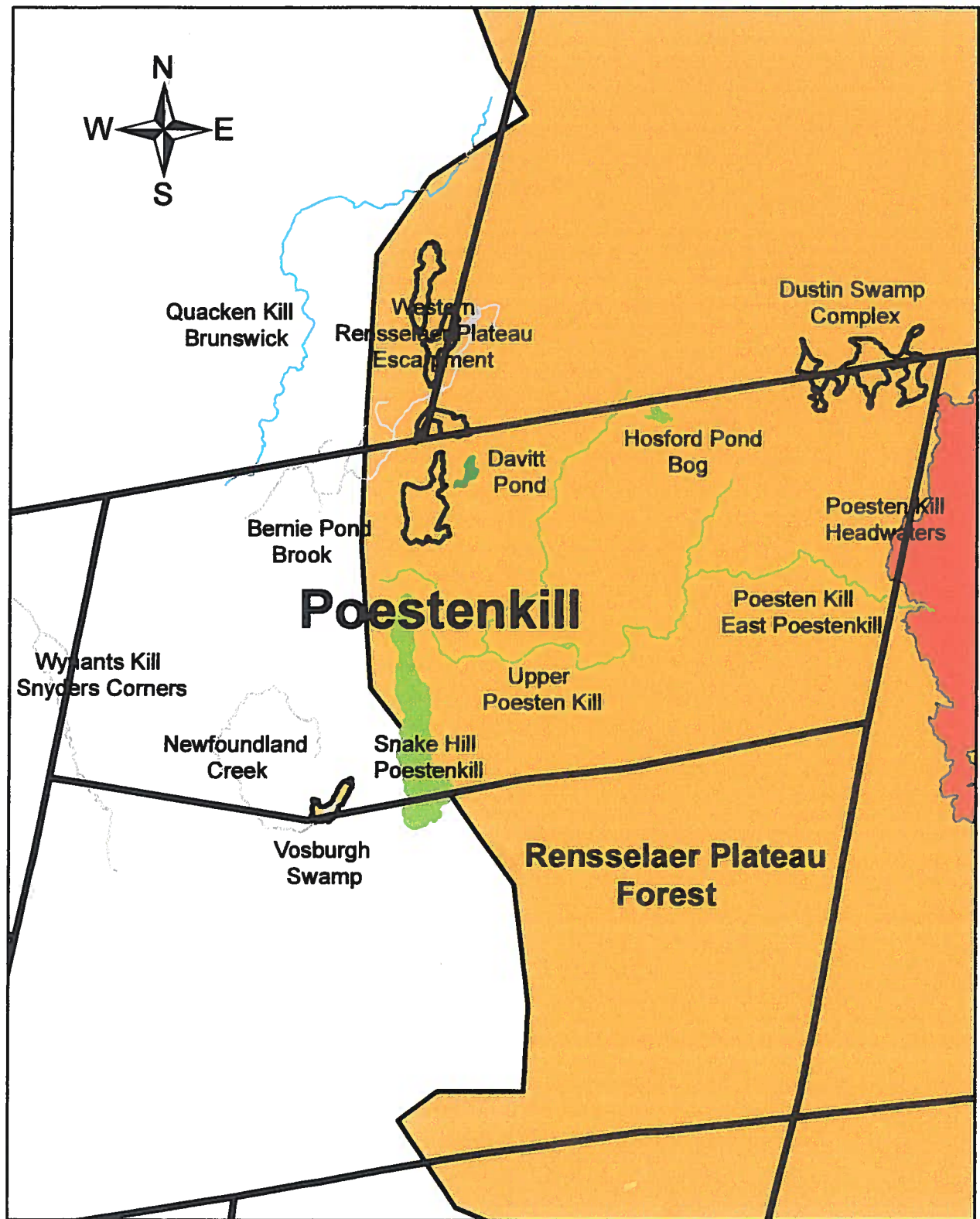
Sources:

GIS layers (Rensselaer Plateau: communities; Rensselaer County: important features).

Hunt, David. 2012. Sites with Known or Potential High Biodiversity Conservation Value. Town of Brunswick, Rensselaer County, NY. Ecological Intuition & Medicine. Draft 1: March 21.

pending more thorough review: field notes (Captial District Friday Field Group survey).

County-Important Animal Habitats



Rensselaer County Importance



Town of Poestenkill: Important Animal Habitats
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
June 2019

1. Introduction.

The goal for this feature, as part of the Town of Poestenkill Natural Resources Inventory, was to provide site descriptions for **all county-important animal habitat sites**, especially the equivalent of 14 sites in town (see Map 7) identified for the 2017 Rensselaer County Conservation Plan (compiled by the Rensselaer Land Trust). The 2017 collective of sites represents the first attempt of RCBGP to 1) develop a **comprehensive countywide list of important animal habitat types**, 2) delineate a **comprehensive countywide set of known important animal habitat sites**, and 3) prepare a **preliminary set of information for those sites**, either manually on hard copies or into a GIS system. The 2017 effort expanded upon initial important animal habitat efforts for the county (of about 2011), in conjunction with the Rensselaer Plateau Conservation Plan, to devise more formal lists for the Rensselaer Plateau region of 1) county-rare animals, 2) important behavioral ("use") habitat types for them, and 3) higher level multi-species concentration area types. While no important sites have yet been mapped for that project, an initial working list of sites had been made which, in turn, fed into the design of sites for this countywide feature.

Work for the Town of Poestenkill in 2019 focused mostly on consolidation of site information into concise site descriptions and review of previously-prepared GIS information. Much work was spent on developing the detailed site fact sheets for this feature. Site descriptions provide lots of detailed information on animal concentration areas and rare animal species including composition lists and a site tally for each. **Many refinements were made to GIS information** including population of many fields left blank in 2017 due to lack of time then (some possibly beyond the project scope). **Minor boundary refinements were made for 3 trout stream sites** (also beyond the project scope), lumping multiple adjacent stream segments (treated as separate sites in 2017) with different but similar important water quality classifications and adding any intervening less important aquatic segments (Poesten Kill East Poestenkill, Wynants Kill Midreach, Bernie Pond Brook). From one to four supplementary sites are suggested (especially Moules Lake), but little information on these sites is readily available and time was limited to designate these as "new sites" or "leads" with accompanying delineated boundaries, datalayer records, and descriptive site fact sheets.

The "important animal habitat" site concept was the most ambiguously defined and the most challenging to analyze among all ecological features documented for the county conservation plan and contributions to the Town of Poestenkill Natural Resources Inventory. Although the initial set of designated sites in the town probably represents the best working hypothesis for this ecological feature, it is likely somewhat dynamic, with additions and/or deletions likely in town in the near future. Additional important sites might be discovered pending more literature and expert research and more refined field observations or based on changing animal behavior patterns (e.g., abandonment of sites such as heron rookeries).

2. Feature Concept.

(modified slightly for clarity from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

Sites throughout Rensselaer County, New York that represent examples of all known "regionally-important" animal habitat sites. "Important animal habitat" was broadly interpreted to represent a combination of 1) important "restricted" animal habitats and 2) important habitat for "rare animals". "Restricted animal habitats" generally represent microhabitat

to macrohabitat types that are relatively uncommon in the county and serve as concentrations of ideally many county-rare to county-uncommon animals that presumably consistently use that habitat for a key part of their life cycle or behavioral patterns. All types of "animal groups" were considered for these habitat types including all vertebrate groups (mammals, birds, fish, herptiles) and multiple invertebrate groups (e.g., odonates, mollusks). Animal groups range from general categories (e.g., cave biota) to intermediate categories (e.g., boreal mammals, soaring birds, shorebirds, forest-interior birds, waterfowl, cleanwater macroinvertebrates) to specific groups (e.g., bats, turtles, native trout). "Habitat use types" are broad, but were intended to be comprehensive, including more common behavioral activity types: 1) breeding/spawning/nesting/rookery areas, 2) overwintering/denning/bedding/hibernaculum areas, and 3) feeding/browsing areas, as well as more unusual types such as "basking areas". "Rare" animals are broadly interpreted to include those rare at especially a global to state level, but also include county level rarity, as determined by rarity lists maintained by the New York Natural Heritage Program (for global- and state-rare species) and the Rensselaer County Biodiversity Greenprint Project (for county-rare species). While not all known/documented rare animal populations in the county were considered to be "important animal habitat", preference was given to "rare animal concentration areas", especially those in habitats that consist primarily of natural or semi-natural community types. Some of these areas represent more common habitat types such as upland forest landscapes (e.g. the Rensselaer Plateau Forest). Unlike "rare plant concentration areas", which were defined generally based on at least 5 species of at least county rare status, "rare animal concentration areas" were interpreted as sites with ideally at least only 2 species of at least county rare status. However, several single rare species sites were designated as "important animal habitat", especially ones with state-rare and especially any global-rare species and especially if the habitat is primarily natural, contains unusual natural community types for the county, and is suspected to support additional rare to uncommon animal species as part of a "concentration area".

Important animal habitat sites were determined from a combination of 1) recent observations of animal species (in the last ~25 years, since 1990), 2) numerous reports from numerous local county animal experts, landowners, and recreation-users, and 3) numerous state-rare species populations documented in the NY Natural Heritage Program database. A few sites with historical reports (e.g., from the 1930-1970s) were included among the important area set, whether field checked or not, especially for areas correlated with suspected rare community types, known to be in good condition, and with suspected potential for those historical species to still be present in the habitat. While no comprehensive model for "important animal habitat types" was known, an expansion of a model partially designed for the Rensselaer Plateau Conservation Plan was undertaken in a first attempt to both derive a comprehensive set of habitat/concentration area types and apply it to related county-important sites. The 2017 effort combined 1) all important animal habitat types proposed for the plateau, 2) all more formally-designated state "significant habitat types" known from the county (e.g., anadromous fish concentration area), 3) all known other "designated important animal areas" (e.g., Important Bird Areas of New York Audubon), and 4) any other habitat/animal concentration area types thought to be of equal importance, spanning all animal groups (vertebrates and invertebrates alike) and all habitat groups (terrestrial, aquatic, subterranean, and even "aerial").

3. Source Compilation.

(see Hunt January 2017/Rensselaer Land Trust County Conservation Plan; available upon request)

includes details on: Rare Species Information Sources, Concentration Area Information Sources.

4. Concentration Area Classification (Methods).

(see Hunt January 2017/Rensselaer Land Trust County Conservation Plan; available upon request)

5. Site Assembly and Prioritization Methods.

(see Hunt January 2017/Rensselaer Land Trust County Conservation Plan for basic methods; available upon request)

includes details on: Site Identity/Boundaries Method Summary, Prioritization Status Determination Method Summary.

Many updates to site boundaries and priority metrics were made to sites in the Town of Poestenkill for the 2019 Natural Resources Inventory work. First, a rapid priority assessment of the Poestenkill sites was done in May 2019 for the 2017 information in the county conservation plan. Both a "county priority" and "town priority" number was assigned for each site, representing the first attempt at either of these metrics in the county for important animal habitats, with the former category including only the "Top 50" sites in the county, but the latter category being assigning comprehensively for Poestenkill. Subsequent to the analysis of 2017 information, supplemental species information beyond the 2017 information applied to all 14 Poestenkill sites suggested a re-evaluation of the basic priority metrics for each (their concentration, rare species, and overall site importance). A rapid re-evaluation was done in June 2019 that should be checked later against the original importance algorithms, resulting in changes to concentration, rare species, and overall site importance assignments; most notably with increases to the overall importance level for 4 of the 14 sites. Despite these changes, the 2019 town priority order is expected to be about the same as the 2017 order, but a more rigorous re-evaluation of that metric is pending.

6. GIS Information Available

(updated substantially from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)
(with several updates catered to the Town of Poestenkill in 2019)

Data Tallies:

- 1) Town of Poestenkill:
 - total of 14 important animal habitat sites mapped in 2017.
 - 1 site of very high county importance, 4 sites of high county importance.
- 2) Rensselaer County/county-level analyses: see Hunt January 2017/Rensselaer Land Trust County Conservation Plan.

File Name:

Important_Animal_Habitats_Poestenkill (town subset of Important_Animal_Habitats_RensCo_Final)

Important Fields for Users:

- * = newly added and populated field for Town of Poestenkill Natural Resources Inventory.
- ** = values newly populated for Town of Poestenkill Natural Resources Inventory.
- *** = metadata updated for Town of Poestenkill Natural Resources Inventory.

1. Important Animal Habitat Identity Fields.

SiteName**: local placename; assigned mostly by RCBGP/D.Hunt using NYNHP methodology.

2019: some name changes for combined sites.

SiteSynon: site synonyms. other placenames by which the site may be known; poorly populated.

Site_Code*,**,***: site code. county-specific code assigned to each site; format: "IAH" + unique number.

2019: assigned for IAH1-IAH14 as the first sites of this feature with codes in the county.

2. Important Animal Habitat Location Fields.

Town**: Towns. encompassed by site; fully populated. 2019: minor refinements, especially for combined sites.

6. GIS Information Available (continued)

Important Fields for Users: (continued)

3. Important Animal Habitat Priority Fields.

ImporLevel**: Animal Habitat Site Importance Level Designation.

qualitative terms expressing the level of site importance for restricted and rare animal habitats; site importance level combines concentration certainty and rarity certainty, with more emphasis placed on the former character. 7 values.

2019: 4 sites with changes based on changes in ConcImport and RareImport values (see below).

Extremely High: very high to high level of certainty for both concentration area and species rarity.

Very High: intermediate combinations of certainty for concentration area and species rarity.

High: intermediate combinations of certainty for concentration area and species rarity.

Concentrated: intermediate combinations of certainty for concentration area and species rarity.

Moderately Concentrated:

intermediate combinations of certainty for concentration area and species rarity.

Probable: intermediate combinations of certainty for concentration area and species rarity.

Possible: very low to low level of certainty for both concentration area and species rarity.

ImporPrior**: Importance Priority.

conversion of Animal Habitat Site Importance Level into numerical priority;

Values: 1 to 7: Extremely High=1, Very High=2, High=3, Concentrated=4, Moderately Concentrated=5, Probable=6, Possible=7

2019: 4 sites with changes based on changes in ConcImport and RareImport values (see below).

ImportHist*,,*****: Importance History. prior ImporPrior values for sites that have updated values.

2019: populated for 4 sites with changes. Format: "2017: x", where x is the old priority value.

4. Important Animal Habitat Characteristics.

Boundary: primary source of site boundary; 100% populated.

Notes: miscellaneous notes, especially concentration area type/diversity; not fully/uniformly populated.

Acres**: size of site in acres.

2019: recalculated and adjusted for 3 consolidated sites with boundary changes.

Length,*****: length of linear (stream) sites in miles. 2019: newly populated for streams with blank values.

5. Concentration Area Identity Fields.

NoConcArea**: Number of Animal Concentration Areas at site. Values: 0 to 4.

2019: updated for sites with new concentration area types added.

ConcIDCert*,,*****: Site Concentration Certainty.

certainty that there is at least one animal concentration area at the site. Values: very high, high, moderately high, moderate, moderately low, low, very low. (split from former "ConcenCert", which did not have values for this field; thus newly populated in 2019).

ConcImport*,,*****: Site Concentration Importance.

based primarily on the number of different animal concentration areas of multiple animal groups; Values: very high, high, moderate, moderately low, low, very low. (split from former "ConcenCert", which had 2017 values for this field). some value changes in 2019.

[number priority] ConArea: concentration area types for site, prioritized by importance within site.

2019: some changes to 2017 information; some shifts in priority order; some newly added types.

note: certainty of individual types are sometimes included as modifiers (Y=certain, Y=almost certain, Y?=probable, ?=possible, presumed); see site fact sheets for more precise values for each type.

PriConArea**: primary concentration area type (most important type for site with multiple types).

SecConArea**: secondary concentration area type (of second importance); for sites with 2 or more types.

TerConArea**: tertiary concentration area type (of third importance); for sites with 3 or more types.

QuaConArea: quaternary concentration area type (of fourth importance); for sites with 4 types.

6. Concentration Area Composition Fields.

PriHabitat,***** primary habitat type. more generalized from concentration area types.

2019: first attempt at a comprehensive population in the county; fully populated for the Town of Poestenkill.

Imp[animal group]Hab,*****: important habitat type for various animal taxonomic groups.

known important habitat for specific to general animal groups. list: ImpVertHab (vertebrates), ImpInvHab (invertebrates), ImpMamHab (mammals), ImpBirdHab (birds), ImpFishHab (fish), ImpHerpHab (herptiles), ImpInsHab (insects), ImpMollHab (mollusks), ImMscInvHb (miscellaneous invertebrates). values: Yes, otherwise blank. 2017: poorly populated; 2019: fully populated anew for the Town of Poestenkill.

7. Rare Species Identity Fields.

NumRareSp**: number of rare species at site; includes global, state and county rare species.

2019: fully populated for Town of Poestenkill.

RareIDCert*,,*****: Site Rarity Certainty.

certainty that there is at least one rare species at the site. Values: very high, high, moderately high, moderate, moderately low, low, very low. (split from former "RareCert", which did not have values for this field; thus newly populated in 2019).

RareImport*,,*****: Site Rarity Importance.

for contained rare species. considering global, state, county rarity and the number of rare species; Values: very high, high, moderate, very low. (split from former "RareCert", which had 2017 values for this field). some value changes in 2019.

6. GIS Information Available (continued)

Important Fields for Users: (continued)

8. Rare Species Composition Fields.

NumNYHP_EO: Number of EOs per site in NY Natural Heritage Program databases.

NumGRare**,***: number of global rare species at site.

2019: fully populated for Town of Poestenkill (all 0).

NumSRare**: number of state rare species at site; 2019: fully populated for Town of Poestenkill.

NumCRare**: number of county rare species at site.

2019: fully populated anew for the Town of Poestenkill; some species with uncertain identity, thus often with imprecise value.

PriRareGrp**,***: primary rare group.

taxonomic group with the most abundant and/or characteristic species for the site.

2019: first attempt at population in the county; fully populated for the Town of Poestenkill.

Other Potentially-Useful Fields (only partially populated in 2017)

PriSource (primary source of concentration type/importance information)

Signif (general significance of site, especially relative to other examples in the county)

FieldVerif (level of recent field verification, especially for historical reports)

SuperSites (larger sites in which the site is embedded)

EmbedSites (smaller sites that are embedded within the site)

BndyPrecis (Boundary Precision. how site boundaries were determined and level of precision)

RareSppCom (Rare Species Comments. especially notes on certainty and rarity of species at site)

ConcenCom (Concentration Area Comments. especially notes on certainty/importance of concentration area)

Other Recommended Fields (not yet created on datalayer template)

Concentration Area Species Tallies (especially for primary concentration area)

7. Ecological Interpretation Summary.

(slightly modified for clarity from Hunt January 2017; prepared for Rensselaer Land Trust County Conservation Plan)

The important animal habitat layer was used to map larger-scale landscape features of Rensselaer County, New York, especially ecosystem complexes, aquatic networks, and priority conservation sites. This layer shows a good correlation with county-exemplary natural community sites throughout the county, both in the distribution of rarer community types and in the distribution of the best examples of more common community types, both as areas potentially suitable for concentrations of rare sedentary animal species to more mobile fauna with uncommon behavioral congregations (e.g., forest interior breeding sites). The county-wide display of important animal habitat sites, especially a display showing priority levels, reveals a pattern that reflects many sites of the county long recommended as the highest priority for conservation: the Rensselaer Plateau, Taconic Mountains, plus especially the Hoosic River and Hudson River Corridors, the latter two known for their concentrations of county-uncommon aquatic and riparian animals. Multiple important animal habitat sites, both as restricted concentration area types and rare animal sites, are present in all of these regions, especially portions of them that contain rare community types. Within the Hudson River Corridor, Schodack Island is noted as a regionally-important site for concentrations of multiple animal groups including the only state "Bird Concentration Area" in the county (NYS DEC), an "Important Bird Area" (NY Audubon), and "Significant Coastal Fish & Wildlife Habitat" (US FWS). It is one of the highest priority (Priority 1) smaller-scales sites from a county perspective. Other sites with extremely high importance value (Priority 1) include the Kinderhook Creek Corridor, Bentley Cave, and multiple sites on the Hoosic River and tidal Hudson River. Four other sites in the county apparently with dense clustering of important animal concentration areas include Poesten Kill Headwaters (Berlin, for boreal birds and mammals), Hoosic River Midreach (Hoosick, for waterfowl, riparian birds, odonates, and aquatic macroinvertebrates), Pikes Hill (Nassau, for rocky summit birds, mammals, and herptiles), and White Oak Farm (Hoosick, for grassland birds, wetland birds, and turtles). Other important animal habitat sites of the county include the Tomhannock Reservoir, multiple trout spawning streams scattered around the county, and several relatively large wetlands of very high to high site importance level (Priorities 2 to 3) in the Taconic Foothills region.

2019 Poestenkill Summary: Most of the highest priority animal sites in town (see Map 7) are embedded within the much larger Rensselaer Plateau Forest landscape as subsites of that area. Important animal sites mapped in the Taconic Foothills part of town are primarily mainstem streams.

8. Site Description Summaries

The specific goal for this feature for the Town of Poestenkill Natural Resource Inventory was to produce a 1- to 2-page site description for each of the 14 county-important animal habitat sites in town designated for the 2017 Rensselaer County Conservation Plan. Site descriptions, represented by "fact sheets", are provided using fine print. They are longer for the larger and more complex sites plus sites that had more lengthy historical description documents. Documents were integrated, condensed, and polished from all readily available prior electronic files of the Rensselaer County Biodiversity Greenprint Project (see below). The document format was attempted to be as consistent as possible across all 14 sites, to allow meaningful site comparisons. Site fact sheets contain site priority assessments as well as detailed information on individual concentration areas (identity certainty and species composition) and rare species (identity certainty, rarity level, and ranks). More descriptive species habitat site description accounts were not made for the ~6 unique animal sites that do not closely correspond with other important ecological features in the Town of Poestenkill. Instead, short descriptions for all these sites are included in the fact sheets and references are made to site descriptions for broader sites in which these sites, mostly mainstems of major streams within aquatic networks, are embedded. These documents are intended to be "first iteration" drafts for public use to provide the following:

1. a visual image of the nature of each site, especially beyond just its name.
2. a concise document with consolidated but detailed information on the ecological characteristics (tallies and composition of both concentration areas and rare animal species), regional importance, and geography of each site.
3. a template which can be refined with more detailed information in the future, especially to fill in any information gaps.
4. a pilot model which could be followed for important animal habitat sites in other towns of the county.

Because many of these site concepts (boundaries and associated ecological characteristics), as biodiversity conservation sites, were envisioned by the Rensselaer County Biodiversity Greenprint Project, it is thought that the most informative description of each site to date is represented in this product. Future improvements, requiring more time beyond the project scope, could involve:

1. more field evaluation of sites in the Taconic Foothills part of town, especially sites important for other ecological features (ecosystem complexes, natural communities, rare plants) to assess their potential designation as new important animal habitats.
2. refinement of site boundaries for large sites, especially upland sites, defined ideally by the density and fidelity of breeding/denning subsites, especially by accessing or obtaining improved animal distribution and behavioral use information.
3. population of additional GIS fields abbreviated from information in the site descriptions.
4. further review of manual files of the Rensselaer County Biodiversity Greenprint Project.
5. review and integration of any documents of other organizations.

Sources (2019 update) :

1. Rensselaer County Conservation Plan documents.
(prepared for Rensselaer Land Trust 2017 including GIS datalayer, summary memo, cover memo).
2. Rensselaer County Biodiversity Greenprint Project electronic site files.
(especially the initial draft of a site tally/composition list for all towns of the county prepared in 2016-2017 for the RLT county conservation plan).
(community-species matrices and site file information for individual sites).
3. Rensselaer Plateau Conservation Plan documents.
(comprehensive working list of county-rare species of the region and partially consolidated list of important animal sites, both last revised about 2011)

Town of Poestenkill: Important Animal Habitats

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For convenience, the major site-level changes made for this feature are summarized as follows:

1. Important Animal Habitat Sites with Boundary Refinements.

<u>Site</u>	<u>Boundary Change</u>
Bernie Pond Brook	added Bernie Pond, connecting 3 stream segments.
Wynants Kill Midreach	lumped 3 stream segments, added connector.
Poesten Kill East Poestenkill	lumped 2 stream segments.

2. Potential Important Animal Habitat Sites (2019 Suggestions).

<u>Site</u>	<u>Potential Concentration Areas</u>	<u>Known Rare Species</u>	<u>Surrogate Sites with Related Products</u>
A. Suspected Importance.			
Moules Lake ¹	odonates/birds	0	ecosystem complex
Newfoundland Creek ²	mammals/fish/birds*/insects*	1	aquatic network
Poesten Kill Midreach ³	mammals/fish/birds*/insects*	0	aquatic network
B. Uncertain Importance.			
SE Brunswick Grasslands	grassland birds*	0	ecosystem complex

* no information readily available for assessment.

1. observations from a 2018 field visit need further assessment for designation of any concentration areas of these two animal groups.
2. otters reported near lowest reaches; observations from a 2017 field visit along the upper creek reaches need further assessment for designation of any concentration areas of these groups.
3. otters are known from stream locations close to the portion of the river in the Town of Poestenkill, both downstream along the mainstem (in the Town of Brunswick) and upstream along a large tributary in town. although the stream is a designated trout stream, it is not designated as a trout spawning stream. Relatively abundant fish, riparian birds, and aquatic macroinvertebrates are known from a downstream site just outside Poestenkill in the Town of Brunswick, where concentration areas might be designated upon more assessment, plus just upstream of this site, at the base of the Rensselaer Plateau, where some concentration areas are designated elsewhere (see the Upper Poesten Kill site). Limited access to the river within the Town of Poestenkill has prevented opportunities for past field surveys.

These 4 other sites possibly warrant "important animal habitat" status but are pending more critical evaluation before assigning that designation plus any related site fact sheets and GIS entry population. Few or no details on the biota of these sites are available to date. Some time was spent in April to May 2019 to assess the status of these sites, but there was limited time to finalize any decisions on site importance.

A. Conservation Importance (Priority 2: very high importance)

1. Site: Poesten Kill Headwaters (IAH1). SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites:

Poesten Kill Headwaters Poestenkil (South of Plank Road) (Level-1)

Poesten Kill Headwaters North (North of Plank Road) (Level-1)

Bucks Corner Swamp (Berlin/Poestenkil) (Level-2)

Poesten Kill Headwaters South (South of Plank Road) (Level-1)

only Berlin

Poesten Kill Headwaters Berlin (Level-1)

Mud Pond Berlin (not in Poestenkil) (Level-2)

Mud Pond Berlin Woods (not in Poestenkil) (Level-2)

Poesten Kill Headwaters Plank Road (not in Poestenkil) (Level-2)

Excluded but Related/Overlapping Sites:

Poesten Kill Headwaters Outlet (riparian ecosystem complex)

Poesten Kill Headwaters Northwest (boreal flats ecosystem complex)

Upper Poesten Kill Corridor

Old Albany Road

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Ecosystem Complex: Poesten Kill Headwaters (equivalent)

Rare Plant Concentration Area: Poesten Kill Headwaters North (contained)

Exemplary Communities: Poesten Kill Headwaters (contained)

B. Site Priority.

County Priority Level (2019): Priority 2 (very high importance)

County Priority (2017): #7 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #1 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 2272 acres; Shape/Boundary: site concept estimated to roughly correspond to equivalent ecosystem complex.

Fifty-Six Road South area might be best added as an expansion area upon more careful assessment, especially for the secondary concentration area.

Town Location: Berlin (~96%) > Poestenkil (~5%).

Descriptive Account: see Poesten Kill Headwaters ecosystem complex: (similar boundary & concept).

D. General Important Habitat Component Presence (May 2019/Draft 2)

Component	Importance	ID Certainty	Abundance	Notes
Concentration Areas	Very High	Very High	4 types	
Rare Species	High	High	2-3 species	updated from 1 in 2017

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (January 2017/Draft 1 from RLT county plan)

Primary Concentration Area Type: large/boreal mammal breeding concentration area.

Secondary Concentration Area Type: large/boreal mammal browsing/bedding concentration area.

Tertiary Concentration Area Type: boreal bird concentration area.

Quaternary Concentration Area Type: riparian/wetland bird concentration area.

Animal Concentration Area Characteristics. (May 2019, Draft 1 newly compiled)

Area	Type/Concentration	Abundance	Frequency	Use Seasonality	Primary Evidence
primary	y-/y?	1 species	2+ times	unknown	family/young/breeding pairs
secondary	y/y	many subsites	lasting	year round?	scat/tracks
tertiary	?/?	3 species?	3+ times	unknown	mobile individuals
quaternary	?/?	2 species?	1+ times	unknown	mobile individuals

notes: most of observations from Town of Berlin.

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: large/boreal mammal breeding concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town
moose	breeding	family/young/pairs	2007-2010	p.c.	Berl>Pk

notes: multiple observations centered around site and within a small geographic radius; other evidence = territorial defense display.

Secondary Concentration Area Type: large/boreal mammal browsing/bedding concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town
moose	browse	numerous sites/types	2006-2018	p.c./DH	Pk/Berl/SL

notes: evidence = abundant scat/abundant tracks/feeding individuals.

snowshoe hare	present	presumed feeding/bedding	2006	p.c.	Pk/Berl/SL
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Area notes: multiple observations within and near site (1-2 mile radius) from multiple subsites and multiple times by multiple people.

1. Site: Poesten Kill Headwaters (continued)

E. Animal Concentration Areas. (continued)

Animal Concentration Area Composition: (continued)

Tertiary Concentration Area Type: boreal bird concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town
black-backed woodpecker	present	mobile individuals (2)	~1970s	p.c.x2	Berl
three-toed woodpecker	present	mobile individual	~1990s	p.c.	Berl
saw-whet owl	present	mobile individuals (2)	~1990s	p.c.x2	Berl

Area notes: one-time observations, most at the edge of the site, all in Berlin, and some of uncertain identity; need to supplement with any observations within this site from the working draft of breeding birds of the Rensselaer Plateau Spruce-Fir core (centered in this site), as produced by J.DeWaalMalefyt.

Quaternary Concentration Area Type: riparian/wetland bird concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town
kingfisher	present	mobile individual	1990s	DH/RTLC	Berl
cedar waxwing	present	mobile individual	1990s	DH/RTLC	Berl

Area notes: one-time observations; in center of site in open wetlands; all in Berlin.

Concentration Area Accuracy:

site poorly explored for fauna; Concentration Areas 1-3 of some focus by multiple groups; Area 4 not yet of known focus. much information based on Rensselaer Plateau Important Animal Compilation (Hunt, September 29, 2011), 2010 Rensselaer Plateau Community Values meetings, and 2008 local landowner interviews. no focused studies to date of any of these concentration areas. other unassessed wetland-aquatic based concentration area types are possible from the site. These include riparian/aquatic mammal, fish, odonate, and herptile concentration areas. p.c. = personal communications with local residents, foresters, and hunters.

F. Rare Animal Species.

Animal Rarity Tallies

	total	active	watch	delisted	notes
May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	2-3	1-2	1	-	identity: 2 certain, 1 possible.
January 2017 (Draft 1) (from RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

Primary Rarity Group: county-rare boreal mammals.

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data) (by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare boreal mammals.

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs	Rare Habitat
County-A	Moose	Alces alces	CA	C1/C1C2	1-4 individuals	recent	probable
	notes: evidence=tracks, scat, visual observations, family, young, breeding pairs, browse areas (extensive), bedding areas, and territory defense display. species identity certain. high certainty of limited habitat use.						
County-A	Black Bear	Ursus americanus	CA	C1C2d	1 individual	recent	possible
	notes: evidence=scat; species identity uncertain. county-rare areas for this species are only denning habitat. den presence uncertain, but suspected based on plentiful critical habitat characteristics within site. tracked as a "possible lead", represented by "?" in site tally.						
County-W?	Snowshoe Hare	Lepus americanus	CW?	C2C3?	1+ individual	2006	probable
	notes: evidence=tracks, visual observations from multiple pers.com. reports. multiple tracks observed within 2-mile radius of site, possibly centered around this site. formerly regionally more common before about 1980s. most common in limited spruce-fir areas of region per experts, thus most likely within this core site per D.Hunt.						

2. County-rare boreal birds.

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs
State-A	American Three-Toed Woodpecker	Picoides dorsalis	SA/CA	S2/CH?	1 individual	historic
	notes: species identity uncertain. one time observation, presumed not resident, near SE edge of site; too uncertain as rare nesting occurrence to tally for site; probably migratory individuals.					
State-W	Black-Backed Woodpecker	Picoides arcticus	SW/CA	S3/CH?	1 individual?	historic
	notes: two time observations, presumed not resident, near SE edge of site; too uncertain as rare nesting occurrence to tally for site; probably migratory individuals.					

Other Interesting Uncommon Species: Raven, Pileated Woodpecker.

1. Site: **Poesten Kill Headwaters** (continued)

F. Rare Animal Species. (continued)

Rarity Accuracy:

only a limited part of the site has been explored for rare fauna including much of the Poestenkill part of the site (near Plank Road/Bucks Corner). poorly explored areas in town include: the peatland spanning Plank Road near the Berlin town line; poorly explored likely rare species population areas in Berlin include Mud Pond Berlin and open peatlands within Poesten Kill Headwaters South. possible extension of the site into Fifty-Six Hunt Club lands (if more rare animals were found in the relatively unexplored Spruce-Fir Swamp habitat there). County rarity assessments for known species need refinement (by expert consensus). likely with multiple species of county rarity level, especially odonates (some of which could be state rare) in open peatlands. other potential rare species groups include boreal birds, especially boreal wetland birds, and bog lemming.

Sources:

Hunt, D.M. 2011. Rensselaer Plateau. rare animal compilation, September 29.
Rensselaer Plateau Alliance. 2010. Community Values meetings.
2008 local landowner interviews.

Edition: June 29, 2019.

B. Conservation Importance (Priority 3: high importance)

2. Site: Rensselaer Plateau Forest (IAH2) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: Rensselaer Forest Tract (NY Audubon important bird area)

Included Subsites: only exceptional small subsites are separately designated within this landscape-level site.

Excluded but Related/Overlapping Sites:

Rensselaer Plateau (physiographic region)

Rensselaer Plateau Forest (conservation site/forest landscape)

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (overlapping/nearly equivalent)

Forest Landscape: Rensselaer Plateau Forest (overlapping/nearly equivalent)

B. Site Priority.

County Priority Level (2019): Priority 3 (high importance)

County Priority (2017): #23-24 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #2 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 150248 acres; Shape/Boundary: site concept matched with Important Bird Area, deferring to NY Audubon as the expert on the primary concentration area boundary; the secondary concentration area boundary may differ and might better match the Rensselaer Plateau Forest forest landscape unit.

Town Location: Poestenkill (~15%) plus 9 other towns.

Descriptive Account: see Rensselaer Plateau Forest priority conservation site: (similar boundary & concept).

D. General Important Habitat Component Presence (May 2019/Draft 2)

Component	Importance	ID Certainty	Abundance	Notes
Concentration Areas	Very High	Very High	2 types	
Rare Species	High	Very High	4+ species	importance raised from moderate in 2017

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (January 2017/Draft 1 from RLT county plan)

Primary Concentration Area Type: forest-interior bird nesting concentration area.

Secondary Concentration Area Type: forest-interior large mammal denning concentration area.

Animal Concentration Area Characteristics. (May 2019/newly compiled & supplemented)

.....Certainty....

Area	Type/Concentration	Abundance	Frequency	Use Seasonality	Primary Evidence
primary	y/y	>>6 species	annual/many	especially spring	breeding behavior/seasonal presence
secondary	y/y	5 species	lasting/many	especially winter	scat in suspected den sites

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: forest-interior bird nesting concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town/Subsite
forest-interior birds	present	various	recent	various	Pk portion of site
black & white warbler	present	call	recent	DH	Pk (Barberville Falls Preserve)
notes: identity somewhat uncertain.					
ovenbird	present	call	recent	DH	Pk (WRP Escarpment Ledges, Common Farms)
pileated woodpecker	present	tree holes	recent	DH	Pk (Snake Hill West, WRP Esc Ledges...)
notes: subsites from other sources = Wheeler Mountain, Poesten Kill Headwaters; other evidence=calls.					
red-eyed vireo	present	call	recent	DH	Pk (Barberville Falls Preserve)
scarlet tanager	present	visual	~2016	N.Conrad	Pk (Poestenkill Community Forest)
yellow-bellied sapsucker	present	tree holes	recent	DH	Pk (Poestenkill Community Forest)

Area notes: only Poestenkill sites are shown. these species and many other species have been noted throughout the site in towns other than Poestenkill; a complete list for the entire site is pending much review of other information including some from 3 key sources 1) electronic and manual RCBGP files (trip observations of DH and others, reports of others, especially from plateau towns other than Poestenkill), 2) regional bird compilations (breeding bird atlas, E-Bird website), and especially 3) more direct nesting observations. The NY Audubon IBA summary may be the best summary list for species in this category; the summary of breeding birds of the Rensselaer Plateau by J.DeWaalMalefyt, especially a list developed for the Central Plateau, should also be very useful. Subsite key: WRP = Western Rensselaer Plateau, Esc = Escarpment.

Sample preliminary list of suspected breeding forest-interior bird species from other towns based on RCBGP information compiled for the RLT 2017 county plan:

Grafton: pine warbler, yellow-rumped warbler, solitary vireo.

2. Site: Rensselaer Plateau Forest (continued)

E. Animal Concentration Areas. (continued)

Animal Concentration Area Composition: (continued)

Secondary Concentration Area Type: forest-interior large mammal denning concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town/Subsite
denning large mammals	territory	various	recent	p.c.	Pk/Poestenkill portion of site
black bear	territory	feeding individuals	recent	p.c.	Pk/Snake Hill West (2 subsites)
notes: denning habitat certain in plateau towns other than Poestenkill.					
black bear	territory	scat	recent	NYNHP	Berl/Pk (Poesten Kill Headwaters).
bobcat	territory	mobile individuals	recent	p.c.	Pk/Snake Hill West, WRP Esc Ledges...
notes: identity uncertain for some sites. other subsites: Wheeler Mountain, Perigo Hill. denning habitat certain in towns other than Poestenkill.					
coyote	denning	den	2007	p.c.	Pk/Pine Ridge Center Woods North
coyote	territory	scat/trail/individual	recent	p.c.	Pk/Poestenkill Community Forest, Snake Hill West.
fisher	territory	scat/feeding	recent	pc/DH	Pk/Barberville Falls Preserve, Snake Hill West (2 subsites)
porcupine	denning	den/scat/individual	2009	pc/DH	Pk/Pine Ridge Center Woods North
porcupine	territory	concentrated scat	recent	DH/pc	Pk/Poestenkill Community Forest, Snake Hill West.
porcupine	territory	mobile individual	1990	DH	Pk/Poestenkill Headwaters Outlet
gray fox	territory	mobile individual	2000s	p.c.	Pk/Pine Ridge Center Woods North...

notes: other subsites: Plank Road East Poestenkill; other towns: Grafton, Stephentown.

Area notes: all species with at least one certain report; most with many certain reports for the entire site. all of these species have also been noted throughout the site in towns other than Poestenkill; these species may represent all large mammal species of the site that den in upland forests; a much more complete characterization of these species, especially the geographic extent of their denning territory within the site, is pending much review of other information including from 3 key sources: 1) electronic and manual RCBGP files (trip observations of DH and others, reports of others, especially from towns other than Poestenkill), 2) regional wildlife compilations (especially from the local wildlife tracking group), and 3) any systematic future research including interviews for expert observations (mostly from local residents, also from naturalists and hunters) such as via "experts meetings". possible local den sites for all these species are predicted/expected in critical habitat/microhabitat types (e.g. cave microhabitats within a talus slope woodland community; large tree hollows within mature forest patches). Other large mammal species intentionally excluded are ones represented within the site only by migratory individuals (i.e., not denning individuals; e.g., mountain lion) or species that do not "den" and instead may "bed" within the site (e.g., moose). Additionally, other small denning mammals are not included in this unit, as they are not as dependent on restricted denning habitats and microhabitats as are the larger mammals. gray fox may need more evaluation from fauna experts as a "forest-interior denning mammal". source: p.c. or pc = personal communication report (mostly from local residents, also from naturalists and hunters).

Concentration Area Accuracy:

site moderately explored for fauna by multiple organizations, focusing on multiple taxonomic groups but not necessarily on identifying, mapping, and characterizing concentration area types. The large volume of information for this landscape-level site and all its numerous subsites is mostly poorly consolidated; only species consolidated to date onto RCBGP electronic site lists for sites in the Town of Poestenkill are shown here; more species are likely recorded from the town in more recent field notes yet to be compiled into electronic format; RCBGP information from other plateau towns is also pending systematic compilation. the presence of both concentration area types within the site is very certain, however much more compilation is needed for a more complete characterization and to better justify that certainty due to the very large size and diverse species composition of the site; no other forest-interior concentration area types are expected to be associated with this site due to its large-scale size. other smaller-scale concentration areas are more appropriately treated within the many embedded important animal habitat sites of the Rensselaer Plateau Forest.

F. Rare Animal Species.

Animal Rarity Tallies

	total	active	watch	delisted	notes
May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	4+	2	2	-	4 certain mammals, probably many forest-interior birds (critical habitat, but pending compilation).
January 2017 (Draft 1) (from RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

Primary Rarity Group: denning forest-interior large mammals

2. Site: Rensselaer Plateau Forest (continued)

F. Rare Animal Species. (continued)

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)
(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare denning forest-interior large mammals.

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs
County-A	Bobcat	Lynx rufus	CA	S4/C1d	2 individuals	recent
	notes: county-rare areas for this species are only denning habitat. den locations with varying degrees of uncertainty throughout site; 1 certain local site (Grafton), several other possible broader subsite areas, most from reports of others, most in towns other than Poestenkill, most within more local "county-important animal habitat" sites on the plateau.					
County-A	Black Bear	Ursus americanus	CA	C1C2d	-	recent
	notes: county-rare areas for this species are only denning habitat. den locations with varying degrees of uncertainty throughout site; 1 relatively certain local site (Nassau), 1 probable local site (Grafton), several other possible broader subsite areas, most from reports of others, most in towns other than Poestenkill, most within more local "county-important animal habitat" sites on the plateau.					
County-W	Fisher	Martes pennanti	CW	C2d	-	recent
	notes: county-rare areas for this species are only denning habitat. den locations with varying degrees of uncertainty throughout site; 1 relatively certain local site (Sand Lake), several other possible broader subsite areas, most from reports of others, most in towns other than Poestenkill, most within more local "county-important animal habitat" sites on the plateau.					
County-W?	Gray Fox	Urocyon cinereoargenteus	CW?	C2C4?	5+ individuals	recent
	notes: county-rare areas for this species are only denning habitat. no den locations yet known or reported throughout site, but probable based on habitat characteristics and multiple mobile individual observations including ones from Poestenkill.					

2. County-rare forest-interior birds.

notes: some rare species are likely known from the site with nesting behavior, but much more research and compilation is needed; most readily available information is probably from towns other than Poestenkill; one of the most likely sources of information for the Poestenkill part of the site may be the bird list from the Poestenkill Community Forest (pending availability to and review by RCBGP). a working breeding bird list for the Central Rensselaer Plateau area (developed/led by J.DeWaalMalefyt) is readily available, but the results have not yet been tallied here (pending a careful and detailed cross-reference to the county rarity of forest-interior bird species assessed by a Rensselaer Plateau Ecology Working Group about 2011).

Rarity Accuracy:

much information is available over a very wide area, thus much more work is needed for a complete compilation. information on many rare nesting forest birds, such as the state-rare red-shouldered hawk, needs compilation. many other interesting uncommon species could be listed that are known to have critical habitat use within the site. other rare large mammals known to use the site, especially mountain lion, are considered migratory individuals that do not den within the site; other known denning mammals, especially porcupine, are not considered rare enough. much field work is required to identify/locate denning and nesting sites. the local wildlife tracking group may be the best source for potential denning sites for rare animals within the larger site; birding groups are likely the best source for nesting subsites of rare birds within the larger site. these types of information are ideally required to delineate and/or refine the entire Rensselaer Plateau Forest site boundary (currently of NY Audubon), conceptualized as the correlated collective of both concentration area types.

3. Site: Vosburgh Swamp (IAH3) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites: Vosburgh Pond

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Priority Conservation Sites: Poesten Kill Midreach Corridor/Network (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Newfoundland Creek Network (embedded within)

Ecosystem Complex: Vosburgh Swamp (embedded within)

Exemplary Communities: Vosburgh Swamp (equivalent)

Rare Plant Concentration Area: Vosburgh Swamp (embedded within)

B. Site Priority

County Priority Level (2019): Priority 3 (high importance)

County Priority (2017): #23-24 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #-3 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description

Site Configuration:

Size: 49 acres; Shape/Boundary: relatively stable concept if limited to aquatic and open canopy parts of the broader site.

Town Location: Poestenkill (90%) > Sand Lake (10%).

all important animal features known from Poestenkill part of site.

Descriptive Account:

see Vosburgh Swamp ecosystem complex: (similar boundary & concept).

D. General Important Habitat Component Presence (June 2019/Draft 2)

Component	Importance	ID Certainty	Abundance	Notes
Concentration Areas	Very High	Very High	3 types	1 new area added 2019.
Rare Species	Moderate	Moderately High	1 species	

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (June 2019/Draft 2)

Primary Concentration Area Type: aquatic mammal concentration area.

Secondary Concentration Area Type: lake bird concentration area.

Tertiary Concentration Area Type: lake fish concentration area. (newly added 2019; "possible" in 2017)

Animal Concentration Area Characteristics. (May 2019, newly compiled)

Area	Type/Concentration	Abundance	Frequency	Use Seasonality	Primary Evidence
primary	y/y?	2 species	1+ times	-year round	mobile individuals
secondary	y/y?	3 species	1+ times	unknown	mobile individuals
tertiary	y/y?	4 species	1+ times	-year round	mobile individuals

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: aquatic mammal concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town
otter	resident	present	recent	p.c.	-Pk
beaver	resident	present	recent	p.c.	-Pk

Area notes: source = verbal reports from D.Wemple (p.c. B.Washburn).

Secondary Concentration Area Type: lake bird concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town
waterbirds	diversity	3 species	various	various	Pk
osprey	migratory?	present	?	p.c.	Pk
egret	migratory?	present	?	p.c.	Pk
wood duck	resident?	present	recent	FFG	Pk

Area notes: concentrations per species unknown, but diverse suite of characteristic species. source = historic reports from local residents.

Tertiary Concentration Area Type: lake fish concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town
lake fish	diversity	4 species	recent	p.c.	Pk
pickerel	resident	present	recent	p.c.	Pk
yellow perch	resident	present	recent	p.c.	Pk
bluegill	resident	present	recent	p.c.	Pk
bass	resident	present	recent	p.c.	Pk

Area notes: concentrations per species unknown; feature tracked as "possibly diverse". source = reports from local residents (p.c. B.Washburn).

Concentration Area Accuracy:

site poorly explored for fauna; Concentration Areas 1 & 2 not yet of focus; Concentration Area 3 was suspected in RLT 2017 county plan and now has more refined information to confirm a concentration area; possible additional wetland-aquatic concentration area types at the site in need of assessment for their presence include: odonates (likely), wetland birds (likely), and wetland-aquatic herptiles (uncertain).

3. Site: Vosburgh Swamp (continued)

F. Rare Animal Species.

Animal Rarity Tallies

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>delisted</u>	<u>notes</u>
May 2019 (Draft 2)	(via compilation of detailed information used for RLT county plan):				
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	1?	-	1?	-	probable presence but uncertain rarity status.
January 2017 (Draft 1)	(from RLT county plan):				
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

Primary Rarity Group: aquatic mammals

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)
(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare aquatic mammals.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-W?	Northern River Otter	Lutra canadensis	SGCN/CW?	C2C4?	1 individual	recent
	notes: potential county-rare species (pending county fauna expert consensus); source = local resident report (D.Wemple via B.Washburn p.c.). no information on habitat use or site fidelity; tracked as "potential lead" and represented by "?" in site tally.					

Rarity Accuracy:

not well explored for rare fauna; only 1 known potential rare species reported to date; mostly from indirect reports derived from local residents; possible additional rare aquatic animals of varying taxonomic groups and county rarity levels are expected, including and especially odonates and wetland birds (e.g., bitterns). although osprey is tracked as county-rare only for resident populations, the observed individual is assumed to be migratory, thus is not tracked as a rare occurrence.

4. Site: **Western Rensselaer Plateau Escarpment** (IAH4) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites:

Western Rensselaer Plateau Escarpment Ledges (Level-1) (Poestenkill)

Kirchner Easement (=Pattison Preserve) (Level-2) (Poestenkill)

Common Farms (Level-2) (Poestenkill)

Camp Rotary Woods (Level-2) (Poestenkill + Grafton)

Penny Royal Lane Slopes (Level-1) (Brunswick + Grafton)

Wheeler Mountain (Level-1) (Brunswick)

Excluded but Related/Overlapping Sites:

Camp Rotary Woods (= Davitt Pond Woods; Camp Rotary)

Barberville Gorge

Common Farms

Kirchner Easement

Related County-Important Ecological Features:

Priority Conservation Site: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Ecosystem Complex: Western Rensselaer Plateau Escarpment (equivalent)

Exemplary Communities: Western Rensselaer Plateau Escarpment (contained & overlapping)

Rare Plant Concentration Area: Western Rensselaer Plateau Escarpment (equivalent)

B. Site Priority.

County Priority Level (2019): Priority 3 (high importance)

County Priority (2017): #29 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #-4 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 415 acres. Shape/Boundary: relatively stable concept, estimated to roughly correspond to equivalent ecosystem complex, but some of the characteristic animals that use this habitat may display the same use behavior (e.g., soaring birds) over a broader area. Most known concentration areas from the northern part of the site (Wheeler Mountain in Brunswick), but similar features are suspected from the Poestenkill part of the site, especially the Western Rensselaer Plateau Escarpment Ledges subsite.

Town Location: Brunswick > Poestenkill (43%) > Grafton. part of 2 of 4 total patches in Poestenkill.

Descriptive Account:

see Western Rensselaer Plateau Escarpment ecosystem complex (similar boundary & concept).

D. General Important Habitat Component Presence (January 2017/Draft 1 from RLT county plan)

<u>Component</u>	<u>Importance</u>	<u>ID Certainty</u>	<u>Abundance</u>	<u>Notes</u>
Concentration Areas	High	High	2 types	
Rare Species	Moderate	Moderate	1-2 species	uncertain denning populations.

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (January 2017/Draft 1 from RLT county plan)

Primary Concentration Area Type: large mammal talus/cliff denning concentration area.

Secondary Concentration Area Type: rocky summit bird soaring/nesting area.

Animal Concentration Area Characteristics. (May 2019, newly compiled & supplemented)

.....Certainty.....

<u>Area</u>	<u>Type/Concentration</u>	<u>Abundance</u>	<u>Frequency</u>	<u>Use Seasonality</u>	<u>Primary Evidence</u>
primary	y/?	2 species	1+ times	winter?	den with scat
secondary	y?/?	2 species?	1+ times	fall?	local soaring individuals

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: large mammal talus/cliff denning concentration area.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Abundance</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town/Subsite</u>
bobcat	territory	mobile individual	1 individual	recent	p.c.	Pk, Br
note: correct habitat/microhabitat at two subsites, thus possible den(s); subsites: Pk (WRP Esc ledges), Br (Wheeler Mountain); source = local resident report.						
porcupine	den	scat piles	1 den	recent	DH	Br (Wheeler Mountain)
note: den confirmed, correct habitat/microhabitat.						
black bear	territory	mobile individual	1 individual	recent	p.c.	Br (Wheeler Mountain)
Area notes: best source = local resident report. two known subsites, one in Brunswick (Wheeler Mountain), one in Poestenkill (Western Rensselaer Plateau Escarpment Ledges). correct habitat, thus possible, but very uncertain den present at this site.						

Secondary Concentration Area Type: rocky summit bird soaring/nesting area.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town/Subsite</u>
bald eagle	soaring	nearby presence	recent	p.c.	Br (Wheeler Mountain)
notes: possibly soaring at this site.					
raven	soaring	nearby presence	recent	p.c.	Br (Wheeler Mountain)
notes: suspected soaring, possibly nesting at this site.					

Area notes: all reports from local resident. type: corresponds/restricted implicitly to "large" birds. Other characteristic species (e.g., hawks, vultures) are suspected from Wheeler Mountain/Brunswick. Name of concentration area revised to be more explicit (either soaring or nesting, ideally both).

4. Site: Western Rensselaer Plateau Escarpment (continued)

E. Animal Concentration Areas. (continued)

Concentration Area Accuracy:

site poorly explored for fauna; Concentration Areas 1 & 2 not yet of focus; possible additional rocky summit/slope concentration area types at the site in need of assessment for their presence include: talus cave invertebrates and rocky summit herptiles (especially snakes and including historical reports of timber rattlesnake).

F. Rare Animal Species.

Animal Rarity Tallies

total active watch delisted notes

May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):

Global Rare: 0 - - -

State Rare: 0 - - -

County Rare: 1-2 1-2 - -

possible occurrences of 2 rare species/critical habitat unit.

January 2017 (Draft 1) (from RLT county plan):

Global Rare: 0 - - -

State Rare: 0 - - -

County Rare: not compiled/specified on GIS for county plan ("0")

Primary Rarity Group: rocky summit mammals

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare rocky summit mammals.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-A	Bobcat	Lynx rufus	CA	S4/C1d	2 individuals	recent
	notes: county-rare areas for this species are only denning habitat. 2 subsites, both from multiple local resident reports: Western Rensselaer Plateau Escarpment Ledges and Wheeler Mountain, with 4 total sightings within a 1-mile radius of a suspected den site. local denning sites not yet confirmed, but possible to probable at this site based on habitat characteristics. tracked as "possible to probable lead", represented by "?" in site tally.					
County-A	Black Bear	Ursus americanus	CA	C1C2d	1 individual	recent
	notes: county-rare areas for this species are only denning habitats. source = pers.com. from local resident of 1 mobile individual. local denning sites not yet confirmed, but possible at this site based on habitat characteristics. tracked as a "possible lead", represented by "?" in site tally.					

Rarity Accuracy:

only a very limited part of the site has been explored for fauna. only 1 known potential rare species to date. large mammal denning sites are generally difficult to find, but there is good potential for some throughout the area (large rock cavities within a large forest-interior area); multiple repeated observations of rare large mammals may represent one local denning site per species, permanent or shifting; any den sites are uncertain between Poestenkill, Grafton, and Brunswick locations. other characteristic rare animals of various taxonomic groups and regional rarity levels, especially county-rare species, are expected from this site. good potential exists for fisher dens at this site, but with no leads to date.

5. Site: **Dustin Swamp Complex** (IAH5) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites:

Dustin Swamp (Grafton/Poestenkill)

Ash Swamp (mostly Grafton/little in Poestenkill) (=Dyken Pond Road Swamp, N RP Wetland Site 211a)

Teal Brook (Grafton) (==NRP Wetland Site 210a)

Dyken Pond Road Marshes #2 (=NRP Wetland Site 218).

Excluded but Related/Overlapping Sites:

Dyken Pond Wetlands

Dyken Pond Center

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Ecosystem Complex: Dustin Swamp Complex (equivalent)

Exemplary Communities: Dustin Swamp Complex (contained & overlapping)

Rare Plant Concentration Area: Dustin Swamp Complex (equivalent)

B. Site Priority.

County Priority Level (2019): Priority 3 (high importance)

County Priority (2017): #30 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #-5 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 244 acres; Shape/Boundary: site concept estimated to roughly correspond to equivalent Dustin Swamp ecosystem complex, but most important animal features known from open canopy part of the complex.

Town Location: Poestenkill (55%) == Grafton (45%).

most known important animal features in Grafton.

Descriptive Account: see Dustin Swamp Complex ecosystem complex: (similar boundary & concept).

D. General Important Habitat Component Presence (January 2017/Draft 1 from RLT county plan)

<u>Component</u>	<u>Importance</u>	<u>ID Certainty</u>	<u>Abundance</u>	<u>Notes</u>
Concentration Areas	Moderate	Moderate	2 types	confirmation of 1 type pending site file review
Rare Species	Very High	Very High	1 species	NYNHP EO

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (January 2017/Draft 1 from RLT county plan)

Primary Concentration Area Type: odonate concentration area.

Secondary Concentration Area Type: heron rookery.

Animal Concentration Area Characteristics. (May 2019, newly compiled)

<u>Area</u>	<u>Type/Concentration</u>	<u>Abundance</u>	<u>Frequency</u>	<u>Use Seasonality</u>	<u>Primary Evidence</u>
primary	y??	(pending)	1+ times	summer	mobile individuals
secondary	y-/?	2+ nests	abandoned/cyclic?	spring-summer-	nests, nesting individuals

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: odonate concentration area.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town</u>
odonates	diversity	multiple species	recent	DH/DPEC	Gr>Pk
notes: suspected high diversity (3 to 5 species) from field recollections.					
odonates	abundance	moderate-	recent	DH/DPEC	Gr>Pk
Area notes: refinement of information and supplementation with species identities is pending availability and review of field notes from Dyken Pond Center odonate workshop (~2015), all observed in the Town of Grafton.					

Secondary Concentration Area Type: heron rookery.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town</u>
great blue heron	rookery	nests, nesting	historic	NYNHP EO/p.c.	Gr>Pk
notes: sources include detailed verbal reports of local preserve staff. apparently with low site fidelity.					

Concentration Area Accuracy:

site somewhat poorly explored for fauna, especially assessments of concentration areas; focus has been mostly in limited areas (Dustin Swamp patch). Concentration Area 1 not yet of focus; Concentration Area 2 moderately well studied over many years but likely of unpredictable use cycles. possible additional wetland-aquatic concentration areas include: wetland birds, wetland-aquatic herptiles (especially turtles and frogs), aquatic mammals (low chance; only 1 species likely). concentration certainty (Part D above) would increase to "High" if field notes on odonates suggest a concentration area (need enough diversity of species [3+] and at least moderate abundance of individuals).

5. Site: **Dustin Swamp Complex** (continued)

F. Rare Animal Species.

Animal Rarity Tallies

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>delisted</u>	<u>notes</u>
May 2019 (Draft 2) (no change)					
January 2017 (Draft 1) (from RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	1	1	-	-	1 NYNHP EO
County Rare:	1	1	-	-	
Total	1				

Primary Rarity Group: odonates.

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)
(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. State-rare odonates.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
State-A	Forcipate Emerald	Somatochlora forcipata	SA/CA	S1/C1	1-5i	2007
notes: source = NYNHP EO.						

Rarity Accuracy:

not well explored for rare fauna; only 1 rare species certain to date (from NYNHP survey). any other rare species are most likely from open peatland patches; potential rare species groups include nesting boreal birds, especially boreal wetland birds, plus bog lemming.

Edition: June 29, 2019.

C. Concentration Importance (Priority 4: concentrated/moderately high importance)

6. Site: Upper Poesten Kill (IAH6) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites: Barberville Falls, East Poestenkill Flats, Bonesteel Creek

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Priority Conservation Site: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Networks: Poesten Kill Headwaters+Bonesteel Creek Headwaters (embedded within)

Ecosystem Complex: Poesten Kill Barberville, East Poestenkill Flats (overlapping)

Exemplary Communities: Upper Poesten Kill, Poesten Kill Midreach, East Poestenkill Flats (all overlapping)

Rare Plant Concentration Area: Barberville Gorge (overlapping)

B. Site Priority.

County Priority Level (2019): Priority 4 (moderately high importance)

County Priority (2017): #43-46 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #6 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 44 acres/11 miles; Shape/Boundary: site concept matched to only stream segments with NYS DEC trout-spawning designation ("C-TS"). suspected to correspond well with areas of the Upper Poesten Kill with the highest water quality, highest concentration and diversity of fish, an abundance of clean-water aquatic macroinvertebrates, and the best habitat for trout spawning, although the boundaries of those features are not expected to precisely match with each other. Thus, the boundary might be expanded more (or reduced) with more field evaluation.

Town Location: Poestenkill (100%).

Descriptive Account:

Overview:

Stream segments of the Upper Poesten Kill with trout-spawning (C-TS) stream designation. Represents stream segments with high water quality, with high concentration and diversity of both fish and clean-water aquatic macroinvertebrates, and thought to contain good habitat for trout spawning. The site contains the largest waterfall in Rensselaer County (Barberville Falls) and an associated plunge pool suspected to also be the largest in the county.

Regional Importance:

One of 6 streams with C(TS) segments of at least 10 miles in the county.

see also site description for Poesten Kill Headwaters Network (in which this site is embedded).

D. General Important Habitat Component Presence (May 2019/Draft 2)

Component	Importance	ID Certainty	Abundance	Notes
Concentration Areas	High	Very High	3 types	changed from 2 types in 2017.
Rare Species	Very Low	Very Low	0-1 species	

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (May 2019/Draft 2)

Primary Concentration Area Type: abundant cleanwater aquatic macroinvertebrates.

Secondary Concentration Area Type: riverine fish concentration area. (newly added 2019)

Tertiary Concentration Area Type: trout spawning stream. (previously secondary area 2017)

Animal Concentration Area Characteristics. (May 2019, newly compiled)

.....Certainty.....

Area	Type/Concentration	Abundance	Frequency	Use Seasonality	Primary Evidence
primary	y/y-	9 orders	lasting	-year round	sedentary individuals
secondary	2+/y-	2+ species	1+ times	-year round	mobile individuals
tertiary	y?/?	1 species?	permanent	-year round	NYS water quality classification

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: abundant cleanwater aquatic macroinvertebrates.

Element	Aspect	Abundance	Evidence	Last Obs	Source	Town/Subsite
macroinvertebrates	diversity	9 orders	sedentary individuals	recent	DH/FFG	Pk/P K Barberville
mayflies	diversity	4 families	sedentary individuals	recent	DH/FFG	Pk/P K Barberville
note: families = Heptageniidae, Oligoneuridae, Baetidae, Ephemeridae.						
caddisflies	diversity	3 families	sedentary individuals	recent	DH/FFG	Pk/P K Barberville
note: families = Hydropsychidae, Glossosomatidae, Odontoceridae.						
true flies	diversity	3 families	sedentary individuals	recent	DH/FFG	Pk/P K Barberville
note: families = Chironomidae, Tipulidae, Athericidae.						
true bugs	diversity	2 families	sedentary individuals	recent	DH/FFG	Pk/P K Barberville
notes: families = Gerridae, Veliidae.						
stoneflies	diversity	1 family	sedentary individuals	recent	DH/FFG	Pk/P K Barberville
note: family = Perlidae.						
beetles	diversity	1 family	sedentary individuals	recent	DH/FFG	Pk/P K Barberville
note: family = Psephenidae.						
crayfish	diversity	1 family	sedentary individuals	recent	DH/FFG	Pk/P K Barberville
notes: family = Cambaridae.						
dragonflies	diversity	1 family	sedentary individuals	recent	DH/FFG	Pk/P K Barberville

6. Site: **Upper Poesten Kill** (continued)

E. Animal Concentration Areas. (continued)

Animal Concentration Area Composition: (continued)

Primary Concentration Area Type: abundant cleanwater aquatic macroinvertebrates. (continued)

<u>Element</u>	<u>Aspect</u>	<u>Abundance</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town/Subsite</u>
fishflies	diversity	1 genus	sedentary individuals	recent	DH/FFG	Pk/P K Barberville

note: genus = Nigronia.

Area notes: source = FFG plot, subsite: "P K" = Poesten Kill.

Secondary Concentration Area Type: riverine fish concentration area.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Abundance</u>	<u>ID cert</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town</u>
fish	high diversity	mobile individual	4 species	y	recent	DH/FFG	Pk
longnose dace	resident	mobile individual	no count	y	recent	DH/FFG	Pk
tessellated darter	resident	mobile individual	no count	y	recent	DH/FFG	Pk
creek chub	resident	mobile individual	no count	y	recent	DH/FFG	Pk
eastern blacknose dace	resident	mobile individual	no count	y	recent	DH/FFG	Pk

Area notes: source=D.Hunt/FFG plot. suspected concentration area overlooked in RLT 2017 (as a third type).

Tertiary Concentration Area Type: trout spawning stream.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town</u>
trout	spawning	stream classification	unknown	NYS DEC	Pk

notes: presumed from NYS DEC stream classification, with no field confirmation information yet available; habitat suitability has not yet been well assessed.

Concentration Area Accuracy:

site somewhat poorly explored for fauna and mostly only in a limited area. NYS DEC trout-spawning streams are consistently designated as "important" animal habitat by themselves at a county level. Concentration Areas 1-3 with only preliminary assessment; more focus planned for 2019 survey along Bonesteel Creek subsite. additional riparian concentration area types also possible at the site, but no information is yet available and they are in need of assessment for their presence; potential areas include riparian mammals (possible), riparian birds (uncertain), riparian herptiles (seems unlikely, only known herptile to date is two-lined salamander).

F. Rare Animal Species.

Animal Rarity Tallies

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>delisted</u>	<u>notes</u>
May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	0-1	0-1	-	-	1 potential EO based on critical habitat presence.
January 2017 (Draft 1) (from RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

Primary Rarity Group: riverine fish.

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare riverine fish.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-A?	Brook Trout	Salvelinus fontinalis	CA?	C1?NC4?I	Class C-TS segment/classification.	
notes: inferred/suspected based on NYS DEC "trout spawning" (C-TS) stream designation, but no field confirmation information yet; thus treated as a "possible lead" and represented by "?" in site tally. confirmation could be sought from any NYS DEC, NY State Museum, and/or Trout Unlimited records.						

Rarity Accuracy:

not well explored for rare fauna; only 1 known potential rare species to date. with some potential for additional rare species, especially river otter.

Sources:

Hunt, David M. 2011. Rensselaer Plateau Rare Animal Compilation. internal Draft 3: September 29.

7. Site: Snake Hill Poestenkill (IAH7) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: Snake Hill

Included Subsites:

Snake Hill North (Level-1)

Barberville Cliffs (Level-2)

Snake Hill Road Cliffs (Level-2)

Snake Hill West (Level-1)

Snake Hill West (Snake Hill Block) (Level-2)

Excluded but Related/Overlapping Sites:

Snake Hill Road

Snake Hill West Block

Snake Hill West (Snake Hill West Block) (Level-2)

Related County-Important Ecological Features:

Priority Conservation Site: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Ecosystem Complex: Snake Hill Poestenkill (equivalent)

Exemplary Communities: Snake Hill Poestenkill (contained & overlapping)

Rare Plant Concentration Area: Snake Hill Poestenkill (equivalent)

B. Site Priority.

County Priority Level (2019): Priority 4 (moderately high importance)

County Priority (2017): #50-51 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #7 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 460 acres; Shape/Boundary: site concept estimated to roughly correspond to equivalent ecosystem complex. relatively stable concept, especially for ideal denning habitat, which is limited in extent within the site.

Town Location: Poestenkill (85%) > Sand Lake (15%).

all known/reported important animal features from Poestenkill part of site.

Descriptive Account: see Snake Hill Poestenkill ecosystem complex: (similar boundary & concept).

D. General Important Habitat Component Presence (January 2017/Draft 1 from RLT county plan)

<u>Component</u>	<u>Importance</u>	<u>ID Certainty</u>	<u>Abundance</u>
Concentration Areas	Moderate	Moderate	1 type
Rare Species	Moderate	Moderately Low	1 species?

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (January 2017/Draft 1 from RLT county plan)

Primary Concentration Area Type: large mammal talus/cliff denning concentration area.

Animal Concentration Area Characteristics. (May 2019, newly compiled)

.....Certainty....

<u>Area</u>	<u>Type/Concentration</u>	<u>Abundance</u>	<u>Frequency</u>	<u>Use Seasonality</u>	<u>Primary Evidence</u>
primary	y-/?	2 species	1+ times	winter? year-round?	mobile individuals

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: large mammal talus/cliff denning concentration area.

<u>Element</u>	<u>Aspect</u>	<u>Certainty</u>	<u>Evidence</u>	<u>Abundance</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town</u>
porcupine	den	?	suspected	-	-	DH inference	Pk
porcupine	territory	y	mobile individuals	1+ individuals	recent	p.c.	Pk
bobcat	den	?	suspected	-	-	DH inference	Pk
bobcat	territory	y?	mobile individuals	1+ individuals	recent	p.c.	Pk

Area notes: verbal reports from local residents. possible dens (suspected but not confirmed).

Concentration Area Accuracy:

site poorly explored for fauna; Concentration Area 1 not yet of focus. possible additional rocky summit/slope concentration area types in need of assessment for their presence include: rocky summit soaring/nesting birds, talus cave invertebrates, and rocky summit herptiles (especially snakes).

F. Rare Animal Species.

Animal Rarity Tallies

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>delisted</u>	<u>notes</u>
(via compilation of detailed information used for RLT county plan):					
May 2019 (Draft 2)					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	1?	1?	-	-	possible occurrence of rare species/critical habitat unit.
(from RLT county plan):					
January 2017 (Draft 1)					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

Primary Rarity Group: rocky summit mammals.

7. Site: Snake Hill Poestenkill (continued)

F. Rare Animal Species. (continued)

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)
(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare rocky summit mammals.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>	<u>Rare Habitat</u>
County-A	Bobcat	Lynx rufus	CA	S4/C1d	1+ individuals recent	possible	notes: species identity is probable, but only denning sites are tracked as county-rare/important habitat for this animal. certain county rare status. territory certain from p.c. report; ideal/preferred/restricted denning habitat/microhabitats confirmed by D.Hunt, thus possible den at this site. tracked as a "possible lead" due to limited known habitat use and represented by "?" in site tally.

Rarity Accuracy:

only a very limited part of this site has been explored for rare fauna. only 1 known potential rare species is known to date. possible additional rare animals of various taxonomic groups and regional rarity levels are suspected, most likely only county-rare fauna, and could include characteristic open rocky summit lepidoptera and/or snakes (e.g., historic reports of timber rattlesnake). good potential exists for at least one fisher den, but there are no leads to date.

Edition: June 29, 2019.

8. Site: Poesten Kill East Poestenkill (IAH8) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites:

Poesten Kill East Poestenkill (RLT county plan 2017: C-T segment) (Level-1)

Poesten Kill Pine Ridge (Level-2)

Poesten Kill East Poestenkill (RLT county plan 2017: B segment)

Excluded but Related/Overlapping Sites:

Poesten Kill Headwaters (ecosystem complex, overlapping)

Related County-Important Ecological Features:

Priority Conservation Site: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Ecosystem Complex: Poesten Kill Headwaters, Poesten Kill Headwaters Outlet (overlapping)

Exemplary Communities: East Poestenkill Flats, Poesten Kill Headwaters, Upper Poesten Kill (all overlapping)

B. Site Priority.

County Priority Level (2019): Priority 4 (moderately high importance); 2017=Priority 5.

County Priority (2017): #>50 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #8 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 14 acres/3.45 miles; Shape/Boundary: site concept matched mostly to stream segments with NYS DEC trout-water designation ("C-T"). suspected to correspond well with areas near the outflow of the Poesten Kill Headwaters with relatively high water quality plus moderately high concentration and diversity of fish and clean-water aquatic macroinvertebrates, although the boundaries of those features are not expected to precisely match with each other. Thus, the boundary might be expanded more (or reduced) with more field evaluation. The 2019 site concept lumps together two groups of stream segments with Class C(T) and Class B designations that were treated as separate sites in 2017.

Town Location: Poestenkill (~90%) > Berlin (~10%).

Descriptive Account: see also Poesten Kill Headwaters Network description (in which this site is embedded).

Stream segments of the Upper Poesten Kill with Class C(T) stream designation plus small intervening designated Class B stream segment. Represents stream segments with correlated good water quality, rare aquatic mammals, plus concentration areas of native fish and cleanwater aquatic macroinvertebrates. thought to support feeding brook trout.

D. General Important Habitat Component Presence (June 2019/Draft 2)

Component	Importance	ID Certainty	Abundance	Notes
Concentration Areas	Moderately Low	High	2 types	changed from 0-1 type and low importance in 2017.
Rare Species	High	High	1-2 species	

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (June 2019/Draft 2)

Primary Concentration Area Type: riverine fish concentration area.

Secondary Concentration Area Type: abundant clean-water aquatic macroinvertebrates. (added 2019)

Animal Concentration Area Characteristics. (May 2019, newly compiled & supplemented)

.....Certainty....

Area	Type/Concentration	Abundance	Frequency	Use Seasonality	Primary Evidence
primary	y/y?	4 species	1+ times	year round?	mobile individuals
secondary	y/y-	7 orders	1 time	year round-	sedentary individuals

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: riverine fish concentration area.

Element	Aspect	ID cert	Evidence	Abundance	Last Obs	Source	Town
fish	diversity	y-	mobile individuals	4 species	recent	DH/RPA	Pk

notes: certainty: feature inferred from observations from a limited reach of Class C(T) stream segment, but not directly assessed for either Class C-T or B segments; Class B stream segment not yet observed.

longnose dace	presence	y	mobile individuals	1+ individual	recent	DH/RPA	Pk
creek chub	presence	y	mobile individuals	1+ individual	recent	DH/RPA	Pk
eastern blacknose dace	presence	y	mobile individuals	1+ individual	recent	DH/RPA	Pk
northern hog sucker	presence	y	mobile individuals	1+ individual	recent	DH/RPA	Pk

notes: identity moderately uncertain.

Area notes: all observations from only C(TS) stream segment.

8. Site: Poesten Kill East Poestenkill (continued)

E. Animal Concentration Areas. (continued)

Animal Concentration Area Composition: (continued)

Secondary Concentration Area Type: abundant clean-water aquatic macroinvertebrates.

Element	Aspect	Abundance	Evidence	Last Obs	Source	Town
aquatic insects	diversity	7 orders	sedentary individuals	recent	DH/RPA	Pk
mayflies	diversity	1 families	sedentary individuals	recent	DH/RPA	Pk
note: families = Heptageniidae.						
caddisflies	diversity	1 families	sedentary individuals	recent	DH/RPA	Pk
note: families = Hydropsychidae.						
stoneflies	diversity	1 family	sedentary individuals	recent	DH/RPA	Pk
note: family = Perlidae.						
beetles	diversity	1 family	sedentary individuals	recent	DH/RPA	Pk
note: family = Psephenidae.						
crayfish	diversity	1 family	sedentary individuals	recent	DH/RPA	Pk
notes: family = Cambaridae.						
true bugs	diversity	1 family	sedentary individuals	recent	DH/RPA	Pk
notes: family = Gerridae.						
fishflies	diversity	1 genus	sedentary individuals	recent	DH/RPA	Pk
note: genus = Nigronia.						

Concentration Area Accuracy:

site somewhat poorly explored for fauna and only in a limited area. Concentration Areas 1 & 2 with only a preliminary assessment; need more assessment. simple NYS DEC trout stream designation (C-T) is not considered a "county-important" animal habitat by itself, but would need redesignation to a trout-spawning segment. river otter, by itself, is not enough for a riparian aquatic mammal concentration area. Other possible riparian concentration area types at the site in need of assessment of their presence include: riparian herptiles (only green frog known to date) and riparian birds (uncertain to unlikely).

F. Rare Animal Species.

Animal Rarity Tallies

	total	active	watch	delisted	notes
May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	1-2	0-1	1	-	1 probable, 1 potential EO based on critical habitat presence.

January 2017 (Draft 1) (from RLT plan):

Global Rare:	0	-	-	-
State Rare:	0	-	-	-

County Rare: not compiled/specified on GIS for county plan ("0")

Primary Rarity Group: riparian mammals.

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare riparian mammals.

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs
County-W?	Northern River Otter	Lutra canadensis	CW?	C2C4?	1 individual	recent
notes: evidence=slide; subsite: downstream of Plank Road bridge (Class B stream segment). sources: local resident (W.Kersch) p.c. report (Rensselaer Plateau rare animal compilation, Draft 3: September 29, 2011). treated as "probable lead".						

2. County-rare riverine fish.

Group	Common Name	Scientific Name	Lists	Ranks	Abundance	Last Obs
County-A?	Brook Trout	Salvelinus fontinalis	CA?	C1?NC4?I	Class C-T segment/classification.	
notes: possible from NYS DEC "trout stream" designation, but no field confirmation information yet; thus treated as a "possible lead" and represented by "?" in species tally. confirmation could be sought from any NYS DEC, NY State Museum, and/or Trout Unlimited records.						

Rarity Accuracy:

not well explored for rare fauna; only 1 known potential rare species and 1 possible suspected rare species to date. uncertain potential for additional rare fauna.

9. Site: **Hosford Pond Bog (IAH9)** SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites: Hosford Pond

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features: -

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Bonesteel Creek Network (embedded within)

Ecosystem Complex: Hosford Pond Bog (embedded within)

Exemplary Communities: Hosford Pond Bog (contained)

Rare Plant Concentration Area: Hosford Pond Bog (embedded within)

B. Site Priority.

County Priority Level (2019): Priority 4 (moderately high importance); 2017=Priority 6.

County Priority (2017): #>50 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #9-10 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 14 acres; Shape/Boundary: site concept estimated to roughly correspond to equivalent Hosford Pond ecosystem complex, but most important animal features are known from the open canopy part of the complex.

Town Location: Poestenkill (100%).

Descriptive Account: see Hosford Pond Bog ecosystem complex: (similar boundary & concept).

D. General Important Habitat Component Presence (June 2019/Draft 2)

<u>Component</u>	<u>Importance</u>	<u>ID Certainty</u>	<u>Abundance</u>	<u>Notes</u>
Concentration Areas	High	High	3 types	2 new areas added 2019; importance changed from Low in 2017.
Rare Species	Moderate	Moderately High	1 species-	uncertain rarity rank

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (June 2019/Draft 2)

Primary Concentration Area Type: lake fish concentration area. (2019: added as new type)

Secondary Concentration Area Type: odonate concentration area. (2019: from primary to secondary)

Tertiary Concentration Area Type: wetland-aquatic herptile concentration area. (2019: added as new type)

Animal Concentration Area Characteristics. (May 2019, newly compiled & supplemented)

<u>Area</u>	<u>Type/Concentration</u>	<u>Abundance</u>	<u>Frequency</u>	<u>Use Seasonality</u>	<u>Primary Evidence</u>
primary	y/y	5 species	1 time	year round?	resident individuals
secondary	y/?	3+ species	1 time	summer?	flying adults
tertiary	?/?	3 species	1 time	year round?	resident individuals

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: lake fish concentration area.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town</u>
fish	diversity	5 species	1987	ALS survey	Pk
yellow perch	resident	13 individuals	1987	ALS survey	Pk
brown bullhead	resident	12 individuals	1987	ALS survey	Pk
chain pickerel	resident	7 individuals	1987	ALS survey	Pk
pumpkinseed	resident	2 individuals	1987	ALS survey	Pk
golden shiner	resident	abundant individuals	2001	FFG/DH	Pk

notes: previously 2 individuals in 1987 ALS survey; 2001: shiner, assumed golden.

Area notes: sources = ALS 1987 lake survey; FFG field trip 2001.

Secondary Concentration Area Type: odonate concentration area.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town</u>
odonates	diversity	3+ species	2001	FFG/DH	Pk
skimmer	larvae	dip net sample	1987	ALS	Pk
darner/green	flying	present	2001	FFG/DH	Pk
dragonfly/white	flying	present	2001	FFG/DH	Pk
pond damsel	larvae	dip net sample	1987	ALS	Pk
pond damsel/blue	flying	present	2001	FFG/DH	Pk
pond damsel/green	flying	present	2001	FFG/DH	Pk

Area notes: source = FFG field trip 2001; observation records apparently for presence, not abundance.

Tertiary Concentration Area Type: wetland-aquatic herptile concentration area.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town</u>
amphibians	diversity	3 species	2001	FFG/DH	Pk
green frog	resident	present	2001	FFG/DH	Pk
bullfrog	resident	present	2001	FFG/DH	Pk
red-spotted newt	resident	swimming	2001	FFG/DH	Pk

Area notes: pending assessment of abundance for each species.

9. Site: **Hosford Pond Bog** (continued)

E. Animal Concentration Areas. (continued)

Concentration Area Accuracy:

site somewhat poorly explored for fauna, although ALS lake survey data suggests some concentration areas, especially for fish. Concentration Areas 2 & 3 not yet of focus. additional wetland-aquatic based concentration area types are possible at the site but in need of assessment for their presence; potential areas include: lake macroinvertebrates (probable), aquatic mammals, and wetland birds. known lake macroinvertebrates seem diverse, with some observed by FFG (leeches, water mites, freshwater sponge, and abundant whirligig beetles) and additional groups listed by the ALS survey (backswimmers, midges, and amphipods). aquatic mammals include beaver (den), but 1 species alone does not qualify as a concentration area.

F. Rare Animal Species.

Animal Rarity Tallies

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>delisted</u>	<u>notes</u>
May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	1?	-	1?	-	certain presence but uncertain rarity status.
January 2017 (Draft 1) (from RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

Primary Rarity Group: aquatic invertebrates.

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)
(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare aquatic invertebrates.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-W?	Freshwater Sponge	fam. Spongillidae	CW?	C?	present	2001
	notes: potential county-rare aquatic invertebrate (not discussed for Rensselaer Plateau rare species list); evidence = sedentary individuals; sources = 2001 FFG/D.Hunt survey, also present in 1987 ALS lake survey.					

Rarity Accuracy:

site poorly explored for rare fauna; possibly additional rare animals of various taxonomic groups and regional rarity levels to be found including odonates, boreal wetland birds, and bog lemming; only 1 known potential rare species to date.

D. Concentration Importance (Priority 5: moderate importance)

10. Site: Davitt Pond (IAH10) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites: -

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Exemplary Communities: Davitt Pond (equivalent)

Rare Plant Concentration Area: Davitt Pond (equivalent)

B. Site Priority.

County Priority Level (2019): Priority 5 (moderate importance); 2017: Priority 6.

County Priority (2017): #>50 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #9-10 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 23 acres; Shape/Boundary: relatively stable concept, with habitat for all important animal features corresponding to the lake.

Town Location: Poestenkill (100%).

Descriptive Account: see Davitt Pond species habitat description.

D. General Important Habitat Component Presence (June 2019/Draft 2)

Component	Importance	ID Certainty	Abundance	Notes
Concentration Areas	Moderate	High	3 types	2017: 1 uncertain type; 2019: added 2 types, more certain (certainty raised from Very Low; importance raised from Low in 2017)
Rare Species	Moderate	Moderately High	1 species-	uncertain rarity rank; moderate certainty in 2017

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (June 2019/Draft 2)

Primary Concentration Area Type: lake fish concentration area.

Secondary Concentration Area Type: lake mollusk concentration area. (added in 2019)

Tertiary Concentration Area Type: wetland-aquatic herptile concentration area. (added in 2019)

Animal Concentration Area Characteristics. (May 2019, newly compiled & supplemented)

.....Certainty....

Area	Type/Concentration	Abundance	Frequency	Use Seasonality	Primary Evidence
primary	y?/?	3 species	lasting-	year round-	nests & resident individuals
secondary	y?/y	2 species	lasting-	year round-	sedentary individuals
tertiary	?/?	2 species	lasting?	year round?	mobile & sedentary individuals

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: lake fish concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town
fish	abundance	moderately abundant	2007	FFG	Pk
fish	diversity	3 species	2007	FFG	Pk
smallmouth bass	breeding	nests	2007	FFG	Pk
largemouth bass	resident	3 individuals swimming	2007	FFG	Pk
pumpkinseed	resident	1 individual swimming	2007	FFG	Pk

Area notes: concentration area suspected because of lake type (Oligotrophic Dimictic Lake) and condition (relatively intact). source = FFG underwater observations of entire littoral area.

Secondary Concentration Area Type: lake mollusk concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town
mollusks	abundance	100s individuals	2007	FFG	Pk
mollusks	diversity	2 species	2007	FFG	Pk
eastern elliptio	resident	abundant sedentary	2007	FFG	Pk
pointed campeloma	sedentary	100s individuals	2007	FFG	Pk

Area notes: source = FFG underwater observations of entire littoral area.

Tertiary Concentration Area Type: wetland-aquatic herptile concentration area.

Element	Aspect	Evidence	Last Obs	Source	Town
herptiles	abundance	very abundant	2007	FFG	Pk
herptiles	diversity	2 species	2007	FFG	Pk
red-spotted newt	resident	very abundant swimming	2007	FFG	Pk
painted turtle	resident	2 sedentary individuals	2007	FFG	Pk

Area notes: source = FFG underwater observations of entire littoral area.

Concentration Area Accuracy:

site moderately explored for fauna; additional aquatic concentration area types are also possible at the site, but no information is yet available and they are in need of assessment for their presence; potential areas include lake aquatic macroinvertebrates (seems unlikely from underwater observations of sparse abundance, with only caddisflies and freshwater sponge known to date) and lake birds (seems unlikely).

10. Site: **Davitt Pond** (continued)

F. Rare Animal Species.

Animal Rarity Tallies

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>delisted</u>	<u>notes</u>
May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	1?	-	1?	-	certain presence but uncertain rarity status.
January 2017 (Draft 1) (from RLT county plan): (all sites may need adjustment)					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

Primary Rarity Group: aquatic invertebrates

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)
(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare aquatic invertebrates.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-W?	Freshwater Sponge	fam. Spongillidae	CW?	C?	5 individuals	2007
notes: potential county rare aquatic invertebrate (not discussed for Rensselaer Plateau rare species list); evidence: sedentary individuals; source: 2007 FFG/D.Hunt underwater observations.						

Rarity Accuracy:

site poorly explored for fauna; only 1 known potential rare species to date; possibly additional rare animals of various taxonomic groups and regional rarity levels to be found.

Sources:

no ALS survey information available; 1934 NYS DEC quantitative fish survey not yet available for review.

Edition: June 29, 2019.

E. Concentration Importance (Priority 6: probable importance)

11. Site: **Quacken Kill Brunswick** (IAH12) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: Lower & Middle Quacken Kill

Included Subsites:

Lower Quacken Kill (Level-1)

Quacken Kill Mouth (Poestenkill) (Level-2)

Quacken Kill Dearsteyne Road (Brunswick?) (Level-2)

Quacken Kill Clums Corner (Brunswick?) (Level-2)

Middle Quacken Kill (Brunswick) (Level-1)

Quacken Kill Narrows (Level-2)

Quacken Kill Freds Falls (Level-3)

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (overlapping)

Forest Landscape: Rensselaer Plateau Forest (overlapping)

Aquatic Network: Quacken Kill Network (embedded within)

Ecosystem Complex: SE Brunswick Grasslands (overlapping)

B. Site Priority.

County Priority Level (2019): 2017: Priority 6 (probable importance); 2017: Priority 7.

County Priority (2017): #>50 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #12-14 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 29 acres/7 miles; Shape/Boundary: site concept matched to only stream segments with NYS DEC trout-spawning designation ("C-TS"). suspected to correspond well with areas of the Lower and Middle Quacken Kill with at least moderately high water quality, at least moderate concentration and diversity of fish and clean-water aquatic macroinvertebrates, and relatively good habitat for trout spawning, although the boundaries of those features are not expected to precisely match with each other. Thus, the boundary might be expanded more (or reduced) with more field evaluation. Although the site boundaries are presumed relatively stable based on the stream designation, they are likely subject to frequent water quality changes and thus probably best based on the most current stream conditions/field observations. Boundaries seem subject to rapid changes in both the extent and nature of the site as an important animal habitat due to severe external/upstream quarry impacts, both on rare species and animal concentration areas.

Town Location: Brunswick >> Poestenkill (~5%).

Descriptive Account: see also site description for Quacken Kill Network (in which this site is embedded)

Overview:

stream segments with NYS DEC trout-spawning designation along the Lower to Middle Quacken Kill, with multiple known and suspected important riparian animal features. siltation from the Quackenkill/Grafton quarries has impacted stream habitat throughout much of the reaches of this site in recent decades.

Regional Importance: One of 24 sets of C(TS) stream reaches in the county.

D. General Important Habitat Component Presence

<u>Component</u>	<u>Importance</u>	<u>ID Certainty</u>	<u>Abundance</u>	<u>Notes</u> (May 2019/Draft 2)
Concentration Areas	Moderate	Moderately High	2 types	updated from 1 type/low importance in 2017
Rare Species	Very Low	Very Low	0-1 species	

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (May 2019/Draft 2)

Primary Concentration Area Type: abundant clean-water aquatic macroinvertebrates. (added 2019)

Secondary Concentration Area Type: trout spawning stream. (changed from primary in 2017)

Animal Concentration Area Characteristics. (May 2019/Draft 1 newly compiled)

.....Certainty.....

<u>Area</u>	<u>Type/Concentration</u>	<u>Abundance</u>	<u>Frequency</u>	<u>Use Seasonality</u>	<u>Primary Evidence</u>
primary	y/y-	7 orders	1+ times	year round-	sedentary individuals
secondary	y?/?	1 species?	permanent	year round?	NYS DEC stream classification

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: abundant clean-water aquatic macroinvertebrates.

<u>Element</u>	<u>Aspect</u>	<u>Abundance</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town/Subsite</u>
aquatic insects diversity		7 orders	sedentary individuals	recent	FFG/DH	Pk/Quacken Kill Mouth
caddisflies diversity		5 families	sedentary individuals	recent	FFG/DH	Pk/Quacken Kill Mouth
note: families = Hydropsychidae, Brachycentridae, Glossosomatidae, Philopotamidae, Odontoceridae.						
mayflies diversity		3 families	sedentary individuals	recent	FFG/DH	Pk/Quacken Kill Mouth
note: families = Heptageniidae, Oligoneuridae, Baetidae.						
beetles diversity		2 families	sedentary individuals	recent	FFG/DH	Pk/Quacken Kill Mouth
note: families = Psephenidae, Elmidae.						
stoneflies diversity		1 family	sedentary individuals	recent	FFG/DH	Pk/Quacken Kill Mouth
note: family = Perlidae.						
true flies diversity		1 family	sedentary individuals	recent	FFG/DH	Pk/Quacken Kill Mouth
note: family = Chironomidae.						
dragonflies diversity		1 family	sedentary individuals	recent	FFG/DH	Pk/Quacken Kill Mouth
note: family = Gomphidae.						
alderflies diversity		1 genus	sedentary individuals	recent	FFG/DH	Pk/Quacken Kill Mouth
note: genus = Nigronia.						

11. Site: Quacken Kill Brunswick (continued)

E. Animal Concentration Areas. (continued)

Animal Concentration Area Composition: (continued)

Primary Concentration Area Type: (continued)

Area notes: abundance and diversity of known families and genera strongly suggest high water quality characteristic of clean-water Rocky Headwater Stream. there may be recent sampling information from Quacken Kill Cropseyville (NYS DEC) and Quacken Kill Freds Falls (FFG). abundances assessed from only 1 small plot; needs more assessment over a wider area to more definitively confirm as a "concentration area".

Secondary Concentration Area Type: trout spawning stream.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town/Subsite</u>
trout	spawning	stream classification	unknown	NYS DEC	Br/Pk
notes: presumed from NYS DEC stream classification; essentially no field confirmation information available from this site, although suitable habitat confirmed in stream reaches not far upstream (Grafton: Quacken Kill Marshes).					
brown trout	naturalized angling observations	historic	pers.com	Br (Quacken Kill Freds Falls)	
note: source = local resident; although non-native, indicator of good water quality suitable to trout spawning habitat; however, reportedly extirpated in recent decades due to siltation from upstream quarries.					

Concentration Area Accuracy:

site explored for fauna only in limited areas. NYS DEC trout-spawning streams are consistently designated as "important" animal habitat by themselves at a county level. additional aquatic-riparian concentration area types are also possible at the site but information has not yet been analyzed or is yet available and their presence is in need of assessment; potential areas include: riverine fish (possible based on upstream samples), riparian mammals (possible habitat), riparian birds (uncertain), and riparian herptiles (uncertain, especially turtles and frogs). additional information is likely in the RCBGP site files from Quacken Kill Freds Falls site (Town of Brunswick), especially for aquatic macroinvertebrates.

F. Rare Animal Species.

Animal Rarity Tallies

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>delisted</u>	<u>notes</u>
May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	0-1	0-1	-	-	1 potential EO based on critical habitat presence.
January 2017 (Draft 1) (from RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

Primary Rarity Group: riverine fish

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)

(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare riverine fish.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-A?	Brook Trout	Salvelinus fontinalis	CA?	C1?NC4?I	Class C-TS segment/classification.	
notes: suspected based on NYS DEC "trout spawning" (C-TS) stream designation, but no field confirmation information yet; thus treated as a "possible lead" and represented by "?" in species tally. stream designation may be due to historically-known naturalized brown trout. confirmation could be sought from any NYS DEC, NY State Museum, and/or Trout Unlimited records.						

Rarity Accuracy:

not well explored for rare fauna; only 1 known potential rare species to date. uncertain potential for additional rare fauna.

Sources: pending review of Quacken Kill Freds Falls site in RCBGP files (Town of Brunswick).

F. Concentration Importance (Priority 7: possible importance)

12. Site: Wynants Kill Midreach (IAH11) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: Wynants Kill North Greenbush (broad sense)

Included Subsites:

Wynants Kill West Sand Lake (Poestenkill/Sand Lake; RLT county plan 2017: B-TS segment)

Wynants Kill Tributary (North Greenbush > Poestenkill; RLT county plan 2017: C-TS segment)

Wynants Kill North Greenbush (North Greenbush > Troy > Poestenkill; RLT county plan 2017: B-T segment)

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Priority Conservation Sites: Wynants Kill Corridor (embedded within)

Forest Landscape: Snyders Corners North Forest (overlapping)

Aquatic Network: Wynants Kill Network (embedded within)

Ecosystem Complex: Wynants Kill Snyders Corners (overlapping)

B. Site Priority.

County Priority Level (2019): Priority 7 (possible importance)

County Priority (2017): #>50 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #11 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 28 acres/3+miles; Shape/Boundary: site concept matched to stream segments with NYS DEC trout-spawning designation ("TS") plus intervening/associated stream segments designated as trout waters ("T"). suspected to correspond well with areas of relatively high water quality, at least moderately high concentration and diversity of both fish and clean-water aquatic macroinvertebrates, and good habitat for trout spawning, although the boundaries of those features are not expected to precisely match with each other. Thus, the boundary might be expanded more (or reduced) with more field evaluation.

Town Location: North Greenbush (55%) > Poestenkill (~20%) -- Sand Lake (~20%) > Troy (5%).

Descriptive Account:

Overview:

multiple trout-spawning stream segments (Wynants Kill West Sand Lake, Wynants Kill Tributary) and intervening stream segments able to support trout (Wynants Kill North Greenbush). Representing an aggregate of 3 adjacent important riparian animal habitat sites previously treated as separate in the RLT (2017) county plan because of different NYS DEC water quality classifications. The stream segments are lumped together here into one site because a) all are hydrologically connected, b) no biotic information is yet available to biologically distinguish them, and c) water quality designations are relatively similar between the 3 stream segments. with possible siltation impacts from upstream gravel mine. The streams flow through the Wynants Kill Snyders Corners wetland complex (see separate site description).

Regional Importance:

The site includes the only B(TS) stream reach in Rensselaer County (Wynants Kill West Sand Lake) and one of 24 sets of C(TS) stream reaches in the county (Wynants Kill Tributary).

see also site description for Wynants Kill Network (in which this site is embedded)

D. General Important Habitat Component Presence (January 2017/Draft 1 from RLT county plan)

Component	Importance	ID Certainty	Abundance	Notes
Concentration Areas	Low	Moderate	1-2 types	1 type added
Rare Species	Very Low	Very Low	0-1 species	

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (January 2017/Draft 1 from RLT county plan)

Primary Concentration Area Type: trout spawning stream.

Secondary Concentration Area Type: riverine fish concentration area.

Animal Concentration Area Characteristics.

(May 2019, newly compiled & supplemented, combined from 3 former sites)

.....Certainty....

Area	Type/Concentration	Abundance	Frequency	Seasonality	Evidence
primary	y??	1 species?	permanent	year round?	NYS DEC stream classification
secondary	??	unknown	unknown	unknown	stream system inference

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: trout spawning stream.

Element	Aspect	Certainty	Evidence	Last Obs	Source	Town
trout	spawning	presumed	stream classification	unknown	NYS DEC	Pk/SL/NG

notes: presumed from NYS DEC stream classification, with no field confirmation information yet available.

relevant subsites: Wynants Kill West Sand Lake (B-TS segment), Wynants Kill Tributary (C-TS segment).

Secondary Concentration Area Type: riverine fish concentration area.

Element	Aspect	Certainty	Evidence	Last Obs	Source	Town
fish	high diversity y?		see notes	-	DH inference	Pk/SL/NG/Tr

notes: potential but unassessed feature; inferred by DH from diverse fish biota in surrounding stream segments, both downstream (Wynants Kill Albion) and upstream (Wynants Kill Averill Park); no species information readily yet available from within this site; needs review of any fish sampling data (NYS DEC, NY State Museum, Trout Unlimited) and ideally recent field observations. relevant subsites: Wynants Kill North Greenbush > Wynants Kill West Sand Lake > Wynants Kill Tributary. certainty of concentration area type = probable.

12. Site: **Wynants Kill Midreach** (continued)

E. Animal Concentration Areas. (continued)

Concentration Area Accuracy:

site very poorly explored for fauna. NYS DEC trout-spawning streams are consistently designated as "important" animal habitat by themselves at a county level. Concentration Area 2 was inferred without field confirmation or literature support. additional aquatic-riparian concentration area types are also possible at the site, but no information is yet available and their presence is in need of assessment; potential areas include cleanwater aquatic macroinvertebrates (possible), riparian mammals (possible), riparian birds (uncertain), and riparian herptiles (uncertain).

F. Rare Animal Species.

Animal Rarity Tallies

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>delisted</u>	<u>notes</u>
May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	0-1	0-1	-	-	1 potential EO based on critical habitat presence.
January 2017 (Draft 1) (from RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

Primary Rarity Group: riverine fish.

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)
(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare riverine fish.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-A?	Brook Trout	Salvelinus fontinalis	CA?	C1?NC4?I	-	-
	notes: suspected based on NYS DEC "trout spawning" (TS) and "trout water" (T) stream designations, but with no field confirmation information yet available; thus treated as a "possible lead" and represented by "?" in species tally. subsites (separate TS/T stream segments): Wynants Kill North Greenbush, Wynants Kill West Sand Lake, Wynants Kill Tributary. confirmation could be sought from any NYS DEC, NY State Museum, and/or Trout Unlimited records.					

Rarity Accuracy:

not well explored for rare fauna; only 1 known potential rare species to date. uncertain potential for additional rare fauna.

13. Site: Newfoundland Creek (IAH13) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites: -

Excluded but Related/Overlapping Sites:

Vosburgh Swamp

Related County-Important Ecological Features:

Priority Conservation Sites: Poesten Kill Midreach Corridor (embedded within)

Priority Conservation Sites: Rensselaer Plateau Forest (overlapping)

Forest Landscape: Rensselaer Plateau Forest (overlapping)

Aquatic Network: Newfoundland Creek Network (embedded within)

Ecosystem Complex: Newfoundland Creek Headwaters (overlapping)

Ecosystem Complex: Vosburgh Swamp (overlapping)

Exemplary Communities: Vosburgh Swamp (overlapping)

Rare Plant Concentration Area: Vosburgh Swamp (overlapping)

B. Site Priority.

County Priority Level (2019): Priority 7 (possible importance)

County Priority (2017): #50 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #12-14 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 17 acres/4 miles; Shape/Boundary: site concept matched to stream segments with NYS DEC trout-spawning designation ("C-TS"). suspected to correspond well with areas of relatively high water quality, at least moderately high concentration and diversity of both fish and clean-water aquatic macroinvertebrates, and good habitat for trout spawning, although the boundaries of those features are not expected to precisely match with each other. Thus, the boundary might be expanded more (or reduced) with more field evaluation.

Town Location: Poestenkill (~80%) > Sand Lake (~20%).

Descriptive Account:

Overview:

Stream segments of Newfoundland Creek with trout-spawning (C-TS) stream designation. Represents stream segments with high water quality, with good concentration and diversity of both fish and clean-water aquatic macroinvertebrates, and thought to have good habitat for trout spawning.

Regional Importance: One of 24 sets of C(TS) stream reaches in the county.

see also site description for Newfoundland Creek Network (in which this site is embedded)

D. General Important Habitat Component Presence (January 2017/Draft 1 from RLT county plan)

<u>Component</u>	<u>Importance</u>	<u>ID Certainty</u>	<u>Abundance</u>
Concentration Areas	Low	Moderate	1 type
Rare Species	Very Low	Very Low	0-1 species

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (January 2017/Draft 1 from RLT county plan)

Primary Concentration Area Type: trout spawning stream.

Animal Concentration Area Characteristics. (May 2019, newly compiled & supplemented)

.....Certainty....

<u>Area</u>	<u>Type/Concentration</u>	<u>Abundance</u>	<u>Frequency</u>	<u>Use Seasonality</u>	<u>Primary Evidence</u>
primary	y?/?	1 species?	permanent	year round?	NYS DEC stream classification

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: trout spawning stream.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town</u>
trout	spawning	stream classification	unknown	NYS DEC	Pk/SL

notes: presumed from NYS DEC stream classification, with no field confirmation information yet available; habitat suitability has not yet been well assessed.

Concentration Area Accuracy:

site poorly explored for fauna. NYS DEC trout-spawning streams are consistently designated as "important" animal habitat by themselves at a county level. additional aquatic-riparian concentration area types are also possible at the site, but no information is yet available and their presence is in need of assessment; other possible areas include: cleanwater macroinvertebrates, riverine fish, riparian mammals, riparian birds, and riparian herptiles. Eastern blacknose dace is the only fish species known by RCBGP to date from the stream segments.

F. Rare Animal Species.

Animal Rarity Tallies

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>delisted</u>	<u>notes</u>
May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	0-1	0-1	-	-	1 potential EO based on critical habitat presence.
January 2017 (Draft 1) (from RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

13. Site: **Newfoundland Creek** (continued)

F. Rare Animal Species. (continued)

Primary Rarity Group: riverine fish

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)
(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare riverine fish.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-A?	Brook Trout	Salvelinus fontinalis	CA?	C1?NC4?I	Class C-TS segment/classification. notes: suspected based on NYS DEC "trout spawning" (C-TS) stream designation, but no field confirmation information yet; thus treated as a "possible lead" and represented by "?" in species tally. confirmation could be sought from any NYS DEC, NY State Museum, and/or Trout Unlimited records.	

Rarity Accuracy:

not well explored for rare fauna; only 1 known potential rare species to date. uncertain potential for
additional rare fauna.

Edition: June 29, 2019.

14. Site: **Bernie Pond Brook** (IAH14) SITE FACT SHEET

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites: Bernie Pond

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Priority Conservation Site: Rensselaer Plateau Forest (overlapping)

Forest Landscape: Rensselaer Plateau Forest (overlapping)

Aquatic Network: Bernie Pond Outlet Network (embedded within)

Ecosystem Complex: SE Brunswick Grasslands (overlapping)

Exemplary Communities: Davitt Pond Block (overlapping)

B. Site Priority.

County Priority Level (2019): Priority 7 (possible importance)

County Priority (2017): #>50 (newly designated from rapid preliminary assessment May 2019).

Town Priority (2017): #12-14 (newly designated from moderately careful preliminary assessment May 2019).

C. Site Description.

Site Configuration:

Size: 37 acres/7 miles; Shape/Boundary: site concept matched to 3 stream segments with NYS DEC trout-spawning designation ("C-TS") plus intervening 10-acre lake habitat. suspected to correspond well with areas of high water quality, at least moderately high concentration and diversity of clean-water aquatic macroinvertebrates, and good habitat for trout spawning, although the boundaries of those features are not expected to precisely match with each other. Thus, the boundary might be expanded more (or reduced) with more field evaluation. Bernie Pond was added to the 2017 RLT boundary as a connecting aquatic feature to seamlessly join the 3 separate stream segments. The lake was originally omitted because of its "Class C" NYS DEC water quality designation.

Town Location: Poestenkill (~40%) + Brunswick + Grafton.

Descriptive Account:

Overview:

Bernie Pond and 3 adjoining stream segments of Bernie Pond Brook that have trout-spawning (C-TS) stream designation. The site primarily represents stream segments with suspected high water quality, good concentration and diversity of clean-water aquatic macroinvertebrates and possibly fish, plus good habitat for trout spawning. Bernie Pond (a Class-C Oligotrophic Pond) was added to the site (2019) as an aquatic body connecting the multiple separate trout streams.

Regional Importance: One of 24 sets of C(TS) stream reaches in the county.

see also site description for Bernie Pond Outlet Network (in which this site is embedded)

D. General Important Habitat Component Presence (January 2017/Draft 1 from RLT county plan)

<u>Component</u>	<u>Importance</u>	<u>ID Certainty</u>	<u>Abundance</u>
Concentration Areas	Low	Moderate	1 type
Rare Species	Very Low	Very Low	0-1 species

E. Animal Concentration Areas.

Animal Concentration Area Diversity. (January 2017/Draft 1 from RLT county plan)

Primary Concentration Area Type: trout spawning stream.

Animal Concentration Area Characteristics. (May 2019, newly compiled & supplemented)

.....Certainty....

<u>Area</u>	<u>Type/Concentration</u>	<u>Abundance</u>	<u>Frequency</u>	<u>Use Seasonality</u>	<u>Primary Evidence</u>
primary	y?/?	1 species?	permanent	year round?	NYS DEC stream classification

Animal Concentration Area Composition: (May 2019/newly compiled from county plan raw data)

Primary Concentration Area Type: trout spawning stream.

<u>Element</u>	<u>Aspect</u>	<u>Evidence</u>	<u>Last Obs</u>	<u>Source</u>	<u>Town</u>
trout	spawning	stream classification	unknown	NYS DEC	Br/Pk

notes: presumed from NYS DEC stream classification, with no field confirmation information yet available; habitat suitability has not yet been well assessed.

Concentration Area Accuracy:

site very poorly explored for fauna. NYS DEC trout-spawning streams are consistently designated as "important" animal habitat by themselves at a county level. additional aquatic-riparian concentration area types are also possible at the site but no information is yet available, and the presence of these areas is in need of assessment. Potential areas include cleanwater macroinvertebrate (possible). Others thought unlikely due to the small stream size are riverine fish concentration area, riparian mammal concentration area, riparian herptile concentration area, and riparian bird concentration area. Review of additional RCBGP field notes from the 1990s, especially for the Bernie Pond area, for more site information is pending.

F. Rare Animal Species.

Animal Rarity Tallies

	<u>total</u>	<u>active</u>	<u>watch</u>	<u>delisted</u>	<u>notes</u>
May 2019 (Draft 2) (via compilation of detailed information used for RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	0-1	0-1	-	-	1 potential EO based on critical habitat presence.
January 2017 (Draft 1) (from RLT county plan):					
Global Rare:	0	-	-	-	
State Rare:	0	-	-	-	
County Rare:	not compiled/specified on GIS for county plan ("0")				

14. Site: **Bernie Pond Brook** (continued)

F. Rare Animal Species. (continued)

Primary Rarity Group: riverine fish

Rare Animal Composition: (May 2019, newly compiled from RLT county plan raw data)
(by rarity: global/state/county; active/watch/review/delisted; rarity rank/certainty)

1. County-rare riverine fish.

<u>Group</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Lists</u>	<u>Ranks</u>	<u>Abundance</u>	<u>Last Obs</u>
County-A?	Brook Trout	Salvelinus fontinalis	CA?	C1?NC4?I	Class C-TS segment/classification.	
					notes: suspected based on NYS DEC "trout spawning" (C-TS) stream designation, but with no field confirmation information yet available; thus treated as a "possible lead" and represented by "?" in species tally. confirmation could be sought from any NYS DEC, NY State Museum, and/or Trout Unlimited records.	

Rarity Accuracy:

not well explored for rare fauna; only 1 known potential rare species to date; uncertain potential for additional rare fauna.

Edition: June 29, 2019.

Town of Poestenkill Important Animal Habitats.

Site Fact Sheet Legend (rapid preliminary version):

Part D.

Field Header Abbreviations.

ID Certainty. identity certainty.

Part E.

Field Header Abbreviations & Definitions.

Last Obs. last observation date.

Type/Concentration Certainty. certainty of presence of concentration area type, certainty that the type represents a concentration area at this site.

Field Values.

Type/Concentration Certainty. y? = probable, y- = very probable/almost certain, ? = possible/potential.

Last Obs. recent = more file research needed to determine exact recent year.

Source. p.c. or pc = personal communication report.

notes. notes for individual species (above).

Area notes: for entire concentration area (above).

Part F.

Field Header Abbreviations.

Last Obs. last observation date.

Source. best source of information.

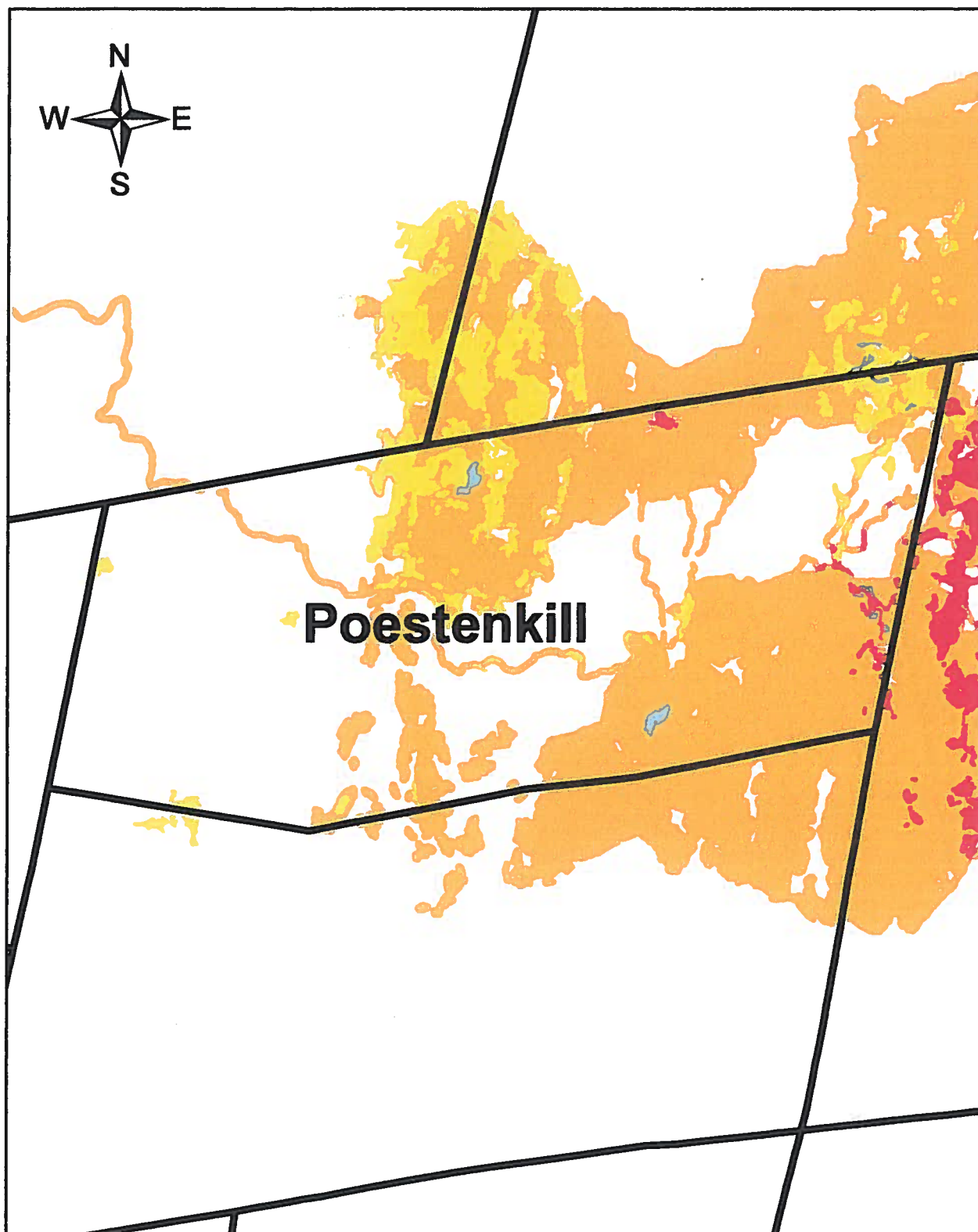
Field Values.

Last Obs. recent = more file research needed to determine exact recent year.

Source. p.c. or pc = personal communication report.

explanations for other values, such as rarity ranks, should be available elsewhere.

County-Exemplary Communities



Rensselaer County Importance



Co-exemplary



Potential Near exemplary

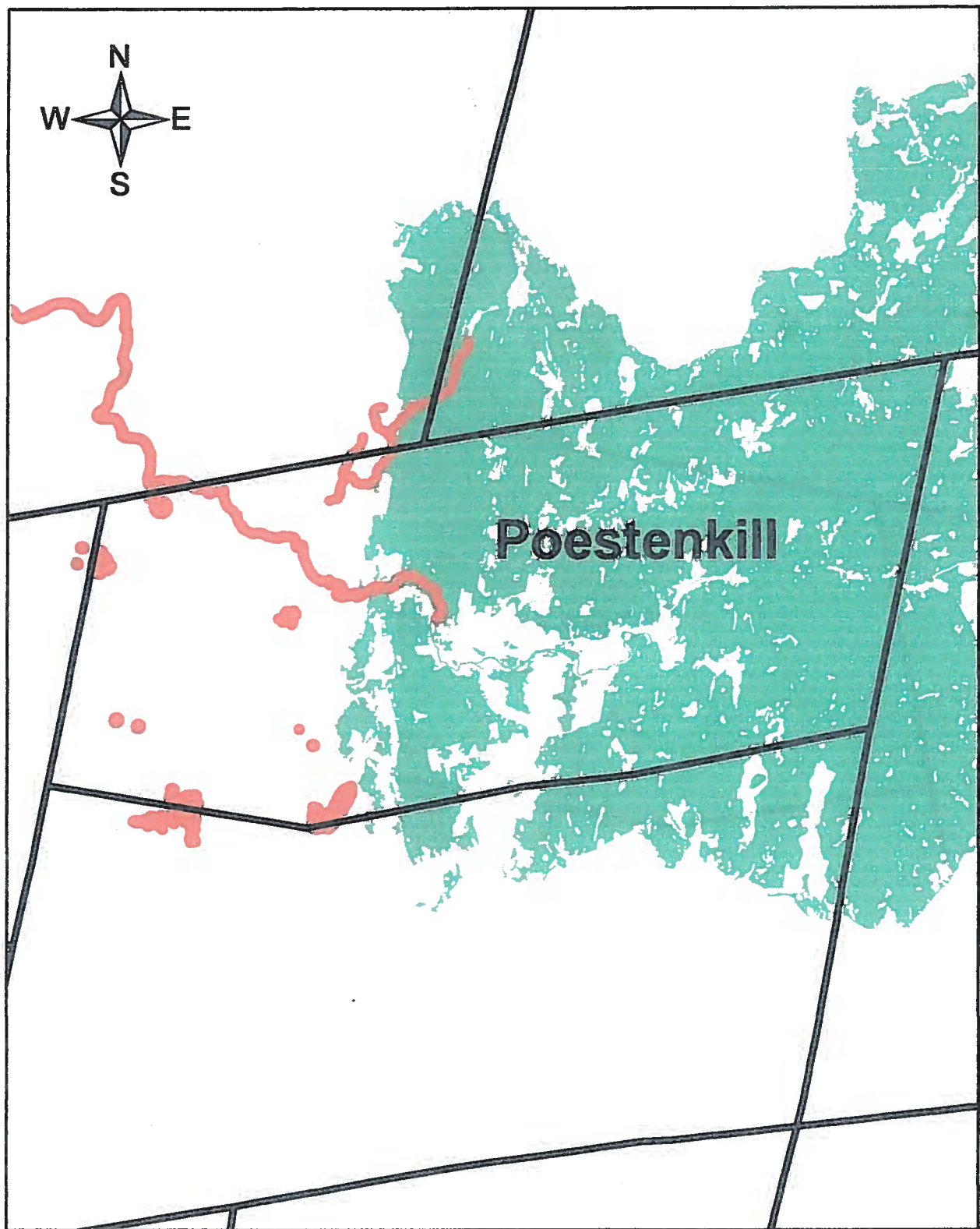


Near exemplary



Sole exemplary

Regionally Significant Communities



Regional Significance Set



Taconic Foothills



Rensselaer Plateau

Town of Poestenkill: Natural Communities
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
June 2019

1. Introduction.

The goal for this feature, as part of the Town of Poestenkill Natural Resources Inventory, was to provide comprehensive town lists and summary characterizations for 3 types of natural community datasets:

- A. Natural community types.
- B. County-exemplary natural community sites.
- C. Regionally-significant natural community sites.

With 3 types of datasets and a large volume of community types and regionally-important sites, natural communities represent the most complex of 8 natural resource features documented for the Town of Poestenkill. Each dataset is addressed separately below throughout this natural community explanatory document. Work for the Town of Poestenkill in 2019 focused on the following:

A. Natural Community Types.

A comprehensive set of natural community types from the town was developed, with 48 known types and 22 others with potential or suspected to occur in town, totalling 70 types. Brief characterization information was compiled. No GIS mapping or datalayer was expected for this dataset. A precise community type distribution map was previously constructed on GIS for the entire Rensselaer Plateau region, in conjunction with its regional conservation plan (2012), covering about 70% of the Town of Poestenkill. That datalayer could be used as a good general picture of the communities that occur within the town.

B. Exemplary Community Sites.

A summary characterization list was made for all 48 county-exemplary natural community sites in town (see Map 5) identified for the 2017 Rensselaer County Conservation Plan (compiled by the Rensselaer Land Trust). The 2017 collective of county-exemplary community sites represented the first attempt of RCBGP to produce a **comprehensive, carefully, and accurately determined countywide set of county-exemplary natural community sites using a GIS system.** That 2017 effort expanded upon 1) a comprehensive but coarsely-mapped (1:150,000-scale) countywide set of county-exemplary community sites in 2003, 2) a comprehensive set of suggested county-exemplary community sites throughout the Rensselaer Plateau in 2012 that were precisely mapped using fine-scale GIS mapping, and 3) more casual hypotheses of exemplary community sites previously prepared for local towns as part of their comprehensive planning documents (especially for the Towns of Brunswick, Grafton, Nassau, Schaghticoke, and Stephentown).

Work on county-exemplary communities for the Town of Poestenkill in 2019 focused on consolidation of information into a concise list of exemplary community occurrences and basic characteristics, relying, in large part, on review of the previously-prepared 2017 GIS information. GIS information was supplemented, especially to provide complete site ranking information and included the assignment of county occurrence codes anew for community examples in the Taconic Foothills region. No boundary refinements were made, but one community identity was changed, for a peatland at Poestenkill Center Bog, based on post-2017 field evaluation. Because the concept of county-exemplary community sites has been precisely defined and accurately analyzed for many years, undergoing 7 county-wide revisions (last updated in 2017), with the second

iteration of a subset presented specifically for the Town of Poestenkill (last presented in 1998), the set of designated county-exemplary community sites in town is likely becoming relatively stable, with only few additions/deletions likely in the near future.

C. Significant Community Sites.

A summary characterization list was made for all 165 natural community examples in town hypothesized to be regionally significant (see Map 5B), totalling 143 for the Rensselaer Plateau and 22 for the Taconic Foothills region. Regionally-significant community examples ("significant communities" for short) were not addressed directly in the 2017 Rensselaer County Conservation Plan (compiled by the Rensselaer Land Trust) because of the high abundance of such sites in the county. However, the subset of all 48 county-exemplary community sites in the Town of Poestenkill from the full countywide datalayer for exemplary communities was consolidated with other non-exemplary but regionally-important community examples in town to form a newly-assembled comprehensive set of regionally-significant communities for the town. Separate sets of significant communities were assembled for the Rensselaer Plateau and Taconic Foothills portions of town, as outlined below, with large differences in the intensity of background research for these two regions countywide.

Rensselaer Plateau. While many significant communities were newly suggested for the Taconic Foothills portion of town, the set of significant communities for the Rensselaer Plateau remained unchanged from the comprehensive analysis of significant communities for that region as part of its 2012 regional conservation plan. The full mapped extent of many significant communities of the plateau in 2012 extends off the plateau into the Taconic Foothills region (this complexity is addressed below). Only minor refinements were made to the Rensselaer Plateau GIS information on regionally-significant community occurrences. Newly-populated information for that region focused on detailed occurrence ranks (see Part 5).

Taconic Foothills. Most hypothesized regionally-significant community sites from the Taconic Foothills part of town (other than county-exemplary sites) were newly created on GIS (with both a shape file and full attributes provided for each site) after much initial compilation of information. While the county-exemplary sites for this region had previously been precisely mapped, other significant communities not among that set were mapped, for expediency, using a coarse rapid "centrum location" (possibly beyond the project scope) instead of precise boundaries.

Although information on the significant communities of the Taconic Foothills region was quickly compiled, the combined set of significant community occurrences for the Taconic Foothills and Rensselaer Plateau regions in town represents the first attempt of RCBGP to get comprehensive townwide information for significant communities into a GIS system. Because the concept of regionally-significant community occurrences is precisely defined (at least for the state and county levels) and depends on size and condition criteria, and because the comprehensive set of Rensselaer Plateau occurrences had been previously accurately analyzed, the set of designated sites is likely very stable for the Rensselaer Plateau region. In contrast, because the preliminary set of examples for the Taconic Foothills part of town was less rigorous, casually based on field notes and memory, several additions and refinements are likely for that area in the near future, especially if additional sites of relatively intact condition or unusual community types are explored or if any of the hypothesized significant sites are more carefully field examined and evaluated.

2. Feature Concept.

A. Natural Community Types.

(modified and supplemented, as a new set of information, from brief mention in Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

Designated natural community types generally follow the state classification of the NY Natural Heritage Program. This ecological feature is standardly defined as an assemblage of specific interacting plant and animal species that share a common physical environment which repeats across a landscape. Only minor changes were applied to the 2014 state classification for community entities that were treated as "variants" in that document but suggested to warrant a specific type (e.g., see working draft of the Rensselaer Plateau Ecological Features Documentation Series: Ecological Communities).

B. Exemplary Community Sites.

(modified slightly and supplemented for clarity from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

The set of county-exemplary community sites throughout Rensselaer County, New York represents examples of all known natural communities hypothesized to be the best, among the best, or near best for their type in the county. "Exemplary" or "best" sites consider 1) the overall quality of community examples [those of the largest size, best condition, and landscape context], 2) the complementarity of different sites representing different community variants, and 3) the abundance of the community in the county. Depending on the nature of comparable sites of a specific community type, sites can be designated as sole exemplary, co-exemplary, near exemplary (not as ecologically valuable as sole exemplary sites), and potential near exemplary (other sites of very high ecological value for the county).

C. Significant Community Sites.

(not addressed in Hunt January 2017/Rensselaer Land Trust County Conservation Plan)
(new to Town of Poestenkill Natural Resource Inventory effort).

"Regionally significant" community occurrences ("significant communities" for short) are all those of high biodiversity value for a given region, thus are worthy of tracking as potential biodiversity conservation targets in regional databases. The concept is commonly applied at the state level (NY Natural Heritage Program) and increasingly applied at the county level for Rensselaer County (RCBGP for town planning documents). Global significance criteria has long been in place by The Nature Conservancy, and local significance has often been suggested by RCBGP for town level conservation.

3. Source Compilation.

Similar sources were used for the three community datasets, but they were applied in different manners. For the sake of repeatability of the assembly of the 3 datasets (Part 4) and despite trying to simplify the representation of sources used for this feature, a somewhat redundant set of sources are detailed for those datasets, used as part of a complex assembly process that covers the 2 regions within the town.

A. Natural Community Types.

Sources used to develop a comprehensive community list for the Town of Poestenkill are divided into those for the town plus 3 larger geographic areas: Rensselaer County, Rensselaer Plateau, and the Taconic Foothills, as noted below. Source information was much more comprehensive for the Rensselaer Plateau part of town than the Taconic Foothills part. Besides that and the fact that the plateau covers 69% of the Town of Poestenkill, the community list should have a relatively high degree of accuracy. Communities restricted to the Taconic Foothills part of town may have less certain presence in town.

Rensselaer County Sources:

1. County-exemplary community occurrence GIS datalayer (RLT county conservation plan 2017).
useful not only for a townwide set of communities that have regional exemplary sites in town, but also especially for several community types not known from Poestenkill but known from nearby towns, thus suggested as "potential" types for Poestenkill; also especially useful for hypotheses of town-exemplary sites (all county exemplary sites in the town are also suggested as town-exemplary sites).
2. RCBGP electronic files from nearby towns.
especially including town comprehensive plan contributions for the Towns of Brunswick and Grafton).

Rensselaer Plateau Sources:

1. Comprehensive GIS community datalayer for the Rensselaer Plateau conservation plan (2012).
includes separate datalayers for community types and community patches; especially useful for the precise distribution and regional abundance of communities between the Central Rensselaer Plateau versus Rensselaer Plateau Escarpment subregions in town; especially useful for town exemplary sites (especially for community sites not chosen as county-exemplary sites and especially with high information precision); also useful for several community types that are not known from Poestenkill but known on the plateau in nearby towns, thus suggested as "potential" types.

Taconic Foothills Sources:

1. RCBGP files for individual sites in Poestenkill.
both electronic and manual files were available, but information from electronic files were more thoroughly assessed and compiled. manual files were especially useful for sites with post-2017 (subsequent to the Rensselaer County conservation plan compilation) field information. Most, but not all, manual files for town sites were carefully reviewed.
2. General RCBGP/D.Hunt knowledge of the Taconic Foothills Region.
especially the Town of Poestenkill part of the region.

Town of Poestenkill Sources:

1. Poestenkill 1998 town plan input from RCBGP/D.Hunt.

B. Exemplary Community Sites.

(see Hunt January 2017 for numerous sources in the Rensselaer Land Trust County Conservation Plan; available upon request) includes detailed information on: Community Presence/Identity Information Sources.

see Part 7B below for sources used to update this feature in 2019 that add to the information in the 2017 Rensselaer County conservation plan.

C. Significant Community Sites.

Like the newly-developed community list for the town, sources used to develop a comprehensive significant community site list for the Town of Poestenkill are divided into those for the 2 larger geographic areas: the Rensselaer Plateau and the Taconic Foothills, with different intensities/rigor of data compilation and analysis. Available sources were much more comprehensive for the Rensselaer Plateau part of town than the Taconic Foothills part. Because the plateau covers 69% of the Town of Poestenkill, the significant community list for that area should have a relatively high degree of accuracy. In contrast, the importance, identity, and ranking information for most significant communities restricted to the Taconic Foothills part of town are less certain. Differences in sources for community occurrences of the 2 regions are noted as follows:

Rensselaer Plateau Sources:

1. Comprehensive 2012 significant community occurrence GIS datalayer for the entire Rensselaer Plateau region.
includes assignment of global, state, county, and local significance levels.
2. Rensselaer Plateau Ecological Features Documentation Series: Ecological Communities (2018 working draft).
contains an extensive appendix with compiled "raw data" for a much larger set of community occurrences (including numerous non-significant ones analyzed for significance) arrayed by all plateau community types. This source was analyzed in 2012 to determine a full set of significant occurrences to map on the GIS datalayer. It includes detailed occurrence ranking assignments which were used exclusively to supplement GIS information for this feature in 2019 (see below).

Taconic Foothills Sources:

1. RCBGP files for individual sites in Poestenkill.
Both electronic and manual files were available for several sites in this region, but information from electronic files were more thoroughly assessed and compiled. Manual files were especially useful for any post-2017 (subsequent to the Rensselaer County conservation plan) field information. Most, but not all, manual files for town sites were carefully reviewed.
2. Townwide air photos.
used to quickly map on GIS "centrum circles" for community examples suspected to be significant but not previously mapped on GIS (see below).
3. RCBGP community significance criteria table.
represents a detailed composite table for communities of the county with significance thresholds for global, state and county significance, compiled primarily from community specification documents of the NY Natural Heritage Program. useful to determine significance from raw information on community size, condition, and landscape context (see below).

4. Feature Assembly Methods.

A. Natural Community Types. Type Assembly & Characterization.

Besides development of a comprehensive community list for the town from the sources listed above, characterization information was also determined or refined from these sources plus personal experience from countywide field observations by D.Hunt of about 30 years. Major information assembly steps were:

1. Determination of a community presence category for the town (known versus potential).
2. Determination of the town community distribution & abundance categories for each type.

B. Exemplary Community Sites. Site Assembly and Prioritization.

(see Hunt January 2017/Rensselaer Land Trust County Conservation Plan; available upon request)
includes details on: Site Boundary Method Summary, Exemplary Status Determination Method Summary.

No 2019 changes were made to the 2017 RLT conservation plan methods.

C. Significant Community Sites. Site Assembly and Prioritization.

The site assembly (mapping) and prioritization (importance determination) methods used to develop a comprehensive significant community site set for the Town of Poestenkill are also divided, for clarity, into those for the 2 larger geographic areas in town (Rensselaer Plateau and Taconic Foothills), reflecting the different intensities/rigor of data compilation and analysis for these regions. Taconic Foothills community examples needed the most work done for both delineation and attribution.

Rensselaer Plateau Methods:

Dataset Assembly.

1. started with a subset of the full comprehensive 2012 Rensselaer Plateau significant community occurrence GIS dataset, those present, at least in part, in the Town of Poestenkill.

Boundary Delineation.

2. used the most fully populated GIS dataset (Eco_Community_Occurrences_RP), which has occurrence boundaries truncated to the Rensselaer Plateau boundary.
3. restored boundaries to community patches within and near the Town of Poestenkill to their full extent off the Rensselaer Plateau (into the Taconic Foothills region) using the more geographically complete occurrence GIS datalayer (tentatively called Eco_Community_Occurrences_Polys_NCpoly_dissolve), which is lacking much attribute data; boundaries were restored for all patches in the Poestenkill-Taconic Foothills area and some, but not all, additional nearby patches in adjacent towns; because some very large occurrences that cover multiple towns were not fully restored, there are some acreage discrepancies in the Poestenkill GIS layer (Acres_EO field).
4. all boundaries of Rensselaer Plateau significant communities were originally mapped (in 2012) from very fine scale air photo interpretation, as shown in the comprehensive regional community map, and no shape changes were needed.

Occurrence Prioritization.

5. a significance determination had been previously assigned before 2012 (see above source), using significant occurrence calculations based on size (from GIS) and landscape context (from air photo reviews/personal field familiarity).

Datalayer Attribution.

6. added ranks to the GIS datalayer from the significant community occurrence appendix referenced above, not previously populated in any Rensselaer Plateau dataset (too much detail).

Taconic Foothills Methods:

Dataset Assembly.

1. started with the precisely-mapped county-exemplary community occurrences for the Town of Poestenkill (see above, derived from the 2017 RLT county conservation plan GIS datalayer).
2. compiled a set of community occurrence sites throughout the Poestenkill-Taconic Foothills area with at least one community of likely global, state, county, or local significance (based especially on estimated occurrence size/condition plus site landscape context, in conjunction with community rarity, derived from review of all electronic and manual RCBGP site files for that area).
3. analyzed each site entirely for community composition to roughly estimate community size and landscape context then estimate a preliminary calculation of regional significance to finalize a preliminary regional set of known and likely significant community occurrences.

Boundary Delineation.

4. created a coarse map of all unmapped likely significant community occurrences to more precisely estimate the community occurrence size. Rapid air photo review was used to quickly map on GIS "centrum circles" for each community example suspected to be significant but not previously mapped on GIS. Precise boundary delineation of these non-exemplary community examples in the Taconic Foothills region were not created in the GIS datalayer, being beyond the project scope. Such work is time-consuming and requires detailed and careful air photo interpretations. Instead, the GIS centrum circle reflects either the smallest area in which an entire community occurrence is contained (especially for examples with a clear outer boundary within a community mosaic) or the largest area most likely to be only the associated community type (especially for examples that grade subtly into other community types within a mosaic).

Occurrence Prioritization.

5. applied the regional significance criteria referenced above, using the more refined community size, to more precisely estimate the regional significance level.

Datalayer Attribution.

6. added ranks to the GIS datalayer from size estimates (size rank), site landscape context, and community condition, the latter especially from any field knowledge.

5. GIS Information Available

A. Natural Community Types.

No GIS layer was requested for this feature as part of the project scope. A useful GIS datalayer for the Rensselaer Plateau, which covers 69% of the town, is:

Rensselaer Plateau Community Types (Eco_Community_Types_AllCodes_RP; available on Databasins or upon request; useful information includes the global, state, and county rarity of each community type).

B. Exemplary Community Sites.

(updated slightly from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)
(with minor updates catered to Town of Poestenkill in 2019)

Data Tallies:

Town of Poestenkill tallies:

- 1) total of 48 county-exemplary community sites, all mapped in 2017.
- 2) 7 sole-exemplary sites, 17 co-exemplary sites, 19 near-exemplary sites, 5 potential near-exemplary sites.
- 3) 3 A-ranked (excellent) examples, 19 AB-ranked (very good) examples.

Rensselaer County/county-level analyses: see Hunt January 2017/Rensselaer Land Trust County Conservation Plan.

File Names:

Exemplary NCs Poestenkill (town subset of Exemplary_NC_RensCo provided to RLT 2017)

Important Fields for Users:

* = values newly populated for Town of Poestenkill Natural Resources Inventory.

** = metadata updated for Town of Poestenkill Natural Resources Inventory.

1. Community & Occurrence Identity Fields.

EcoComName*: official name from NY Natural Heritage Program state classification.

2019: one site identity change (Poestenkill Center Bog).

EC_Acronym*: community acronym/abbreviation.

useful for map display; 2019: one site identity change (Poestenkill Center Bog).

CommSystem: community system type (highest level of classification hierarchy; 6 types for the county).

CommSubSys: community subsystem type (second highest level of classification hierarchy).

Occ_Code*: community occurrence code.

2019: comprehensively assigned numbers to the Taconic Foothills set of Poestenkill occurrences (lacking in 2017 county dataset), representing the start of a master list for the entire county, with the first assignments beyond the Rensselaer Plateau area, which has been comprehensively assigned.

2. Location Fields.

SiteName*: local placename;

assigned mostly by RCBGP/D.Hunt using NHP methodology; 2019: minor name refinements.

SiteSynon: other placenames by which the site may be known (optional).

Town*,**:

ordered by towns with the most area first; 2019: fully populated for Town of Poestenkill, with some previously values fixed.

Phys_Reg*,**. Physiographic Region (primary).

2019: with two values for Poestenkill {Rensselaer Plateau, Taconic Foothills}.

3. Community & Occurrence Priority Fields.

Exemplary: region for which the site is exemplary, as applicable to this project; all "County".

Exemp_Mod: "exemplary status modifiers", as the level of exemplary nature; 4 values.

Sole:

sole exemplary/best site of community type for the county; usually clearly much larger and in better condition/landscape context than other highest quality sites for the county.

Co:

among two or more co-exemplary sites of community type for the county; usually of similarly relatively large size and good condition/landscape context for examples of the county; often used for complementarity where more than one community variant exists in the county or where the community is present in two or more physiographic regions of the county.

Near:

supplementary sites that may be close to exemplary but are usually lacking in one attribute such as relatively large size or relatively good condition.

Potential Near:

supplementary sites that may be close to near-exemplary but are usually lacking in good information on exact boundaries (size), condition, or internal species diversity.

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3. Community & Occurrence Priority Fields. (continued)

PriorLevel: Priority Level. conversion of exemplary status modifiers into a numerical priority:

Sole=1, Co=2, Near=3, Potential Near=4.

Rarity*. Community rarity level (global, state, county).

2019: finished population for Poestenkill Taconic Foothills sites.

Importance*,.** Occurrence importance level (global, state, county, local). all populated.

NYNHP_EO.** NY Natural Heritage Program EO. occurrence in NYNHP databases.

Yes- = in 2017 database, but patches and/or boundary may differ slightly, No = not in 2017 database.

4. Community Occurrence Characteristics.

Acres_EO: size of site in acres.

Ranking Fields*,:**

fields are: Occurrence rank (Occur_Rank), Size rank (Size_Rank), Condition rank (ConditRank), Landscape context rank (LsCon_Rank).

2019: extensively and fully populated for all Town of Poestenkill occurrences, with ConditRank values least certain.

Other Potentially Useful Fields to Populate in Future.

OccurType (occurrence type: primary versus sub occurrence)

IDCertain (community identification certainty)

NumPatch (number of community patches)

ComVariant (community variant)

Other Potential Fields to Set Up in Future.

Source Information field.

C. Significant Community Sites. (no equivalent in RLT county conservation plan datasets)

Data Tallies: (see Part 6 for more details).

Town of Poestenkill tallies:

- 1) total of 165 regionally-significant community sites mapped in 2017.
- 2) representing 45 community types in the Rensselaer Plateau and 15 community types in the Taconic Foothills.
- 3) 8 globally significant sites, 79 state significant sites, 29 county significant sites.
- 4) 143 significant sites in the Rensselaer Plateau and 22 in the Taconic Foothills.

File Names: (separate datasets for Rensselaer Plateau & Taconic Foothills regions).

Eco_Community_EOs_RP_Poestenkill

(town subset of Eco_Community_EOs_RP, a Rensselaer Plateau database with all Rensselaer Plateau significant communities; on Databasins website but not as fully populated)

Eco_Community_EOs_TF_Poestenkill

(a newly created dataset modelled after the corresponding Rensselaer Plateau datalayer, with some polygon portions borrowed from the Rensselaer Plateau layer).

Important Fields for Users:

1. Community & Occurrence Identity Fields.

Full_Name: community name. official name from NY Natural Heritage Program state classification.

Occ_Code: community occurrence code.

2019: newly assigned number to entire Taconic Foothills set.

2. Location Fields.

SiteName: local placename; assigned mostly by RCBGP/D.Hunt using NHP methodology; 2019: all populated.

TOWN: towns. ordered by towns with the most area first.

2019: fully populated for Town of Poestenkill as "Poestenkill, others?", pending evaluation of all.

Phys_Reg: Physiographic Region (primary).

with two values for Poestenkill {Rensselaer Plateau, Taconic Foothills}.

3. Community & Occurrence Priority Fields.

Exemplary: any region for which the site is exemplary.

Exemp_Mod: "exemplary status modifiers", as the level of exemplary nature; 4 values.

Sole:

sole exemplary/best site of community type for the county; usually clearly much larger and in better condition/landscape context than other highest quality sites for the county.

Co:

among two or more co-exemplary sites of community type for the county; usually of similarly relatively large size and good condition/landscape context for examples of the county; often used for complementarity where more than one community variant exists in the county or where the community is present in two or more physiographic regions of the county.

Near:

supplementary sites that may be close to exemplary but are usually lacking in one attribute such as relatively large size or relatively good condition.

Potential Near:

supplementary sites that may be close to near-exemplary but are usually lacking in good information on exact boundaries (size), condition, or internal species diversity.

Importance. Occurrence importance level (global, state, county, local). all populated.

5. GIS Information Available (continued)

C. Significant Community Sites. (continued)

Important Fields for Users: (continued)

4. Community Occurrence Characteristics.

Acreage Fields: size of site in acres.

either size of precise boundaries or of centrum circles approximating boundaries. (Acres_Full field in Rensselaer Plateau dataset for full acreage, distinguished from acreage confined to the plateau boundaries [Acres_RP field]; Acreage field in Taconic Foothills dataset).

Acres_Est: estimated size of occurrence, especially for sites mapped coarsely as a centrum circle. used only in Taconic Foothills dataset; Rensselaer Plateau occurrences are all precisely mapped.

Ranking Fields: Occurrence rank (Occur_Rank), Size rank (Size_Rank), Landscape context rank (LsCon_Rank). 2019: extensively and fully populated for all Town of Poestenkill occurrences.

Other Potential Fields to Populate in Future.

NYNHP_EO. NY Natural Heritage Program EO. occurrence in NYNHP databases.

Yes- = in 2017 database, but patches and/or boundary may differ slightly, No = not in 2017 database.

ConditRank (condition rank, needs much new research and compilation [time consuming])

IDCertain (community identity certainty)

OccurType (occurrence type: primary versus sub occurrence)

Source (information source)

5. Ecological Interpretation Summary.

A. Natural Community Types. (See Table NC1)

Information is summarized, as explained below, about the composition/diversity, regional distribution, and abundance/rarity of natural communities within the Town of Poestenkill. Town-exemplary sites are also mentioned.

1. **Natural Community List.** The natural community list for the Town of Poestenkill reveals a high level of natural community diversity, partly attributable to two physiographic regions and three physiographic subregions in town. The town contains over 50% (48) of the 87 natural communities known from Rensselaer County.
2. **Community Distribution.** There is a clear distribution pattern of community types within the town across the 3 physiographic subregions, with some types restricted to a single subregion.
3. **Community Rarity.** The rarity of communities within the town suggests a possible strategy for local conservation of biodiversity features: 12 are very rare, 6 are rare, and 4 are moderately uncommon; thus nearly half (22) of the 48 types are not common in town. Examples of these less common community types in town are typically few in number and small in size.
4. **Town-Exemplary Sites.** Hypothesized town-exemplary sites for each community type suggest another possible strategy for local conservation of biodiversity features, especially as a complementary approach with rarer community types.

B. Exemplary Community Sites.

(slightly modified for clarity and supplemented from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

The exemplary community layer was used for mapping larger-scale landscape features of Rensselaer County, New York, especially ecosystem complexes, aquatic networks, and priority conservation sites. The county-wide display of exemplary community sites, especially a display showing priority levels, reveals a pattern that reflects sites of the county long recommended as the highest priority for conservation: the Rensselaer Plateau, Taconic Mountains, the Hudson River and Hoosic River Corridors, and scattered rich sites of the Taconic Valley. Exemplary communities are concentrated in all of these areas.

Supplementary 2019 Poestenkill interpretation: Clusters of county-exemplary community examples occur at a few well documented sites in the Town of Poestenkill, most corresponding to important county-restricted ecosystem complexes (see separate site descriptions): Poesten Kill Headwaters, Snake Hill Poestenkill, Dustin Swamp Complex, Western Rensselaer Plateau Escarpment, Vosburgh Swamp, and Reicherts Lake. There are 7 sole-exemplary occurrences in town, most associated with Poesten Kill Headwaters, and 17 co-exemplary occurrences, many associated with Snake Hill Poestenkill and the forested blocks of the Rensselaer Plateau. Many are A (excellent) to AB (very good) ranked community examples. The map of

county-exemplary communities in town (Map 5A) shows only a small area of county sole-exemplary sites, the most important examples of communities in Poestenkill, clustered in the Spruce-Fir Zone of the Central Rensselaer Plateau near the east edge of town.

C. Significant Community Sites.

Hypothesized regionally-significant examples in the Town of Poestenkill are categorized geographically, systematically, and by priority as follows:

	.....Maximum Significance Level.....				
	<u>global</u>	<u>state</u>	<u>county</u>	<u>local</u>	<u>total</u>
Rensselaer Plateau	8	69	23	43	143
Taconic Foothills	0	10	6	6	22
Total	8	79	29	49	165

Much of the Rensselaer Plateau part of town is dominated by state-significant communities. Much fewer important community examples are known and suspected from the Taconic Foothills region in town and the examples are much smaller in that area (see Map 5B), known large important forest examples lacking from that region. The plateau part of town has about 7 times more numerous important community occurrences than the Taconic Foothills portion of town, reflecting the differences in the ecological integrity of the natural landscapes in those regions.

	..... Community Types							<u>Total</u>
	<u>Climax Upland Forests</u>	<u>Wetlands</u>	<u>Barrens & Open Uplands</u>	<u>Lakes</u>	<u>Rivers</u>	<u>Caves</u>	<u>Successional Uplands</u>	
Rensselaer Plateau	10	13	7	5	5	1	4	45
Taconic Foothills	1	7	0	2	5	0	0	15

	..... Important Community Occurrences							<u>Total</u>
	<u>Climax Upland Forests</u>	<u>Wetlands</u>	<u>Barrens & Open Uplands</u>	<u>Lakes</u>	<u>Rivers</u>	<u>Caves</u>	<u>Successional Uplands</u>	
Rensselaer Plateau	34	53	18	11	21	1	5	143
Taconic Foothills	2	12	0	3	5	0	0	22
Total	36	65	18	14	26	1	5	165

Much fewer important climax upland forest examples are known and suspected from the Taconic Foothills part of town than the Rensselaer Plateau portion. Important wetland community examples are relatively abundant and diverse in both regions. Important barren/open canopy upland community examples are sparse in town, especially in the Taconic Foothills region. Important lake community examples are also sparse, and important river community examples are especially sparse in the Taconic Foothills part of town. Important cave communities are essentially absent. The only important successional community examples known to date in town are on the Rensselaer Plateau, where the low abundance of invasive species makes these examples regionally unique. Many, but probably not all, community examples of Poestenkill hypothesized to be significant in 1998 are included here, but they need further assessment of any change in status.

6. Feature Products.

The specific goal for this feature for the Town of Poestenkill Natural Resource Inventory was to produce 3 to 4 summary lists of community datasets for the town:

- A. **Natural community types.** a comprehensive set of all types known and others suspected from the town.

- B. **County-exemplary natural community sites.** a comprehensive set of sites from the town (see Map 5) representing all 48 identified for the 2017 Rensselaer County Conservation Plan.
- C. **Regionally-significant natural community sites.** all examples known/hypothesized throughout the town, analyzed separately for the Rensselaer Plateau and Taconic Foothills regions within town.

Each dataset is addressed separately below.

A. Community Type List. (Attachment Set NC1)

A 3-parted set of lists for the town was produced showing all community types known or potentially occurring in the town. The list of known communities represents a subset of the 87 types known countywide (2017 Rensselaer County Conservation Plan). The list considered all community types with exemplary sites designated for the 2017 county plan. Separate lists are provided showing known community types (48), and potential community types (22), totalling 70 types. The community aspects shown for the 3 table parts are detailed as follows:

Part I. Known Communities, Basic Demography.

town distribution (Central Rensselaer Plateau, Rensselaer Plateau Escarpment, Taconic Foothills), town rarity, town exemplary sites (with associated importance level: state/county/local).

Part II. Known Communities, Community Notes.

any explanatory notes on community types and/or exemplary sites including rarity within the town and exemplary analysis information.

Part III. Other Potential Communities.

nearest known sites (including towns), probability of community presence in town, part of town or individual site in which community is most likely to occur.

This effort represented a first attempt at a comprehensive community type list for the town. These documents are intended to be "first iteration" drafts for public use. Future improvements, requiring more time beyond the project scope, could involve field evaluation of the rarest community types (especially ones of uncertain presence; see Table NC1) plus unexplored and poorly known sites in the Taconic Foothills part of town likely to support more unusual communities such as Coopers Pond Complex, Moules Lakes, and Reicherts Lake.

B. Exemplary Community Site List. (Attachment Set NC2/Table NC2)

A 1-page list was produced showing all 48 county-exemplary community sites in town designated for the 2017 Rensselaer County Conservation Plan. Basic site characteristics are provided: county occurrence code designations, exemplary status, occurrence rank/subranks, and occurrence size. While there was already much information provided for the 2017 RLT county conservation plan GIS datalayer, much ranking information needed to be newly integrated, condensed, and polished from readily available prior electronic files of the Rensselaer County Biodiversity Greenprint Project. A key source for the Rensselaer Plateau sites was an extensive community occurrence list for the entire Rensselaer Plateau, while individual site files were the main source for Taconic Foothills sites (see below). All boundaries are those mapped for the 2017 county plan, which differ in their derivation between the two regions. Rensselaer Plateau sites were precisely mapped from air photos in 2012 for the regional conservation plan. In contrast, Taconic Foothills sites were more coarsely represented (e.g., from a surrogate federal wetland datalayer). While the boundaries of Rensselaer Plateau sites are very precise and their representation should be relatively stable, even they are subject to

changes over time from natural dynamics and land use practices. The needed improvements to the boundaries of Taconic Foothills sites requires much more time beyond the scope of this project.

Future improvements, requiring more time beyond the project scope, could involve:

1. refinement of site boundaries for Taconic Foothills sites, where mostly coarse, rapid remote GIS models were used to delineate some community occurrences; boundary refinements would involve more careful air photo review.
2. population of additional GIS fields inferred from relations with other GIS ecological features or from manual RCBGP files, especially including more complex information such as identity certainty, last observation date, documentation status, and source information.

Sources (2019 update):

1. Rensselaer County Conservation Plan documents.
(prepared for Rensselaer Land Trust 2017 including GIS datalayer, summary memo, cover memo).
2. Rensselaer County Biodiversity Greenprint Project electronic site files.
(for individual sites, especially in the Taconic Foothills region)
3. Rensselaer Plateau Conservation Plan documents.
(see "Rensselaer Plateau Communities. Important Occurrences Appendix" referenced in working draft of Rensselaer Plateau Ecological Features Documentation Series: Ecological Communities).

C. Significant Community Site Lists. (Attachment Set NC3/Tables NC3 & NC4)

Two sets of lists were produced for the Town of Poestenkill showing all suspected regionally-significant community examples in town, partitioned separately into the Rensselaer Plateau and Taconic Foothills regions (because of the large difference in the intensity of prior data analysis and compilation for those areas). No attempt to comprehensively document significant communities countywide has been made to date. The closest prior attempt was a first (preliminary) comprehensive list of community occurrences for the 6 most important landscape sites in the county (Hunt 2000), only one of which, the Rensselaer Plateau, occurs in the Town of Poestenkill. A more precise regional comprehensive set of significant communities was later developed for the entire Rensselaer Plateau, via its conservation plan (2012). That set is represented by both a GIS datalayer and an extensive compilation of comparative ranking information in the RCBGP files. The Rensselaer Plateau list of significant communities for Poestenkill represents a subset of Rensselaer Plateau Community Occurrence appendix and GIS datalayer from 2012, with 143 regionally-significant community occurrences of almost all (45) community types of the 48 types known from the town. Basic site characteristics are provided in lists for both regions: site name, county community occurrence number, occurrence ranks, size, importance level, and town geography. Documents were integrated, condensed, and polished from multiple readily available sources (see Part 3 above).

Future improvements, requiring more time beyond the project scope, could involve:

1. field confirmation/evaluation of remotely mapped community occurrences, especially for the Taconic Foothills region.
2. more precise delineations of community occurrences in the Taconic Foothills region with air photos, beyond centrum circles.
3. population for both Rensselaer Plateau and Taconic Foothills occurrences of additional GIS fields left blank in the full county dataset template.

Sources:

1. Rensselaer Plateau Conservation Plan documents. (for Rensselaer Plateau sites)
(especially from the Rensselaer Plateau Communities. Important Occurrences Appendix referenced in working draft of Rensselaer Plateau Ecological Features Documentation Series: Ecological Communities).
2. Rensselaer County Biodiversity Greenprint Project electronic site files. (especially for Taconic Foothills sites)
(for individual sites, especially standard RCBGP community-species site matrices).
3. Rensselaer County Conservation Plan documents. (for any county-exemplary community occurrences).
(prepared for Rensselaer Land Trust 2017 including GIS datalayer, summary memo, cover memo).

Attachment Set NC1.

Town of Poestenkill: Natural Community Composition
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
Draft 1: June 25, 2019

Part I. Known Communities: Basic Demography
Part II. Known Communities: Community Notes.
Part III. Other Potential Communities.

Table NC1.

Town of Poestenkill: Natural Community Composition

Part I. Known Communities: Basic Demography

Community Name*	Town Distribution			Town Rarity	Town Exemplary Site(s)	Site Status
	RPC	RPe	TF			
Acidic Talus Slope Woodland	u	mu	x?	uncommon	Western Rensselaer Plateau Escarpment/Davitt Pond Ledges	C-ne: ATS9
Appalachian Oak-Hickory Forest	x	c	c	common	Snake Hill Poestenkill Southwest Snake Hill Poestenkill	C-ne: ATS7 C-ce: AOH5
Appalachian Oak-Pine Forest	u	a	c	common	Western Rensselaer Plateau Escarpment	C-ne: AOH9
Aquatic Cave Community	u	x	x-	very rare	Perigo Hill Northeast	C-ne: AOP4
Balsam Flats	u	x	x	very rare	Poesten Kill Headwaters/East Poestenkill Forest	C-s: ACC3
Beech-Maple Mesic Forest	a	c	mc?	very common	Perigo Hill Block Dyken Pond Block	C-se: BF6 C-ce-bso: BMM11
Black Spruce-Tamarack Bog	u	x	u	very rare	Reicharts Lake	C-ce-bso: BMM2
Bog Lake	u	x	u	very rare	Hosford Pond Bog	C-ne, c-s
Calcareous Cliff Community	x	u	u?	very rare	Snake Hill Poestenkill North	C-se: BL1
Chestnut Oak Forest	x	mc	mu?	moderately common	Western Rensselaer Plateau Escarpment/Davitt Pond Ledges	C-ce: CCC1
Cliff Community	u	mu	u?	moderately uncommon	Snake Hill Poestenkill	C-ce: COF2
Cobble Shore	x	u	mu?	uncommon	Barberville Falls	C-ce: CC10
Confined River	x	u	mu	uncommon	Poesten Kill Midreach	l-s: CS3
Deep Emergent Marsh	x	u	mu	uncommon	Vosburgh Swamp	C-ce: CR1
Dwarf Shrub Bog	mu	x	u	rare	Dustin Swamp Complex	C-ce, c-s
Eutrophic Pond	u	x	mu	moderately uncommon	Vosburgh Pond	C-ne: DSBS
Floodplain Forest	u	u	mu	very rare	East Poestenkill Flats	C-ne, s-s
Flow-Through Pond (variant)	u?	x	u	rare	East Poestenkill Forest	C-ne: FF3
Hemlock-Hardwood Swamp	mc	mu	mu-	moderately common	Pine Ridge Northwest	probable lead
Hemlock-Northern Hardwood Forest	a	a	mu?	very common	(see two ecoregional variants below)	s-s: HHS5
--Northern Appalachian variant					Dyken Pond Block	
--Lower New England variant					Perigo Hill Block	C-ce-bso: HNH11
Highbush Blueberry Bog Thicket	u	x	u?	rare	Western Rensselaer Plateau Escarpment/Davitt Pond Block	C-ce-bso: HNH6
Inland Non-Calcareous Lakeshore	u	x	u?	very rare	Poestenkill Center Bog	C-ce-bso: HNH9
Inland Poor Fen	u	x	x-	very rare	Davitt Pond	C-ne, s-s
Intermittent Stream	c	mu	c-	common	Dustin Swamp Complex/Fifty Six Road Northwest Wetlands	C-s: INL11
Maple-Basswood Rich Mesic Forest	mu	mc	mc	moderately common	Pine Ridge Center Northeast	C-ne: IP9
Marsh Headwater Stream	c	x	c	common	Poesten Kill Barberville	C-ce: IS33
Oligotrophic Dimictic Lake	u	x	x	rare	Poesten Kill Headwaters/East Poestenkill Forest	s-s: MBF9
Oligotrophic Pond	mc	u	x?	moderately uncommon	Davitt Pond	C-se: MHS1
Pine-Northern Hardwood Forest	u	x	x	very rare	Hicks Pond	C-pe: ODL8
Pitch Pine-Oak-Heath Rocky Summit	x	u	x-	very rare	Dustin Swamp Southwest	l-s: PNH8
Red Cedar Rocky Summit	x	u	x	very rare	Snake Hill Poestenkill South	C-s: PORS3
Red Maple-Hardwood Swamp	c	mu	c	common	Snake Hill Poestenkill North	C-ce: RCRS1
--Blackgum variant					Reicharts Lake	C-ne, l-s
Rocky Headwater Stream	c	mc	mc	common	Moules Lake	C-s
Sedge Meadow	c	x	c-	common	Upper Poesten Kill	C-ce: RHS4
Shallow Emergent Marsh	c	u	c-	common	Poesten Kill Headwaters/East Poestenkill Forest	C-se: SM23
Shoreline Outcrop	x	u	mu?	uncommon	Poesten Kill Headwaters/East Poestenkill Forest	C-se: SEM14
Shrub Swamp	c	u	c-	common	Barberville Falls	l-s: SO2
Spring	u	x	u	uncommon	Poesten Kill Headwaters/East Poestenkill Forest	C-se: SHGW16
Spruce Flats	mu	x	x	rare	Round Top South	s-s: SPR6
					Poesten Kill Headwaters Northwest	C-ce: SFI4
Spruce-Fir Swamp	mc	x	x	uncommon	Poesten Kill Headwaters Southwest/East Poestenkill Forest	C-ce: SFI3
Spruce-Northern Hardwood Forest	mc	x	x	uncommon	Poesten Kill Headwaters/East Poestenkill Forest	C-se: SFS4
Successional Fern Meadow	u	x	u?	rare	Poesten Kill Headwaters Northwest	C-ne: SFW7
Successional Northern Hardwoods	c	c	a?	very common	Pine Ridge Center Crossings	l-s: SFW4
Successional Northern Sandplain Grassland	u	x	x?	very rare	Dyken Pond Center	l-s: SUNH6
Successional Old Field	mc	mu	mc-	common	Cranberry Vly Northeast	l-s: SNS4
Successional Shrubland	c	mc	mc	common	Southeast Brunswick Grasslands	probable lead
Successional Southern Hardwoods	x	u	c	moderately common	Perigo Hill East	C-ce: SUS6
Vernal Pool	mu	u	mu?	moderately uncommon	Snake Hill Poestenkill/Hather Ridge Road Forest Perigo Hill North	probable lead C-ce: VPE

* communities are arrayed alphabetical by community name.

Legend:

Field: Community Name.
mostly following 2014 NYNHP state classification.

Field: Town Distribution.

Physiographic Region.

RP= Rensselaer Plateau (c=Central Plateau; e=Plateau Escarpment); TF= Taconic Foothills.

Town Abundance.

Abundance Level.

a = abundant, c = common, m = moderate, mc = moderately common, mu = moderately uncommon, p = present, u = uncommon, x = absent (with relatively high certainty).

Modifiers.

? = uncertain, ~ = probably.

Field: Site Status.

Maximum Significance Level.

c-s = county significant, l-s = locally significant, s-s = state significant.

County Exemplary Status.

Status.

C-ce = county co-exemplary site, C-ne = county near-exemplary site, C-pe = county potential near-exemplary site, C-se = county sole-exemplary site; -bo = block sub-occurrence.

Sites.

represented by RCBGP community occurrence codes assigned for Rensselaer Plateau occurrences (2012).

Table NC1.

Town of Poestenkill: Natural Community Composition

Part II. Known Communities: Community Notes.

Community Name*

Notes

Acidic Talus Slope Woodland	ATS7 is the only example in Poestenkill RPe; only 4 patches mapped in Poestenkill RPC.
Aquatic Cave Community	ACC3 represents the subterranean stream variant.
Balsam Flats	town-exemplary site (BF6) is peripheral to Poestenkill, with only small part of one patch in town; other town-near-best examples include Poesten Kill Headwaters Outlet/East Poestenkill Forest (C-pe, BF5, smaller and lower ranked, but entirely in Town of Poestenkill) and Dustin Swamp Complex (C-pe, BF2). only ~7 patches in Poestenkill, all in RPe/Spruce-Fir Zone.
Beech-Maple Mesic Forest	other town-near-best examples include Davitt Pond Block (C-ne, BWM20).
Black Spruce-Tamarack Bog	other town-near-best examples include Dustin Swamp (BSTB10), Moules Lake, and Poestenkill Center Bog; only 4 patches mapped in Poestenkill RP. Poestenkill RPC examples essentially only in Spruce-Fir Zone.
Bog Lake	only 3 examples known from town; only 2 known/suspected TF examples, both town-near-best examples: Moules Lake (C-ne), Reicharts Lake.
Calcareous Cliff Community	other town-near-best examples include Barberville Falls (C-pe, CCC5, lower ranked & smaller).
Chestnut Oak Forest	other town-near-best examples include Snake Hill Poestenkill (COF9, slightly lower ranked & much smaller), a former town exemplary site (Hunt 1998). only 2 Poestenkill RP examples mapped.
Cliff Community	other town-near-best examples include Western Rensselaer Plateau Escarpment/Davitt Pond Ledges (C-ne, CC5).
Cobble Shore	potential town exemplary site(s) suspected along unexplored reaches of Poesten Kill Midreach downstream of NY Route 351.
Deep Emergent Marsh	other town-near-best examples include Tyneson Road Marsh (largest Poestenkill RP example), Snake Hill Poestenkill West (RPe), and Newfoundland Creek Headwaters.
Dwarf Shrub Bog	other town-near-best examples include Moules Lake, Poestenkill Center Bog (former C-ne Dwarf Shrub Bog, reclassified to Highbush Blueberry Bog Thicket) and Hosford Pond Bog (DSB25, lower ranked & smaller).
Eutrophic Pond	only 1 Poestenkill RP patch mapped: Swamp West of Dustin Swamp (EP7, RPe).
Floodplain Forest	town-exemplary site (FF3) is one of only two Poestenkill RP sites, the other being Poesten Kill Barberville (FF4, smaller & lower ranked); any TF examples (especially along Poesten Kill Midreach downstream of NY Route 351) not yet explored.
Flow-Through Pond	variant of Oligotrophic Pond and Eutrophic Pond in 2014 NYNHP state classification, pending designation as a new type.
Hemlock-Hardwood Swamp	other town-near-best examples include Western Rensselaer Plateau Escarpment/Camp Rotary-Bernie Pond Southeast (HHS1, former county-exemplary, with only 1 patch in Poestenkill).
Highbush Blueberry Bog Thicket	town-exemplary site (Poestenkill Center Bog) with only 1 patch; other town-near-best examples include Hicks Pond SE (HBBT1, slightly smaller, 1 patch), Moules Lake, and Reicharts Lake.
Inland Non-Calcareous Lakeshore	only 2 Poestenkill RP sites, the other is Hicks Pond (INL12, smaller & lower ranked).
Inland Poor Fen	other town-near-best examples include Hosford Pond Bog (former C-ce, IP15, lower ranked & much smaller), a former town-exemplary site (Hunt 1998).
Intermittent Stream	other town near-exemplary sites include Davitt Pond West (IS2), Dyken Pond Road Grafton (IS31), Hicks Pond South (IS37), Cranberry Vly Inlet (IS50), Poesten Kill Headwaters/Bucks Corner Swamp Outlet (IS52), Camp Rotary Woods/Clickner Road Southwest (IS15), and North Road Pond North (IS56). only 7 patches mapped from Poestenkill RPe.
Maple-Basswood Rich Mesic Forest	only 2 other RP examples: Snake Hill Poestenkill North & Snake Hill Poestenkill South, both smaller than town-exemplary site (MBF9).
Oligotrophic Pond	only 4 patches mapped from Poestenkill RPe.
Pine-Northern Hardwood Forest	other town-near-best examples include Hicks Pond (PNH12, smaller); 4 patches mapped/suspected from Poestenkill, mostly in RPe/Spruce-Fir Zone.
Pitch Pine-Oak-Heath Rocky Summit	town-exemplary site (PORS3) is the only patch mapped from Poestenkill RP and known from entire town.
Red Cedar Rocky Summit	town-exemplary site (RCRS1) is the only patch mapped from Poestenkill RP and known from entire town.
Red Maple-Hardwood Swamp	other town-near-best examples include Newfoundland Creek Headwaters, Reicharts Lake, Ives Corners Marsh (RMHS11), and Poesten Kill Pine Ridge Flats (RMHS7, Poestenkill RP best).
Sedge Meadow	other town-near-best examples include Dustin Swamp South (C-ne, SM2, lower ranked & smaller), a former town-exemplary site (Hunt 1998).
Shallow Emergent Marsh	other town-near-best examples include Dustin Swamp (C-ne, SEM3).
Spring	other town-near-best examples include Newfoundland Creek Headwaters and Poestenkill Community Forest (on RP community map as Intermittent Stream).
Spruce Flats	other town-near-best examples include Dustin Swamp (C-ne, SF8); most town examples restricted to RPe/Spruce-Fir Zone.
Spruce-Fir Swamp	town-exemplary site (SFS4) represented by only small patches in Poestenkill (Bucks Corners Swamp, 2 patches); other town-near-best examples include Cropsey Road Northwest (SFS29), Pine Ridge Center Forest North (SFS22), Fifty-Six Road Block Northwest (SFS48), all with more area in Poestenkill, and Dustin Swamp (C-ne, SFS3, with one large patch in Poestenkill); most town examples restricted to RPe/Spruce-Fir Zone.
Spruce-Northern Hardwood Forest	most town examples restricted to RPe/Spruce-Fir Zone.
Successional Fern Meadow	most town examples restricted to RPe/Spruce-Fir Zone.
Successional Northern Hardwoods	town exemplary site (SUNH6) represents only regionally-important example identified from Poestenkill RP; other town-near-best examples include Poestenkill Community Forest.

Successional Northern Sandplain Grassland town-exemplary site (SNSG4) represents only RP patch mapped in Poestenkill, from RPc/Spruce-Fir Zone.
Successional Old Field community presence needs verification at town-exemplary site (Southeast Brunswick Grasslands); best Poestenkill RP examples are: Lynn Road Fields and Hosford Pond Bog Southeast.
Vernal Pool 8 patches mapped in Poestenkill RPe; nearby highly-ranked examples just outside town include Geiser Preserve Sand Lake (C-ce, VP7) and Western Rensselaer Plateau Escarpment Gratcon (VP3).

* communities are arrayed alphabetical by community name.

Legend:

Field: Notes, abbreviations used.

Physiographic Region.

RP= Rensselaer Plateau (c=Central Plateau; e=Plateau Escarpment); TP= Taconic Foothills.

County Exemplary Status.

Status. C-ce = county co-exemplary site, C-ne = county near-exemplary site, C-pe = county potential near-exemplary site.
Sites. represented by RCBGP community occurrence codes assigned for Rensselaer Plateau occurrences (2012).

Table NCl.

Town of Poestenkill: Natural Community Composition
Part III. Other Potential Communities.

Community Name*	Nearest Town/site	Poestenkill Probability (Most Likely Physiographic Region-Subregion/Town Site)
Riverside/Lakeside Bluff	Brunswick/Quacken Kill Narrows	80% (Taconic Foothills/Poesten Kill)
Riverside Sand/Gravel Bar	Brunswick/Poesten Kill Bott Lane	80% (Taconic Foothills/Poesten Kill)
Unconfined River	Brunswick/Poesten Kill Bott Lane	80% (Taconic Foothills/Poesten Kill)
Talus Cave Community	Grafton/Slide Mountain Grafton	60% (Rensselaer Plateau Escarpment/Snake Hill Poestenkill or Davitt Pond Ledges)
Shale Cliff & Talus Community	Sand Lake/Wynants Kill Averill Park	40% (Taconic Foothills/Poesten Kill or Wynants Kill)
Successional Blueberry Heath	Grafton/Jay Hakes Road Fields	40% (Rensselaer Plateau)
Backwater Slough	Berlin/Poesten Kill Headwaters	30% (Taconic Foothills/Poesten Kill, Wynants Kill, or Newfoundland Creek)
Silver Maple-Ash Swamp	Brunswick/Willard Ives Trail	30% (Taconic Foothills)
Successional Red Cedar Woodland	Petersburgh/Sugarloaf Hill South	30% (Taconic Foothills)
Clayplain Forest (variant**)	Schaghticoke/Madigan Road Flats	20% (Taconic Foothills)
Rocky Summit Grassland	Brunswick/Quackenkill Ridge	20% (Rensselaer Plateau Escarpment/Snake Hill Poestenkill, W RP Escarpment)
Shale Talus Slope Woodland	Grafton/Dunham Reservoir Hill	
Oxbow Lake	Brunswick/Bald Mountain Brunswick	20% (Taconic Foothills)
	Grafton/Quacken Kill Flats	10% (Taconic Foothills/Poesten Kill)
Pitch Pine-Oak Forest	Troy/Poesten Kill Valley Troy	
Ice Cave Talus Community	Schodack/East Schodack Powerlines	10% (Taconic Foothills/Southwest Poestenkill)
Medium Fen	Sand Lake/Boundless Woods	5% (Rensselaer Plateau)
Terrestrial Cave Community	Sand Lake/Cranberry Vly	5% (Taconic Foothills/Moules Lake & Reicharts Lake ecosystem complexes)
Calcareous Talus Slope Woodland	Berlin/Bentley Cave	5% (Rensselaer Plateau Escarpment)
	Grafton/Slide Mountain Grafton	<5% (Rensselaer Plateau Escarpment/Snake Hill Poestenkill North)
Eutrophic Dimictic Lake	Berlin/Plank Road Slope	
Inland Calcareous Lakeshore	Sand Lake/Reicharts Lake	<5% (Taconic Foothills/Coopers Pond)
Mesotrophic Dimictic Lake	Hoosick/Hoosic River Midreach Hoosick	<5% (Taconic Foothills/Coopers Pond)
	Sand Lake/Big Bowman Pond	<5% (Taconic Foothills/Coopers Pond)
Red Maple-Tamarack Peat Swamp	Sand Lake/Crystal Lake	
	Berlin/Butternut Hill	<5% (Taconic Foothills/Moules Lake ecosystem complex)

* communities arrayed by presence probability, then alphabetical by community name.

** variant of Maple-Basswood Rich Mesic Forest or Limestone Woodland in 2014 NYNHP state classification, pending designation as a new type.

County-Exemplary Natural Communities: Town of Poestenkill

David M. Hunt, Ecological Intuition & Medicine
 Rensselaer County Biodiversity Greenprint Project
 Draft 2: June 25, 2019 (previous draft: October 1998)

County-Exemplary Site*	NC/EO	RLT Importance	EO rank (Subranks)	Size
Barberville Falls	CCC5	Co/pot-near	D (D-/BC-/BC)	0.35 acres***
Davitt Pond	ODL8	Co/pot-near	BC (B/C-/C)	22.7 acres
Davitt Pond Block	HNH9	Co/co-ex	AB (A/AB-/AB)	2962 acres
Davitt Pond Block	BMM20	Co/near-ex	AB (A/AB-/AB)	1106 acres
Davitt Pond Ledges	COF2	Co/co-ex	B (C/AB-/AB)	55.3 acres
Davitt Pond Ledges	ATS9	Co/near-ex	B (BC/AB-/AB)	7.16 acres
Davitt Pond Ledges	CC5	Co/near-ex	B (BC/AB-/AB)	~15 acres***
Dustin Swamp Complex	DSB5	Co/near-ex	B (B/AB-/AB)	21.0 acres
Dustin Swamp Complex	SEM3	Co/near-ex	B (BC/AB-/AB)	17.4 acres
Dustin Swamp Complex	SF8	Co/near-ex	B (B/AB-/AB)	169.5 acres
Dustin Swamp Complex	SFS3	Co/near-ex	AB (B/AB-/AB)	55.6 acres
Dustin Swamp Complex	SM2	Co/near-ex	AB (A/AB-/AB)	46.9 acres
Dustin Swamp Complex	BF2	Co/pot-near	C (D/AB-/AB)	24.7 acres
Dyken Pond Block	BMM2	Co/co-ex	AB (A/B-/B)	4068 acres
Dyken Pond Block	HNH11	Co/co-ex	AB (A/B-/B)	4667 acres
East Poestenkill Flats	PF3	Co/near-ex	C (C/C-/C)	29.6 acres
East Poestenkill Forest	BF5	Co/pot-near	C (D/B-/B)	11.6 acres
Fifty Six Road Northwest Wetlands	IP9	Co/near-ex	AB (AB/AB-/AB)	26.0 acres
Hicks Pond	OP5	Co/pot-near	B (AB/BC-/BC)	23.0 acres
Hosford Pond Bog	BL1	Co/sole-ex	AB (AB/B-/B)	14.3 acres
Moules Lake	BL14	Co/near-ex	B (AB/BC/C)	14.1 acres
Perigo Hill Block	BMM11	Co/co-ex	AB (A/AB-/AB)	2559 acres
Perigo Hill Block	HNH6	Co/co-ex	AB (A/AB-/AB)	3891 acres
Perigo Hill East	SUS6	Co/co-ex	B (C/A-/A)	104.9 acres
Pine Ridge Center Northeast	IS33	Co/co-ex	AB (B/AB-/AB)	1.58 miles
Poesten Kill Headwaters	BF6	Co/sole-ex	B (B/AB-/AB)	276.0 acres
Poesten Kill Headwaters	MHS1	Co/sole-ex	AB (A/AB-/AB)	11.41 miles
Poesten Kill Headwaters	SEM14	Co/sole-ex	A (A/AB-/AB)	75.3 acres
Poesten Kill Headwaters	SFS4	Co/sole-ex	AB (A/AB-/AB)	328.7 acres
Poesten Kill Headwaters	SHSW16	Co/sole-ex	A (A/A/A)	102.2 acres
Poesten Kill Headwaters	SM23	Co/sole-ex	A (A/AB-/AB)	189.6 acres
Poesten Kill Headwaters Northwest	SF14	Co/co-ex	AB (B/AB-/AB)	569.7 acres
Poesten Kill Headwaters Northwest	SPNH7	Co/near-ex	B (B/AB-/AB)	214.7 acres
Poesten Kill Headwaters Southwest	SF13	Co/co-ex	AB (B/AB-/AB)	810.0 acres
Poesten Kill Midreach	CR1	Co/co-ex	B (AB/BC-/BC)	98.0 acres
Poestenkill Center Bog	HBBT13**	Co/near-ex	BC (C/AB/C)	9.95 acres
Reicharts Lake	BSTB17	Co/near-ex	C (D/B/BC)	3.21 acres
Reicharts Lake	RMHS16	Co/near-ex	BC (B/BC/BC)	54.9 acres
Snake Hill Poestenkill	AOH5	Co/co-ex	AB (A/B-/B)	519.8 acres
Snake Hill Poestenkill	CC10	Co/co-ex	B (B/B-/B)	17.8 acres***
Snake Hill Poestenkill	RCRS1	Co/co-ex	C (CD/B-/B)	4.5 acres
Snake Hill Poestenkill Southwest	ATS7	Co/near-ex	BC (C/B-/B)	5.1 acres
Snake Hill Poestenkill North	CCC1	Co/co-ex	BC (B/B-/B)	25.8 acres***
Upper Poesten Kill	RHS4	Co/co-ex	AB (A/B-/B)	14.2 miles
Vosburgh Pond	EP9	Co/near-ex	B (B/B/BC)	7.67 acres
Vosburgh Swamp	DEM7	Co/co-ex	BC (B/BC/BC)	40.5 acres
Western Rensselaer Plateau Escarpment	AOH9	Co/near-ex	AB (A/AB-/AB)	235.1 acres
Western Rensselaer Plateau Escarpment	AOP4	Co/near-ex	AB (A/AB-/AB)	582.2 acres

* community occurrences are arrayed alphabetically by site, then by importance, then alphabetically by occurrence code.

** reclassified in 2018 from former county near-exemplary Dwarf Shrub Bog.

Legend.

Field: NC/EO. Occurrence Code (Community & Occurrence Number).

Occurrence Code = Community Acronym (standard county use) + County Occurrence Number.

numbers assigned by RCBGP for:

Rensselaer Plateau occurrences, assigned as part of Rensselaer Plateau conservation plan (2012).

Taconic Foothills occurrences, newly assigned as part of Town of Poestenkill Natural Resources Inventory (2019).

Field: RLT Importance. County Exemplary Status.

assigned for RLT county conservation plan (2016), with one post-2016 modification for community identity change. values:

CO = county, co-ex = co-exemplary, near-ex = near exemplary, pot-near = potentially near exemplary, sole-ex = sole exemplary.

Field: EO Rank (Subranks). Occurrence Rank & Subranks.

format: Occurrence Rank (size rank/condition rank/landscape context rank)

condition ranked assumed to be equivalent to landscape rank unless good onsite information was available.

size rank determined from precise size specifications (see table cited in summary document; available upon request).

recently populated on GIS for most occurrences, especially for all Taconic Foothills sites.

Field: Size.

acres determined precisely from GIS shapes.

*** size (for steeply-sloping communities) calculated perpendicularly to average slope.

Attachment Set NC3.

Town of Poestenkill: Significant Natural Community Occurrences
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
Draft 1: June 25, 2019

Table NC3. Town of Poestenkill: Significant Natural Community Occurrences of Rensselaer Plateau
Table NC4. Town of Poestenkill: Significant Natural Community Occurrences of Taconic Foothills

Table NC3.

Town of Poestenkill: Significant Natural Community Occurrences of Rensselaer Plateau
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project

Community Type/Acronym*		Community Ranks			Size	EO	Max Importance	Towns	Notes
EO#*	Site Name	Size	LS	ES					
Acidic Talus Slope Woodland (ATS)									
7	Snake Hill Poestenkill Southwest	C	B	BC	acres		st-sig;Co:near-ex	Pk	RLT 2017 exemplary designation. formerly C rank. = Camp Rotary Scout Reservation.
9	Davitt Pond Ledges	C	AB	BC	5.06		st-sig;Co:near-ex	Pk/Br.	
14	Emerson Way Hill	D	B	C	3.12		co-sig	Pk	
19	Perigo Hill Northwest	D	AB	C	2.39		co-sig	Pk	
20	Round Top	D-	AB	D	1.23		loc-sig?	Pk	
21	Snake Hill Poestenkill	D	B	C	3.09		co-sig	Pk	part of Pine Ridge Forest South. =Perigo Hill N. especially Snake Hill N.
Appalachian Oak-Hickory Forest (AOH)									
5	Snake Hill Poestenkill	A	B	AB	acres		st-sig;Co:co-ex	Pk/SL	entire hill.
9	Western RP Escarpment	A	AB	AB	235.1		st-sig;Co:near-ex	Pk/Gr/Br	Sub EO (topographic) with links to N. includes Camp Rotary Woods. RLT 2017 exemplary designation. A size ragnk/AB sub-EO rank confirmed 2019. formerly BC rank and 300 acres (1997). More of EO outside Poestenkill not on Poestenkill GIS layer; see RP GIS layers for full extent.
Appalachian Oak-Pine Forest (AOP)									
3	Snake Hill Poestenkill	A	B	AB	acres		st-sig	Pk/SL	Sub EO: 20 patches. includes Snake Hill W.
4	Western RP Escarpment	A	AB	AB	582.2		st-sig;Co:near-ex	Pk/Gr/Br	Sub EO: 30 patches. includes Camp Rotary Woods. formerly estimated at B rank.
14	Oak Hill	BC	BC/C	BC	68.8		loc-sig?	Pk	not within an important matrix block.
15	Vosburgh Pond	B	BC/C	BC	206.4		loc-sig?	Pk>SL	3 patches of 46, 46, 41, 25 acres. not within an important matrix block.
Aquatic Cave Community (ACC)									
3	Perigo Hill Northeast	BC	AB	CD	feet		co-sig	Pk	=0.09 mi. associated with RHS (RHS1). Subterranean stream with no associated Terrestrial Cave Community part.
Balsam Flats (BF)									
2	Dustin Swamp Complex	D	AB	C	acres		co-sig;Co:pn-ex	Gr/Pk	RLT 2017 exemplary designation. part of Dyken Pond Environmental Center.
5	East Poestenkill Flats	D	B	C	11.56		co-sig;Co:pn-ex	Pk	RLT 2017 exemplary designation.
6	Poesten Kill Headwaters	B	AB	B	276.0		st-sig;Co:sole-ex	Ber>>Pk	53 patches. largest patch = 33.8 acres. includes Plank Road Bucks Corner, Poesten Kill Headwaters Plank Road, Poesten Kill Headwaters Dutch Church Road. formerly CD rank.
Beech-Maple Mesic Forest (BMM)									
2	Dyken Pond Block	A	B	AB	acres		st-sig;Co:co-ex	Gr/Ber/Pe/Pk	219 patches. includes Dyken Pond E, Dyken Pond Block N. among exemplary block Sub EOs.
5	Poesten Kill Headwaters Block	B	B	B	777.5		st-sig	Pk/Ber	35 patches. =Fifty-Six Road Block.
11	Perigo Hill Block	A	AB	AB	2559		st-sig;Co:co-ex	Pk/Ber/SL	162 patches. among exemplary block Sub EOs.
20	Davitt Pond Block	A	AB	AB	1105.5		st-sig;Co:near-ex	Gr/Pk/Br	94 patches. RLT 2017 exemplary designation. More of EO outside Poestenkill not on Poestenkill GIS layer; see RP GIS layers for full extent.
29	Snake Hill Block	B	B	B	344.9		st-sig	Pk/SL	34 patches. More of EO outside Poestenkill not on Poestenkill GIS layer; see RP GIS layers for full extent.
31	Ives Corner East Block	B	BC	BC	207.0		loc-sig?	Pk	33 patches.
Black Spruce-Tamarack Bog (BSTB)									
10	Dustin Swamp	D	AB	C	acres		co-sig	Gr/Pk	see NYHP form.
13	Dustin Swamp Complex Southwest	D-	AB	D	0.85		loc-sig?	Pk	=Fifty-Six Road NW Wetlands.
14	Bucks Corner Woods	D-	AB	D	0.76		loc-sig?	Pk	

Community Type/Acronym* EO#* Site Name	Community Ranks			Size	Max Importance	Towns	Notes
	Size	LS	EO				
Bog Lake (BL)							
1 Hosford Pond Bog	AB	B	AB	acres 14.27	st-sig; Co:sole-ex	Pk	formerly 10 acre estimate.
Calcareous Cliff Community (CC)							
1 Snake Hill Poestenkill North	B	B	BC	acres 25.8	st-sig; Co:co-ex	Pk	1 patch. includes Snake Hill E. 4.48 acres horizontally-projected area. New (2012): 1 of 3 county-exemplary sites. Avg Slope = -80 deg. exemp for circumneutral variant. RUT 2017 exemplary designation. Avg Slope = -80 deg. ID: CCC=CC. circumneutral variant.
5 Barberville Falls	D-	BC	D	0.35	co-sig; Co:pn-ex	Pk	
Chestnut Oak Forest (COF)							
2 Davitt Pond Ledges	C	AB	B	acres 55.34	st-sig; Co:co-ex	Pk>Gr	Camp Rotary Woods. includes Davitt Pond SW. formerly estimated as C rank. New (2012): 1 of 4 county co-exemplary sites. formerly 50 acres, B rank, & county-exemplary (larger & more higher ranked examples now known from RP).
9 Snake Hill Poestenkill	D-	B	D	2.83	loc-sig?	Pk	
Cliff Community (CC)							
3 Snake Hill Poestenkill Southwest	BC	B	BC	acres 10.4	co-sig	Pk	GIS horizontally projected area = 5.19 acres. RUT 2017 exemplary designation. part of Western Rensselaer Plateau Escarpment. GIS horizontally projected area = 5.88 acres. formerly BC rank. Avg slope = -70 deg. originally estimated at 20 acres. GIS horizontally projected area = 3.09 acres. Slope -80 deg. New (2012): 1 of 3 county-exemplary sites. formerly sole county-exemplary site. includes Perigo Hill N Slope, Perigo Hill E Slope. GIS horizontally projected area = 2.55 acres. Avg slope = -50 deg. low diversity.
5 Davitt Pond Ledges	BC	AB	B	~15	st-sig; Co:near-ex	Pk	part of Poesten Kill Midreach. also tracked as CCC. GIS horizontally projected area = 0.05 acres. Avg slope = -85 deg. lead (from slope & air photo). GIS horizontally projected area = 1.22 acres.
10 Snake Hill Poestenkill	B	B	B	17.8	st-sig; Co:co-ex	Pk	part of Poesten Kill Midreach. also tracked as CCC. GIS horizontally projected area = 0.05 acres. Avg slope = -85 deg. lead (from slope & air photo). GIS horizontally projected area = 1.22 acres.
12 East Poestenkill Forest	D	B(AB)	CD	4.0	loc-sig?	Pk	
21 Barberville Falls	D	B	C	4.0	co-sig	Pk	
24 Snake Hill Poestenkill West	D	B	C	2.4	co-sig	Pk	
Cobble Shore (CS)							
3 Poesten Kill Barberville	D-	B	D	acres 0.18	loc-sig?	Pk	part of Poesten Kill Midreach.
Confined River (CR)							
1 Poesten Kill Barberville	AB	BC	B	miles 1.83	st-sig; Co:co-ex	Pk+	Site represents RP sub-EO part of ~10 mile long Poesten Kill Midreach EO (extending downstream only to Quacken Kill confluence). RP Sub EO=12.68 acres, with 8.62 acres on RP. RUT 2017 exemplary designation. former county sole-exemplary site (2013). See Table NC4 (Taconic Foothills EOs) for full extent.
Deep Emergent Marsh (DEM)							
5 Hicks Pond Southwest	C	B	BC	acres 8.07	co-sig;	Pk	2 patches, with ~11 acre largest patch.
Dwarf Shrub Bog (DSB)							
5 Dyken Pond Road Swamps	B	AB	B	acres 21.0	st-sig; Co:near-ex	Pk/Gr	=Fifty-Six Road NW Wetlands (includes Swamp W of Dustin Swamp); Dustin Swamp NW; Dustin Swamp SW; part of Dustin Swamp Complex.
7 Pine Ridge Center Fen	C	AB	BC	5.53	st-sig;	Pk	
25 Hosford Pond Bog	C	B	B(BC)	5.38	st-sig;	Pk	
29 Perigo Hill Northwest	D-	B	D	0.88	loc-sig?	Pk	NYHP EO (10 acres: AB rank). formerly AB rank.
Eutrophic Pond (EP)							
7 Dyken Pond Road Swamp	D	AB	BC	acres 0.94	co-sig;	Gr/Pk	=Swamp W of Dustin Swamp.

Table NC3. Town of Poestenkill: Significant Natural Community Occurrences of Rensselaer Plateau.

Community Type/Acronym* EO#* Site Name		Community Ranks			Size	Max Importance	Towns	Notes
Size	LS	EO						
Floodplain Forest (FF)								
3	East Poestenkill Flats	C	C	C	acres 29.62	st-sig;Co:near-ex	Pk	15 patches, with largest patch = 15.98 acres. 0.6 mile patch separation. RLT 2017 exemplary designation. exemplary for NAP variant. also designated as co-exemplary for RP.
4	Poesten Kill Barberville	D	C(BC)	CD	7.51	st-sig	Pk	
Hemlock-Hardwood Swamp (HHS)								
1	Bernie Pond Southeast	AB	AB	AB	acres 14.96	st-sig	Gr/Pk	part of Camp Rotary Woods; part of Western Rensselaer Plateau Escarpment. formerly estimated as 22 acres & county-exemplary site (2013).
5	Pine Ridge Northwest	A	B	AB	22.77	st-sig	Pk	unconfirmed lead.
18	Madonna Lake Road Wetlands	AB	B	B	21.43	st-sig	Gr/Pk	Hosford Pond Inlet.
50	Perigo Hill East	A	BC	B	34.19	st-sig	Pk/Ber	17 patches with 6.1 acre maximum.
52	Ives Corner Block East	B	BC	BC	12.49	loc-sig?	Pk	
Hemlock-Northern Hardwood Forest (HNF)								
6	Perigo Hill Block	A	AB	AB	acres 3890.5	st-sig;Co:co-ex	Pk/SL/Ber	Sub3 EO: 70 patches. NAP variant.
7	Ives Corner Block	B	B(BC)	B	921.5	st-sig	Pk	Sub3 EO: 12 patches.
8	Poesten Kill Headwaters Block	B	AB	AB	1173.4	st-sig	Pk/Ber	Sub3 EO: 39 patches. = Fifty-Six Road Block.
9	Davitt Pond Block	A	AB	AB	2961.6	st-sig;Co:co-ex	Pk/Gr/Br	Sub3 EO: 63 patches. with 2127 acre largest patch. includes Wheeler Mountain N. LNE variant. More of EO outside Poestenkill not on Poestenkill GIS layer; see RP GIS layers for full extent.
11	Dyken Pond Block	A	B	AB	4666.7	st-sig;Co:co-ex	Gr/Ber/Pe/Pk	Sub3 EO: 168 patches with largest patch of 2020 acres. includes Dyken Pond Block N. NAP variant.
21	Snake Hill Block	B	B	B	390.1	st-sig	Pk/SL	Sub3 EO: 12 patches.
Highbush Blueberry Bog Thicket (HBBT)								
1	Hicks Pond Southeast	D	B	CD	acres 2.52	loc-sig?	Pk	
Inland Non-Calcareous Lakeshore (INL)								
11	Davitt Pond	BC	B	BC	acres 0.422	co-sig	Pk	
12	Hicks Pond	C	BC	C	0.279	loc-sig?	Pk	
Inland Poor Fen (IP)								
3	Pine Ridge Center Fen	D-	AB	D	acres 0.32	loc-sig?	Pk	
4	Pine Ridge Center Forest South	D	AB	BC	4.32	st-sig	Pk	=Perigo Hill NE, Round Top.
8	Dustin Swamp Northwest	D	AB	C	1.92	co-sig	Pk/Gr	close to IPF9 EO.
9	Fifty-Six Road NW Wetlands	AB	AB	AB	26.05	st-sig;Co:near-ex	Pk/Gr	close to IPF8 EO.
13	Hicks Pond	D	B	C	1.85	co-sig	Pk	
15	Hosford Pond Bog	CD	B	B(BC)	3.95	st-sig	Pk	NYHP EO (10 acres: AB rank). formerly AB rank & county-exemplary site (2013), but too small. former town-exemplary site (1998).
20	Poesten Kill Headwaters West	D	AB	C	0.70	co-sig	Pk	

Community Type/Acronym*		Community Ranks			Size	Max Importance	Towns	Notes
EO#	Site Name	Size	IS	EO				
Intermittent Stream (IS)								
2	Davitt Pond West	B	AB	B	miles 0.60	st-sig	Pk	=Davitt Pond Ledges; part of Camp Rotary Woods & Western Rensselaer Plateau Escarpment.
15	Clickner Road Southwest	B	B	B	0.79	st-sig	Pk>Gr	0.24 acres. 2019: name distinguished from Fifty-Six Road NW.
30	Snake Hill Poestenkill East	B	BC	BC	0.98	loc-sig?	Pk	
31	Dyken Pond Road Grafton Southwest	B	B	B	0.85	st-sig	Gr>Pk	
32	Fifty-Six Road Northwest	BC	B	BC	0.48	loc-sig?	Pk/Gr	
33	Pine Ridge Center Northeast	B	AB	AB	1.58	st-sig;Co:co-ex	Pk	1 of 6 county co-exemplary sites. =Boundless Woods Swamp Outlet. 2019: names corrected with IS37. =Taborton Road N. 2019: names corrected with IS34.
34	Hicks Pond East	BC	B	BC	0.51	loc-sig?	Pk	
36	Hicks Pond West	BC	BC	BC	0.50	loc-sig?	Pk	
37	Hicks Pond South	B	B	B	0.87	st-sig	SL>Pk	
50	Cranberry Vly Inlet North	B	B	B	1.22	st-sig	SL>Pk	
52	Bucks Corner Swamp Outlet	B	B	B	0.56	st-sig	Pk>Ber	
55	Hicks Pond Northeast	B	BC	BC	0.73	loc-sig?	Pk	
56	North Road Pond North	B	B	B	1.49	st-sig	Pk/Gr	
Maple-Basswood Rich Mesic Forest (MBF)								
9	Poesten Kill Barberville	B	BC	BC	acres 153.9	st-sig	Pk	Sub EO: 47 patches. Plank Road. Sub EO: 21 patches. =Snake Hill NW, =Snake Hill W. Sub EO: 11 patches.
10	Snake Hill Poestenkill North	B	BC	BC	80.0	st-sig	Pk	
11	Snake Hill Poestenkill South	C	B	BC	45.3	st-sig	SL>Pk	
Marsh Headwater Stream (MHS)								
1	Poesten Kill Headwaters	A	AB	AB	miles 11.41	st-sig;Co:sole-ex	Ber>Pk	N & S of Plank Road, formerly 5 mile length estimate. possibly state-exemplary LNE variant. = Fifty-Six Road N.
6	Dustin Swamp Complex	C	AB	BC/B	1.37	st-sig	Pk/Gr	
Oligotrophic Dimictic Lake (ODL)								
8	Davitt Pond	C	B	BC	acres 22.69	st-sig;Co:pn-ex	Pk	RLT 2017 exemplary designation.
Oligotrophic Pond (OP)								
5	Hicks Pond	AB	BC	B	acres 23.02	st-sig;Co:pn-ex	Pk	RLT 2017 exemplary designation.
12	Perigo Hill North	B	B	B	4.55	st-sig	Pk	
16	Boundless Woods Marsh	B	B	B	17.61	st-sig	SL/Pk	
Pine-Northern Hardwood Forest (PNH)								
8	Dustin Swamp Southwest	D-	AB	D	acres 6.92	loc-sig?	Pk>>Gr	may also include area near Lean-to. RTLC (-1998) = 2.66 acres. =Dyken Pond Environmental Center. good typical lakeshore setting.
12	Hicks Pond Southeast	D-	B	D	4.63	loc-sig?	Pk	
Pitch Pine-Oak-Heath Rocky Summit (PORS)								
3	Snake Hill Poestenkill Southwest	D	B	CD	acres 2.80	co-sig	Pk	unconfirmed lead.
Red Cedar Rocky Summit (RCRS)								
1	Snake Hill Poestenkill	CD	B	C	acres 4.48	co-sig;Co:co-ex	Pk	1 of 2 county-exemplary sites.
Red Maple-Hardwood Swamp (RMHS)								
7	Poesten Kill Pine Ridge Flats	D	AB	BC	acres 14.13	loc-sig?	Pk>Ber	largest GIS patch = 17.9 acres.
11	Ives Corner Marsh	C	BC	C	20.62	loc-sig?	Pk	
12	Fifty-Six Road Wetlands	D	BC	C	10.96	loc-sig?	Pk	
Rocky Headwater Stream (RHS)								
4	Upper Poesten Kill	A	B	AB	miles 14.23	st-sig;Co:co-ex	Pk>Gr	25 patches. 1 of 2 county co-exemplary sites. includes Pine Ridge Center, Pine Ridge Center NW, Pine Ridge Center NE. also 30.5-acre polygon.
22	Davitt Pond Brook	C	AB	B	1.28	st-sig	Pk	9 patches. 7 patches. needs better comparison to RHS4 (-within 1 mile).
23	Bonesteel Creek	B	BC	B	5.42	st-sig	Pk>Gr	
32	East Poestenkill Flats	C	B	BC	1.28	loc-sig?	Pk>Gr	

7 patches. needs better comparison to RHS4 (-within 1 mile).

Table NC3. Town of Poestenkill: Significant Natural Community Occurrences of Rensselaer Plateau.

Community Type/Acronym* EO#* Site Name		Community Ranks			Size	Max Importance	Towns	Notes
Size	LS	EO						
Sedge Meadow (SM)								
2	Dustin Swamp South	A	AB	AB	acres 46.9	st-sig;Co:near-ex	Pk/Gr	12 patches. RTLC (~1998): ~B to AB rank, 16.73 acres, town-exemplary site, beaver meadow, most of Dustin Swamp?; DH identity: Sedge Meadow or Dwarf Shrub Bog. includes Dyken Pond Road Swamp (B rank Sub EO, =Swamp W of Dustin Swamp) . =Fifty-Six Road NW Wetlands. formerly county co-exemplary (2013) . riparian complex. formerly 10 acres.
3	Clickner Road Marshes	B	B	B	19.39	st-sig	Gr>>Pk	
13	Perigo Hill Northwest	C	AB	B	13.17	st-sig	Pk	with largest patch of 6.7 acres. =Hosford Pond S. includes Poesten Kill Headwaters N & NE & E. includes Perigo Hill ENE. NYHP = 139 acres.
14	Hosford Pond Bog	BC	B	B	9.66	st-sig	Pk/Gr	DSB > SM. perhaps best treated as a lead.
18	North Road	C	BC	BC	11.83	loc-sig?	Pk	
23	Poesten Kill Headwaters	A	AB	A	189.6	gl-sig;Co:sole-ex	Ber>Pk	
25	Pine Ridge Center Fen	C	AB	B	6.55	st-sig	Pk	
Shallow Emergent Marsh (SEM)								
3	Swamp West of Dustin Swamp	BC	AB	B	acres 17.45	st-sig;Co:near-ex	Gr>Pk	=Dyken Pond Road Swamp; =Fifty-Six Road NW Wetlands. part of Dustin Swamp Complex.
6	Ives Corner Marsh	B	CD	BC	38.40	loc-sig?	Pk	
14	Poesten Kill Headwaters	A	AB	A	75.3	gl-sig;Co:sole-ex	Ber>Pk	39 patches. includes Poesten Kill Headwaters N & NE; NYHP EO (209 acres/A rank) .
Shoreline Outcrop (SO)								
2	Poesten Kill Midreach Barberville D-	B	D	D	acres 0.20	loc-sig?	Pk	2 patches. 0.1 mi long.
Shrub Swamp (SHSW)								
16	Poesten Kill Headwaters	A	A	A	acres 102.2	gl-sig;Co:sole-ex	Ber>Pk	51 patches. not NYHP EO. includes Plank Road Bucks Corner.
18	Ives Corner Marsh	BC	C	BC	19.75	loc-sig?	Pk	
Spring (SPR)								
6	Round Top	B	AB	B	miles 0.07	st-sig	Pk	1 patch. 0.41 acres. = Pine Ridge Center Forest South.
Spruce Flats (SF)								
6	Hicks Pond Southeast	D	BC	C	acres 33.84	co-sig	Pk>SL	
8	Dyken Pond West	B	AB	B	169.5	st-sig;Co:near-ex	Pk/Gr/Ber	RLT 2017 exemplary designation. Sub EO. 29 patches.
13	Poesten Kill Headwaters Southwest B	AB	AB	AB	810.0	st-sig;Co:co-ex	Ber>Pk	Sub2 EO: Perigo Hill Block. 31 patches. among exemplary block Sub EOs.
14	Poesten Kill Headwaters Northwest B	AB	AB	AB	569.7	st-sig;Co:co-ex	Ber>Pk	Sub2 EO: Poesten Kill Headwaters Block. 33 patches. among exemplary block Sub EOs.
Spruce-Fir Swamp (SFS)								
3	Dustin Swamp	B	AB	AB(B)	acres 55.6	gl-sig;Co:near-ex	Pk/Gr	8 patches. includes Dustin Swamp N, NW, & S; Swamp W of Dustin Swamp; =Dyken Pond Road Swamp. NYHP EO: mapped as entire Dustin Swamp (51 acres, AB rank) . New (2012): 1 of 5 near county-exemplary sites.
4	Poesten Kill Headwaters	A	AB	AB	328.7	gl-sig;Co:sole-ex	Ber>>Pk	56 patches. includes Poesten Kill Headwaters N & NE, Round Pond NE. NYHP EO: 245 acres, AB rank.
21	Pine Ridge Forest South	D	AB	C	5.39	co-sig	Pk	=Round Top.
22	Pine Ridge Center Forest North	C	AB	BC	13.07	st-sig	Pk	
29	Cropsey Road Northwest	BC	B	B	19.62	gl-sig	Pk	
41	Perigo Hill East	D	B	C	6.05	co-sig	Pk>>Ber	unconfirmed lead.
45	Hicks Pond Southeast	D	BC	CD	8.06	loc-sig?	Pk/SL	
47	Cranberry Vly Northeast	D-	BC	D	4.25	loc-sig?	Pk/SL	
48	Fifty-Six Road Block Northwest	C	B	BC	14.99	st-sig	Pk	
50	East Poestenkill Flats Pine Ridge D	AB	C	C	6.24	co-sig	Pk	2 patches.
55	East Poestenkill Hill	D-	BC	D	2.12	loc-sig?	Pk	1 patch.
56	Hicks Pond East	D-	BC	D	2.11	loc-sig?	Pk	1 patch.
57	Pine Ridge Northeast	D-	AB	D	2.01	loc-sig?	Pk	

Community Type/Acronym* EO# Site Name		Community Ranks Size IS EO			Size	Max Importance	Towns	Notes
Spruce-Northern Hardwood Forest (SPN)								
6	Poesten Kill Headwaters South	C	AB	B	70.49 acres	gl-sig	Pk/Ber	Sub2 EO: 6 patches. part of Poesten Kill Headwaters county-exemplary Sub1 EO.
7	Poesten Kill Headwaters Northwest	B	AB	B	214.7	gl-sig;Co:near-ex	Pk/Gr>Ber	Sub2 EO: 29 patches. part of Poesten Kill Headwaters county-exemplary Sub1 EO.
Successional Fern Meadow (SFM)								
4	Pine Ridge Center Crossings	D-	B	D/F	0.40 acres	loc-sig?	Pk	
Successional Northern Hardwoods (SUNH)								
6	Dyken Pond Center	D	AB	BC	73.71 acres	loc-sig?	Gr>Pk	Sub EO. formerly county sole-exemplary site (2013). includes Abbt Farm Trail, South Long Pond Forest (Mkera Tract). locally 1/3 of matrix forest. RTLC: 96.06 acres.
Successional Northern Sandplain Grassland (SNSG)								
4	Cranberry Vly Northeast	D-	A	D	1.85 acres	loc-sig?	Pk/Ber	on Cowee lands.
Successional Shrubland (SUS)								
4	Cropsey Road	D	B	C	34.69 acres	loc-sig?	Pk	
6	Perigo Hill East	C	A	B	104.91	st-sig;Co:near-ex	Ber>Pk	Sub EO. RLT 2017 exemplary designation. 1 of 3 RP co-exemplary sites.
Vernal Pool (VP)								
8	Geiser Preserve North	D-	A	C	0.40 acres	co-sig	Pk	formerly part of county-exemplary EO (Sand Lake & Poestenkill) now split from VP7 (Sand Lake, county-exemplary EO); probably in NYHP backlog.
11	Snake Hill Road	D	BC	CD	0.84	loc-sig?	Pk	
18	Poesten Kill Barberville	D-	BC	CD	0.42	loc-sig?	Pk	2 patches.
24	Fifty-Six Road Hunt Club	D-	AB	CD	0.40	loc-sig?	Pk	1 patch.
25	Davitt Pond Southwest	D-	AB	CD	0.15	loc-sig?	Pk	

* communities arrayed by alphabetical order, occurrences arrayed by numerical order within community type.

Legend:

Field: Community Ranks.

Size, Occurrence Size Rank.

"D-" implies occurrence is smaller than D rank and EO specifications; however kept as regionally significant because acreage calculation imprecise and regionally rare community type.

IS. Landscape Context Rank.

note: condition rank not shown (requires much additional work); best assumed equivalent to landscape context rank until more refined.

EO. Occurrence Rank.

F rank = small size; below lower size thresholds for community occurrence.

Field: Max Importance. Maximum Importance.

includes both maximum significance level and county exemplary status.

Maximum significance level.

co-sig = county significant (RCBP criteria), loc-sig? = possibly locally significant (no basis yet established), st-sig = state significant (NYNHP criteria).

County exemplary status.

Co: = county; co-ex = co-exemplary, near-ex = near exemplary, pn-ex = potentially near exemplary, sole-ex = sole exemplary. See Table NC2 for more detail.

Field: Towns.

Ber = Berlin, Br = Brunswick, Gr = Grafton, Pe = Petersburg, Pk = Poestenkill, SL = Sand Lake.

Field: Notes. abbreviations.

Physiographic Regions: RP = Rensselaer Plateau.

Ecoregions: INE = Lower New England, NAP = Northern Appalachians.

Community Site: EO = element occurrence (standard NYNHP terminology).

Organizations/People: DH = David Hunt, NYHP = NY Natural Heritage Program, RLT = Rensselaer Land Trust, RTLC = Rensselaer-Taconic Land Conservancy.

Table NC4.

Town of Poestenkill: Significant Natural Community Occurrences of Taconic Foothills

David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project

Draft 1: June 25, 2019

Community Type/Acronym*		Community Ranks				Size	Max Importance	Towns	Notes
EO#	Site Name	Size	LS	BO					
Backwater Slough (BS)									
13	Poesten Kill Bott Lane	D	BC	C	acres -0.5	st-sig	Pk	B condition rank.	
Black Spruce-Tamarack Bog (BST)									
17	Reicharts Lake	D	BC	C	acres 3.19	co-sig;Co:near-ex	SL>Pk	AB condition rank.	
18	Poestenkill Center Bog	D-	C	D	-0.5	loc-sig?	Pk		
-	Moules Lake	-	-	-	-2	co-sig?	NG (xPk?)		1998 town plan: putative st-sig; 2019: apparently not in Pk and probably only county significant; thus not assessed for ranks.
Bog Lake (BL)									
14	Moules Lake	AB	C	B	acres 14.1	st-sig;Co:near-ex	Pk>>NG		
15	Reicharts Lake	B	BC	BC	-2.5	st-sig	SL (-xPk)		1998 town plan: putative st-sig; 2019: confirmed st-sig, but apparently not in Pk.
Confined River (CR)									
1	Poesten Kill Midreach	AB	BC	B	miles -12	st-sig;Co:co-ex	Br>Pk>Tr		98 acres, B condition rank. 1998 town plan: putative st-sig; 2019: confirmed identity & st-sig (with large size and moderately good condition & diversity).
Deep Emergent Marsh (DEM)									
7	Vosburgh Swamp	B	BC	BC	acres 42.3	co-sig;Co:co-ex	Pk>SL		1998 town plan: putative st-sig as Sedge Meadow; 2019: appears all or most DEM (with perhaps transition to Sedge Meadow in S part of wetland in Sand Lake) and only county important.
8	Newfoundland Creek Headwaters	D	BC	C	-3	loc-sig?	Pk		
Dwarf Shrub Bog (DSB)									
-	Moules Lake	-	-	-	acres -3	co-sig?	NG (xPk?)		1998 town plan: putative st-sig; 2019: apparently not in Pk and probably only county significant; thus not assessed for ranks.
Eutrophic Pond (EP)									
9	Vosburgh Swamp	B	BC	B	acres 6.4	st-sig;Co:near-ex	Pk		1998 town plan: putative st-sig Oligotrophic Pond; 2019: appears still st-sig, but different lake community type.
10	Coopers Pond Complex	B	BC	BC	-5	co-sig	Pk		spans TF/RP regions. only full RP mapping extent shown; may be more unmapped/unassessed patches in TF to W.
Floodplain Forest (FF)									
4	Poesten Kill Barberville	D	C(BC)	CD	acres 7.87	loc-sig?	Pk		C condition rank.
7	Poesten Kill Bott Lane	C	C	C	-20	st-sig	Pk		AB condition rank.
Highbush Blueberry Bog Thicket (HBBT)									
13	Poestenkill Center Bog	C	C	BC	acres 9.95	st-sig;Co:near-ex	Pk		1998 town plan: putative st-sig as "B-ranked fen?Medium Fen?"; 2019: appears lower ranked and only county important unless rarer Medium Fen community (needs better identity evaluation), which would be st-sig.
14	Moules Lake	BC	C	BC	-10	st-sig	Pk		
Inland Poor Fen (IP)									
24	Reicharts Lake	D	BC	C	acres -1	co-sig	SL>Pk		spans TF/RP regions. only TF portion shown of full 153.9-acre extent from RP mapping; may be more unmapped/unassessed patches in TF to W.
Maple-Basswood Rich Mesic Forest (MBF)									
9	Poesten Kill Barberville	B	BC	BC	acres 7.91	st-sig	Pk		BC condition rank. acres shown only from Pk; several additional acres known from adjacent Brunswick, supporting C rank and co-sig designation.
35	Poesten Kill Bott Lane	CD	C	C	-3+	co-sig	Pk		

Community Type/Acronym*		Community Rank			Size	Max Importance	Towns	Notes
EO#	Site Name	Size	LS	EO				
Red Maple-Hardwood Swamp (RMS)								
16	Reicharts Lake	B	BC	BC	<u>acres</u> 56.9	loc-sig; Co: near-ex	SL>Pk	Blackgum variant (county rare); may extend into Pk town (needs more careful air photo review and field observations).
17	Moules Lake	D	C	BC	-5	loc-sig?	NG>>Pk	
Rocky Headwater Stream (RHS)								
3	Bernie Pond Brook	B	AB	B	<u>miles</u> 3.54	st-sig	Br>Pk>Gr	info from RP GIS layer for significant EOS: 4.22 acres (with 2.95 acres in TF region), RP portion only in Br & Gr towns.
Shrub Swamp (SHSW)								
22	Moules Lake	D	C	C	<u>acres</u> -3	loc-sig?	Pk	1998 town plan: putative st-sig; 2019: appears only locally important.
Spring (SPR)								
20	Newfoundland Creek Headwaters	B	BC	BC	<u>miles</u> 0.1	st-sig	Pk	
Unconfined River (UR)								
1	Poesten Kill Bolt Lane	D	C	C	<u>miles</u> -0.2	co-sig	Pk	B condition rank.

* communities arrayed by alphabetical order; occurrences arrayed by numerical order within community type.

Legend:

Field: Community Ranks.

Size: Occurrence Size Rank.

"D-" implies occurrence is smaller than D rank and EO specifications; however kept as significant because acreage calculation imprecise and county rare community type.

LS: Landscape Context Rank.

note: condition rank not shown (requires much additional work); best assumed equivalent to landscape context rank until more refined.

EO: Occurrence Rank.

F rank = small size; below lower size thresholds for community occurrence.

Field: Size.

- = estimated size, presented for occurrences mapped as centrum circles and based on comparison of circle size to air photo signature.

Field: Max Importance. Maximum Importance.

includes both maximum significance level and county exemplary status.

Maximum significance level.

co-sig = county significant (RCBP criteria), loc-sig? = possibly locally significant (no basis yet established), st-sig = state significant (NYNHP criteria).

County exemplary status.

Co: = county; co-ex = co-exemplary, near-ex = near exemplary, pn-ex = potentially near exemplary, sole-ex = sole exemplary. See Table NC2 for more detail.

Field: Towns.

Br = Berlin, Br = Brunswick, Gr = Grafton, NG = North Greenbush, Pe = Petersburg, PK = Poestenkill, SL = Sand Lake, Tr = Troy.

(xPK) = probably not in Poestenkill, (xPK?) = possibly not in Poestenkill.

Field: Notes. abbreviations.

Physiographic Regions: RP = Rensselaer Plateau.

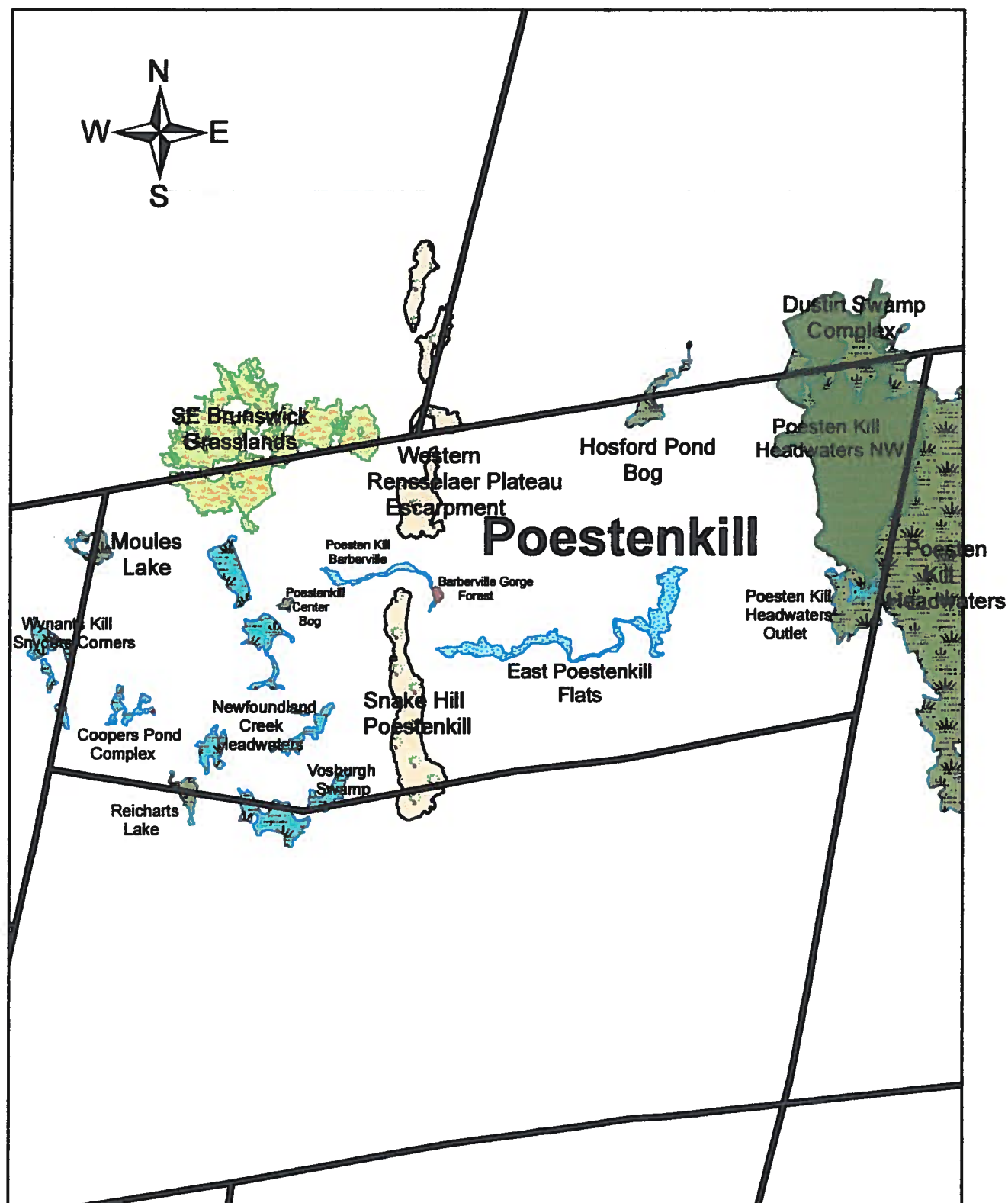
Community Site: EO = element occurrence (standard NYNHP terminology).

Towns: as shown in Towns Field.

Max Importance: as shown in Max Importance Field.

Community Acronyms: as shown in association with community name.

County-Important Restricted Ecosystem Complexes



Town of Poestenkill: Important Restricted Ecosystem Complexes

David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
June 2019

1. Introduction.

The goal for this feature, as part of the Town of Poestenkill Natural Resources Inventory, was to provide site descriptions for all **18 county-important restricted ecosystem complex sites** in town (see Map 4) identified for the 2017 Rensselaer County Conservation Plan (compiled by the Rensselaer Land Trust). The 2017 collective of 187 countywide important sites for this biodiversity feature represented the first attempt to develop a **comprehensive, carefully, and accurately determined countywide set of the most important sites of all county-restricted ecosystem complex types**. That effort expanded upon the comprehensive GIS set of important restricted ecosystem complex sites developed for the Rensselaer Plateau and previous efforts of focus countywide on one ecosystem complex type (peatland complexes). Work for the Town of Poestenkill in 2019 focused mostly on consolidation of information into concise site fact sheets and site descriptions plus review of previously-prepared GIS information. Only **minor refinements were made to GIS information** (beyond the project scope). **Boundary refinements were made for only one site** (also beyond the project scope), Pine Bowl Road Bog, which was expanded in concept, and thus geographic extent, then renamed "Coopers Pond Complex". Because the general site concept for ecosystem complexes is precisely defined and was accurately analyzed in 2017, the set of designated sites is likely very stable, with any additions unlikely in the near future. No supplementary sites are suggested.

Feature Concept.

(slightly modified for clarity and supplemented from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

Sites throughout Rensselaer County, New York that represent the best chance for the long-term conservation of native biota (plants and animals) characteristic of habitat types that are not common in the county (i.e., they are of "restricted" distribution), thus suggested to support many rare to uncommon native species. Ecosystem complexes are defined and mapped as groupings of natural community types that often co-occur together in discrete repeatable patches across a landscape or region due to unique combinations of underlying physical features (hydrology, geology, topography, and soils). While large areas of the county are covered by common forest ecosystems, more local patches of other more unusual ecosystem complexes are scattered throughout the county that contain suites of less common species not found in the common forest ecosystem types. A first attempt was made in 2017 to develop a comprehensive set of restricted ecosystem complex types for the entire county, expanding upon the comprehensive set applied by RCBGP for the Rensselaer Plateau and borrowing from a model developed by Ecological Intuition & Medicine/D.Hunt for the Adirondack Region. The 11 resulting complex types are briefly characterized below (see Attachment EC1). They range in climatic zone and elevation from tidal areas (e.g., tidal wetlands) near sea level to boreal areas (e.g., boreal flats and boreal rocky summits) above about 1700 feet elevation. They range in topography from basins (e.g., peatland and mineral soil wetland complexes) to flats (e.g., sandplains and clayplains) to steep slopes and summits (e.g., rocky summits). They range in hydrology from inundated areas (lake and riparian complexes) to xeric habitats (sandplains and rocky summits). Lastly, they range in naturalness from near old-growth conditions (mature forest patches) to a semi-natural state (grasslands and reservoirs). Many complex types were designated throughout the county at various levels of classification (up to 7 levels) based on different characteristics within each type including: elevation/climatic zone, bedrock and surficial geology (e.g., acidic/calcareous), landforms, slope position, stream confinement, stream size class, stream order, hydrologic regime (e.g., tidal/non-tidal), naturalness, ecoregion variant, and physiographic variant.

Town of Poestenkill: Important Restricted Ecosystem Complexes

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While the concept for each complex type is based on field observations from the county, not all important sites have been field confirmed, but rather many were delineated based on remote modelling using multiple GIS layers that predict where different ecosystem complexes are likely to occur (wetlands, streams, lakes, bedrock geology, surficial geology, soils, tidal wetlands, submerged aquatic beds, areas of steep slope, and land cover categories). Sites designated as "important" (i.e., for the county) represent examples hypothesized to be among the few best for their complex type, considering 1) the overall quality of ecosystem complex examples [those of the largest size, best condition, and landscape context], 2) the complementarity of different sites representing different complex variants, 3) stratification across different physiographic regions of the county, and 4) the abundance of the complex type in the county. Sites were assigned to one of 3 importance tiers (levels) for the county. The design of an ecosystem classification and delineation methods generally followed a model primarily developed by Ecological Intuition & Medicine/D.Hunt for regional planning efforts of the Adirondack Nature Conservancy, then perfected by RCBGP for the Rensselaer Plateau, especially relying upon a comprehensive natural community map. Thus, the boundaries of each type are very precise, aggregating all relevant features from multiple, fairly precisely-mapped overlapping GIS layers. For example, important "calcareous wetlands" were mapped from wetlands, bedrock geology, topography, and exemplary natural community layers with air photo interpretation confirmation/refinement.

3. Source Compilation.

(see Hunt January 2017/Rensselaer Land Trust County Conservation Plan; available upon request)

includes details on: Ecosystem Complex Presence/Identity Information Sources.

4. Site Assembly and Prioritization Methods.

(see Hunt January 2017/Rensselaer Land Trust County Conservation Plan; available upon request)

includes details on: Site Boundary Method Summary, Prioritization Status Determination Method Summary.

Boundary refinements were made only for the Pine Bowl Road Bog site, renamed Coopers Pond Complex (see site description and fact sheet), changing the site concept from a small peatland to a larger lake complex and expanding its geographic extent to include multiple hydrologically-connected lakes and wetlands, all in close proximity of the peatland.

5. GIS Information Available

(updated slightly from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)
(with minor updates catered to Town of Poestenkill in 2019)

Data Tallies:

- 1) Town of Poestenkill: total of 18 Level-2 ecosystem complex sites mapped in 2017.
- 2) Rensselaer County/county-level analyses: see Hunt January 2017/Rensselaer Land Trust County Conservation Plan.

File Name:

Restricted_EcoComplexes_ImpSites_Poestenkill

(newly created town subset of Restricted_EcoComplexes_ImpSites_RensCo)

Important Fields for Users:

- * = values newly populated for Town of Poestenkill Natural Resources Inventory.
- ** = metadata updated for Town of Poestenkill Natural Resources Inventory.

1. Ecosystem Complex Identity Fields.

Several levels of ecosystem complex classification.

SupComplex: General Ecosystem Complex Type; 2 values: upland complexes vs. aquatic/wetland complexes.

Complex_1: Level-1 Ecosystem Complex Type; 3 values: upland complex, wetland complex, aquatic complex.

Complex_2**:

Level-2 Ecosystem Complex Type. most effective and recommended grouping of complexes, with 11 types countywide; following names modelled after Adirondack TNC and RPA efforts. The complete list of Level-2 complexes for the county is: Boreal Flats, Clayplains, Lake Complex, Lowland Grasslands, Mature Forests, Mineral Soil Basin Wetlands, Peatlands, Riparian Complex, Rocky Summits, Sandplains, Tidal Wetlands.

Complex_3 to Complex_7*:

Level-3 to Level-7 Ecosystem Complex Types; values vary according to each complex type; some have only about 3 levels, others are discriminated more through Level-7 with finer and finer distinctions.

Important Fields for Users (continued):

2. Ecosystem Complex Location Fields.

SiteName*:

Local Placename; assigned mostly by RCBGP/D.Hunt using NYHP methodology; 2019: value changed for Pine Bowl Road Bog.

SiteSynon*: Other Placenames by which the site may be known; 2019: value changed for Pine Bowl Road Bog.

Town*,**:

2019: only partially populated, "Poestenkill" added for all sites in Town of Poestenkill; "others" added for towns beyond Poestenkill; could be expanded in the future.

3. Ecosystem Complex Priority Fields.

RensCoTier:

Priority Tier within County for this feature, important restricted ecosystem complexes.

Tier 1:

sites of highest priority for the ecosystem complex type; usually representing sites with a combination of the largest size, least disturbed condition and/or landscape context, highest diversity of habitat features, plus the broadest range of variation for the complex type and/or complex variants.

Tier 2:

sites of high priority for the ecosystem complex type; usually representing sites as good supplemental examples; generally smaller, more disturbed, and/or less diverse than comparable Tier 1 choices of the complex type and/or complex variants.

Tier 3**:

other sites of recommended or alternate focus (moderately high priority) for the ecosystem complex type; generally smaller, more disturbed, and/or less diverse than comparable Tier 1 and Tier 2 choices of the complex type and/or complex variants.

4. Ecosystem Complex Characteristics.

EC_SizeAc: Size of Ecosystem Complex Site in acres.

Other partially populated fields of potential use include:

"Complex Notes" (which explain more detail about site classification as the complex type or variant).

"Target Notes" (which explain more detail about the prioritization of a site as a conservation target).

numerous community composition fields. (high priority for future population).

6. Ecological Interpretation Summary.

(slightly modified for clarity from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

The important restricted ecosystem complex site layer was used in mapping larger-scale landscape features of Rensselaer County, New York, especially important aquatic networks and priority biodiversity conservation sites. County-wide displays of important restricted ecosystem complex sites, especially ones showing priority levels and for complex types based on natural (not semi-natural) community types and field observations (as opposed to remotely-modelled areas), reveal a pattern that reflects, in part, sites of the county long recommended as the highest priority for conservation: the Rensselaer Plateau, Taconic Mountains, the Hudson River and Hoosic River Corridors, plus scattered rich complexes of the Taconic Valley. Important restricted ecosystem complex sites are concentrated in all of these areas. Similarly, one complex type, "mature forest patches", is concentrated most on the Rensselaer Plateau, the largest intact natural landscape in the county. However, some restricted ecosystem types are, by nature, situated in different regions (e.g., lowland lake complexes at Sand Lake Lakes, lowland rocky summits at North Troy Hills), suggesting other important parts of the county for a comprehensive biodiversity conservation portfolio. Additionally, three complex types, two modelled from the soils GIS layer (sandplains and clayplains) and one modelled from the land cover GIS layer (grasslands), that are based more on "semi-natural" features than "natural" features, as well as a "reservoir variant" of lake complexes, suggest important sites for those features generally outside of the large landscape sites mentioned above. While little (but not nothing) is known of these county areas in the field, these models suggest that modelled sandplain areas may be important for rare sandplain plants and animals (e.g., blue lupine, Karner blue butterfly) and modelled grassland areas may be important for grassland birds. Thus, it is highly desirable to gather more field information for these types to confirm their potential importance; for example, to confirm that areas mapped in the NLCD data layer as

"pasture/hay" contain sites that support characteristic grassland birds, especially due to farm management practices compatible with breeding seasons for grassland birds. Limited field experiences in these complex types support their biodiversity conservation importance, with county-rare plants found and/or reported in a couple small sandplain sites (e.g., pitch pine, scrub oak, blue lupine) and breeding county-rare grassland birds found on one farm within the largest mapped grassland site for the county (e.g., bobolink, meadowlark, savannah sparrow), both also mapped as important animal habitat sites.

7. Site Summaries.

The specific goal for this feature for the Town of Poestenkill Natural Resource Inventory was to produce a site description for each of the 18 county-important restricted ecosystem complex sites in town designated for the 2017 Rensselaer County Conservation Plan. It was decided to present summary information in two formats per site:

1. a 1-page site fact sheet with abbreviated GIS-compatible information, especially for the composition of ecosystems, natural communities, rare plant concentration areas, and important animal habitats, as well as site relations with other ecological features.
2. a 1-page site description with longer descriptions of site aspects including ecological characteristics, regional importance, and conservation status of each site.

Site fact sheets and site descriptions are provided using fine print. They are longer for the larger and more complex sites plus sites that had more lengthy historical description documents. Documents were integrated, condensed, and Documents were integrated, condensed, and polished from all readily available prior electronic files of the Rensselaer County Biodiversity Greenprint Project (see below). The document formats were attempted to be as consistent as possible across all 18 sites, to allow meaningful site comparisons. These documents are intended to be "first iteration" drafts for public use to provide the following:

1. a visual image of the nature of each site, especially beyond just its name.
2. concise documents with consolidated but detailed information on the ecological characteristics, regional importance, and conservation status of each site.
3. templates which can be refined with more detailed information in the future, especially to fill in any information gaps.
4. pilot models which could be followed for important restricted ecosystem complex sites in other towns of the county.

Because many of these site concepts (boundaries and associated ecological characteristics), as biodiversity conservation sites, were envisioned by the Rensselaer County Biodiversity Greenprint Project, it is thought that the most informative description of each site to date is represented in this product. Future improvements, requiring more time beyond the project scope, could involve:

1. refinement of site boundaries for sites in the Taconic Foothills region based on field observations of community composition and evaluations of the site ecological coherency.
2. population of additional GIS fields abbreviated from information in the site fact sheets and site descriptions.
3. further review of manual files of the Rensselaer County Biodiversity Greenprint Project.
4. review and integration of any documents of other organizations.

Sources (2019 update):

1. Rensselaer County Conservation Plan documents.
(prepared for Rensselaer Land Trust 2017 including GIS datalayer, summary memo, cover memo).
2. Rensselaer County Biodiversity Greenprint Project electronic site files.
(see individual sites for relevant references).
3. Rensselaer Plateau Conservation Plan documents.
(see individual sites for relevant references, especially the working draft of the Site Description Appendix of the Rensselaer Plateau Ecological Features Documentation Series: Ecosystem Complexes).

Attachment EC 1. Ecosystem Complex Type Descriptions.

Boreal Flats

moist upland forested flats dominated by spruce and fir, typically with Spruce Flats and Balsam Flats communities dominant. designated in 2017.

Clayplain

moist upland forested flats with clay-dominated substrate, typically with Clayplain Forest or Maple-Basswood Rich Mesic Forest communities dominant. especially with Rhinebeck silt loam in Rensselaer County. designated in 2017.

Lake Complex

lake-dominated complex with associated lakeshore, wetland, and forested flats communities abundant. includes natural lakes and large reservoirs. see also Hunt 2013 (working draft of Ecosystem Complexes volume in Rensselaer Plateau Ecological Features Documentation Series) for more detailed description. designated in 2013.

Lowland Grassland

open grassland habitat on lowland flats and rolling hills. typically dry to moist with Successional Old Field, Hayfield, or Pastureland communities dominant. ideally maintaining a semi-natural state (e.g., unmowed) for the majority of the time annually. ideally with associated characteristic fauna (especially grassland-nesting birds and grassland lepidoptera). designated in 2017.

Mature Forest

relatively mature forest patch, especially for upland forest types and especially including areas trending towards an incipient old-growth state. designated in 2017.

Mineral Soil Basin Wetland

mineral soil-dominated wetland complex, typically with minerotrophic hydrologic conditions and dominated by open to forested mineral-soil communities. typically not associated with large aquatic bodies and often in large, relatively isolated basins. designated in 2017.

Peatland

peat-dominated wetland complex, typically with ombrotrophic hydrologic conditions and dominated by open to forested peatland communities. typically not associated with large aquatic bodies often in large isolated basins. see also Hunt 2013 (working draft of Ecosystem Complexes volume in Rensselaer Plateau Ecological Features Documentation Series) for more detailed description. designated in 2013.

Riparian Complex

river-dominated complex with associated riverside, wetland, and forested flats communities abundant. see also Hunt 2013 (working draft of Ecosystem Complexes volume in Rensselaer Plateau Ecological Features Documentation Series) for more detailed description. designated in 2013.

Rocky Summit

dry summit/slope area with rock-dominated substrate, typically with some exposed rocky substrate (e.g., bedrock) and summit/slope topography including areas of steep slopes, especially slopes of 25% or higher, and typically with some open canopy patches (rocky summit community types) mixed with dry forest types such as Appalachian Oak-Hickory Forest and Chestnut Oak Forest. see also Hunt 2013 (working draft of Ecosystem Complexes volume in Rensselaer Plateau Ecological Features Documentation Series) for more detailed description. designated in 2013.

Sandplain

moist upland forested flats with sand-dominated substrate, typically dominated by pines and oak, especially pitch pine and scarlet oak and often with Pitch Pine-Oak Forest and/or Appalachian Oak-Pine Forest communities dominant. especially with Windsor loamy sand in Rensselaer County. designated in 2017.

Tidal Wetland

tidally-influenced wetland complex. typically with diurnal exposure to tides and dominated by open to forested estuarine wetland community types such as Freshwater Tidal Marsh. typically bordering associated large estuarine water bodies. designated in 2017.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Barberville Gorge Forest** (Ecosystem Complex)

Ecosystem Complex Type: Mature Forest Complex

Complex Subtype Hierarchy: Upland/Climax/Deciduous

Physiographic Setting: Rensselaer Plateau (Rensselaer Plateau Escarpment).

Descriptive Account (Ecosystem & Ecological Community Composition).

Barberville Gorge Forest represents one of 15 putative old-growth or incipient old-growth patches known and mapped from the county as of 2017. The primary habitat, mature forest, is very limited in extent by nature in Rensselaer County due the widespread logging history in the region, thus it is tracked as a restricted ecosystem complex type. The patch of mature forest at this site consists of upland forest, possibly only one community type, Hemlock-Northern Hardwood Forest, a conifer to mixed forest type. Field observations suggest many forest-grown trees of large girth and the initial development of large standing dead and large coarse woody debris layers.

Rare Species Synopsis.

No rare species are known from this patch; none or few are likely because of the common forest types.

Landscape Context.

The mature forest patch is part of (or at the edge) of the larger Poesten Kill Barberville ecosystem complex (see separate site description) and embedded within the relatively large and intact Davitt Pond Block.

Ecological Integrity.

in very good condition and progressively undergoing natural recovery to a more mature state.

Inventory Status (Species & Ecological Communities).

The mature forest patch was field verified by the New York Old Growth Forest Association about 2002 and casually observed on multiple field trips of conservation organizations and natural history groups.

Mapping Status.

approximate location mapped, with boundaries estimated, in part, from rapid air photo review.

Conservation Status.

The site is managed as "forever wild" by The Nature Conservancy.

Sources:

GIS layers (Rensselaer County: important ecological features).

pending more thorough review: field notes (New York Old Growth Forest Association survey)

Draft: D.M.Hunt. June 25, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Barberville Gorge Forest** (Mature Forest Complex).

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites: -

Excluded but Related/Overlapping Sites:

Barberville Falls Preserve

Poesten Kill Barberville

Western Rensselaer Plateau Escarpment

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Midreach (overlapping)

Exemplary Communities: Davitt Pond Block (overlapping)

Rare Plant Concentration Area: Barberville Gorge (overlapping)

Important Animal Habitat: Rensselaer Plateau Forest (embedded within)

B. Site Priority.

Regional Priority:

County Priority (County Plan 2017): Tier 1 (highest priority).

Rensselaer Plateau Priority (Conservation Plan ~2013): not included (not designated as type).

C. Site Description.

Complex Hierarchy: Upland Complex/Mature Forest Complex.

Site Configuration:

Size: 2 acres; Shape/Boundary: approximate location and shape, likely to gradually expand in future if continued to be under "forever-wild" management regime.

Town Location: Poestenkill (100%).

Descriptive Summary:

relatively mature patch of Hemlock-Northern Hardwood Forest approaching incipient old-growth stage. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....			.....Ecosystem Patches.....		
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>		<u>open/forest</u>	<u>open/forest</u>
Mature Forest	1	1 (0/1)	0	1	1 (0/1)	0

Ecosystem Composition: Mature Climax Forest: 1 patch.

Ecosystem Accuracy: fully assessed from careful air photo review and field evaluation.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition: upland forests (Hemlock-Northern Hardwood Forest, Beech-Maple Mesic Forest)

Importance (most important examples):

Hemlock-Northern Hardwood Forest (county co-exemplary, NY Natural Heritage Program EO), Beech-Maple Mesic Forest (county near-exemplary).

2. Rare Plant Concentration Area: none known, unlikely.

3. Important Animal Concentration Areas: none known, unlikely.

4. Rare Animal Populations: none known, unlikely.

F. Associated Landscape Features: Rensselaer Plateau Forest (see separate site description)

Sources:

GIS layers (Rensselaer County: important ecological features).

pending more thorough review: field notes (New York Old Growth Forest Association survey)

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: Coopers Pond Complex (Ecosystem Complex)

Ecosystem Complex Type: Mineral Soil Complex

Complex Subtype Hierarchy: Circumneutral

Physiographic Setting: Taconic Foothills region (Western Rensselaer County).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. The Coopers Pond Complex consists of a small central wetland, apparently a peatland (Pine Bowl Road Bog), in close proximity to three small ponds and multiple associated mineral soil wetlands, all thought best aggregated into one somewhat heterogeneous ecosystem complex. Although the embedded Pine Bowl Road Bog ecosystem identity is uncertain, it is treated as a peatland, not a mineral soil wetland, based on the CONUS datalayer classification, and supported by a rapid casual air photo interpretation. The larger Cooper Ponds Complex ecosystem complex type, the presence of a peatland, and the potential inclusion of the associated ponds within this complex need field confirmation. The single peatland patch is classified (NWI datalayer) as a forested/shrub wetland with a "peat modifier". The peatland is likely the Lower New England variant, characterized by the suspected presence of Highbush Blueberry Bog Thicket. The expanded site contains three ponds, ones of 6 acres (Coopers Pond), 6 acres, and 2 acres.

Regional Importance. The importance of this complex is derived especially from its suspected unusual peatland type for the Taconic Foothills region, as reflected by the following statistics:

- 1) It contains one of only 4 CONUS datalayer peatland patches in the county outside of the Rensselaer Plateau.
- 2) It contains the 19th largest peatland patch in county.

Rare Species Synopsis.

No rare species are known to date from this site.

Landscape Context.

Although the surrounding landscape (Coopers Pond Block) is essentially fragmented forest, dissected by residential structures and associated clearings, it is moderately large and somewhat intact for the Taconic Foothills region and serves as a good natural landscape for large wetland examples in that region. in good to fair condition (good for the Taconic Foothills region).

Ecological Integrity.

2017: apparently in good condition from air photos; 2019: expanded site concept includes some bisecting dirt roads and small altered wetland segments.

Inventory Status (Species & Ecological Communities).

pending field evaluation/confirmation due to challenging site access. high inventory priority for the Taconic Foothills and Rensselaer County, focusing on rapid evaluation of peatland, then lakes, then wetlands, then rare species. The larger Cooper Ponds Complex ecosystem complex type, the presence of a peatland, and the potential inclusion of the associated ponds within this complex all need field confirmation.

Mapping Status.

2017: single potential peatland patch precisely delineated, as part of comprehensive county conservation plan treatment of important restricted ecosystem complexes, from air photo signature as an area resembling a peatland. 2019: added two lakes and multiple associated NWI/CONUS wetlands to form a much larger contiguous wetland/aquatic complex.

Conservation Status.

unknown efforts of private landowners and Town of Poestenkill, the latter as the owner of four parcels at the site.

Sources:

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. June 25, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Coopers Pond Complex** (Mineral Soil Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: Pine Bowl Road Wetlands

Included Subsites:

Pine Bowl Road Bog

Coopers Pond

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features: -

Forest Landscape: Coopers Pond Forest (embedded within)

B. Site Priority

Regional Priority: County Priority (County Plan 2017): Tier 3 (high priority).

C. Site Description

Complex Hierarchy: Wetland-Aquatic Complex/Wetland Complex/Mineral Soil Wetland Complex/Circumneutral.

Site Configuration:

Size: 37 acres (expanded in 2019 from prior 6 acres); relatively stable concept for peatland complex, based on extent of characteristic community types on comprehensive federal wetland datalayer; however, complex concept and boundary expanded in 2019 and thought to be best represented as including two adjacent lakes and associated wetlands, thus reclassified from a peatland complex to a mineral soil wetland complex.

Town Location: Poestenkill (100%).

Descriptive Summary:

wetland complex apparently with a small central peatland in close proximity to two small ponds and associated with other mineral soil wetlands; tentatively thought best aggregated into one heterogeneous ecosystem complex. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....				.....Ecosystem Patches.....			
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>lake</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>lake</u>
		<u>open/forest</u>	<u>open/forest</u>			<u>open/forest</u>	<u>open/forest</u>	
Peatland Complex	3	0	2 (2/0)	1	6	0	4 (4/0)	2

Ecosystem Composition:

mineral soil wetland: 3 patches (2 open? and 1 forested?).

lake: 2 patches (monomictic?).

Circumneutral open peatland: 1 patch (-Lower New England variant).

Ecosystem Accuracy:

based on prior air photo delineation with essentially no field evaluation; pending careful air photo review and review of federal wetland datalayer after lumping two lakes into the former concept of the complex (peatland).

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition: lakes (ponds), wetlands (-Highbush Blueberry Bog Thicket, -Shrub Swamp, -Red Maple-Hardwood Swamp)

Importance: 0 NY Natural Heritage Program EOs.

2. Rare Plant Concentration Area: none known, but probable.

3. Important Animal Concentration Areas: none known, but possible.

4. Rare Animal Populations: none known, but possible.

F. Associated Landscape Features: relatively isolated.

Sources:

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. June 25, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Dustin Swamp Complex** (Ecosystem Complex)

Ecosystem Complex Type: Peatland Complex

Complex Subtype Hierarchy: Acidic/Northern Appalachian

Physiographic Setting: Rensselaer Plateau (Central Rensselaer Plateau).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. Dustin Swamp Complex is a peatland complex situated in a headwater basin. Peatland patches have developed along small unconfined streams (Marsh Headwater Stream) within the basin. Although the site contains small streams, the complex is dominated by peatland features and is most strongly influenced by peatland characteristics, thus it is not treated as a riparian wetland complex. Dustin Swamp Complex contains several patches of acidic open peatland, acidic forested lowlands, and acidic forested peatland/acidic boreal swamp ecosystem types. It includes Dustin Swamp (proper) plus several additional associated undisturbed, hydrologically-linked peatlands and boreal swamps that flow into the nearby Poesten Kill. Individual wetlands varies from an open peatland complex, a forested peatland complex, and a peatland complex with a mosaic of open and forested patches.

Regional Importance. The site was identified as a Rensselaer Plateau conservation target for ecosystem complexes. Its importance is derived from its large wetland size and excellent quality/condition, as confirmed from numerous field studies. Its importance and large size are reflected by the following statistics:

- 1) It is one of 12 regionally-important acidic peatlands and boreal swamps of the Rensselaer Plateau.
- 2) It is among the 12 largest acidic riparian wetlands in the county.
- 3) It is between the largest 100-200 CONUS datalayer wetland complexes in the county.
- 4) It contains the 5th largest CONUS datalayer single peatland patch in the county.
- 5) It contains the 110th largest CONUS datalayer single wetland patch in the county.

Community Composition. The acidic open peatland is dominated by Inland Poor Fen, Dwarf Shrub Bog, Black Spruce-Tamarack Bog, Sedge Meadow, Shallow Emergent Marsh, and Marsh Headwater Stream, with other characteristic natural communities in this ecosystem including various wetlands, small lakes, and small stream types. The acidic boreal swamp is dominated by Spruce-Fir Swamp (several small patches), with other characteristic natural communities in this ecosystem including Balsam Flats and Hemlock-Hardwood Swamp. The acidic forested lowlands is dominated by Spruce Flats, with other characteristic natural communities in this ecosystem including many lowland and boreal forest types, plus forested to shrub wetland types. The site is important especially for its relatively large and intact examples of boreal wetland community types: Balsam Flats, Dwarf Shrub Bog, Inland Poor Fen, Black Spruce-Tamarack Bog, and Spruce-Fir Swamp, as well as good examples of other more common types: Highbush Blueberry Bog Thicket, Sedge Meadow, and Shallow Emergent Marsh. A key community type, Inland Poor Fen, is indicative and characteristic of this complex type and is a dominant feature in at least one patch of the complex. This and other community types at the site are typical of the Northern Appalachian peatland variant.

Important Natural Community Examples. Important natural communities at the site include several county-exemplary and regionally-significant examples. Besides the county-exemplary communities listed on the site fact sheet, other state-significant community examples include: Hemlock-Northern Hardwood Forest, Shallow Emergent Marsh, Spruce Flats, and Spruce-Northern Hardwood Forest. There are an additional 5 other county-significant community examples. Three moderately globally-rare community types are known from the site: Spruce-Fir Swamp, Spruce-Northern Hardwood Forest, and Highbush Blueberry Bog Thicket. There are 3 additional state-rare community types and 3 additional county-rare types at the site.

Rare Species Synopsis.

The site is also designated as a rare plant concentration area (with many county-rare plants) and a county-important animal concentration area.

Landscape Context.

The site is contained within the broader Central Rensselaer Plateau Forest, mostly in the Spruce-Fir Core of the plateau. It is situated within the Dyken Pond Block (Towns of Berlin, Grafton, and Poestenkill), where it is surrounded mostly by recovering forest.

Ecological Integrity.

in very good condition, with very few unnatural disturbances noted.

Inventory Status (Species & Ecological Communities).

The site has been partially explored to date, with intensive studies focused on county lands (Dyken Pond Center). Communities have been mapped as part of a comprehensive regional map.

Mapping Status.

precisely delineated, as part of comprehensive Rensselaer Plateau conservation plan treatment of important restricted ecosystem complexes. Community types were determined from air photos and from multiple field surveys on county lands, culminating in a comprehensive regional ecological community map for the Rensselaer Plateau, from which ecosystem complexes were delineated.

Conservation Status.

The site is partially on county conservation land (Dyken Pond Environmental Center), apparently intended as forever-wild land, and partially on private land, apparently used primarily as working forest.

Sources:

Hunt, David M. 2013. Dustin Swamp Complex. Town of Grafton. Preliminary Ecological Summary. Ecological Intuition & Medicine. January. Working draft for Rensselaer Plateau Conservation Plan.
GIS layers (Rensselaer County: important ecological features).

ECOSYSTEM COMPLEX FACT SHEET

Site: **Dustin Swamp Complex** (Peatland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms:

Fifty Six Road NW Wetlands

Included Subsites:

Dustin Swamp (Grafton/Poestenkill)

Ash Swamp (mostly Grafton/some in Poestenkill) (=Dyken Pond Road Swamp, Northern Rensselaer Plateau Wetland Site 211a)

Teal Brook (Grafton) (~=NRP Wetland Site 210a)

Dyken Pond Road Marshes #2 (=NRP Wetland Site 218).

Excluded but Related/Overlapping Sites:

Dyken Pond Wetlands,

Dyken Pond Center

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Exemplary Communities: Dustin Swamp Complex (contained & overlapping)

Rare Plant Concentration Area: Dustin Swamp Complex (equivalent)

Important Animal Habitat: Dustin Swamp Complex (equivalent)

B. Site Priority.

Regional Priority:

County Priority (County Plan 2017): Tier 2 (very high priority).

Rensselaer Plateau Priority (Conservation Plan ~2013): Tier 2 (very high priority).

C. Site Description.

Complex Hierarchy: Wetland-Aquatic Complex/Wetland Complex/Peatland Complex/Acidic.

Site Configuration: Size: 244 acres; Shape/Boundary: relatively stable concept.

Town Location: Poestenkill (55%) ~- Grafton (45%).

Descriptive Summary:

acidic peatland complex (Northern Appalachian variant) situated in a headwater basin with Inland Poor Fen patches. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....			.....Ecosystem Patches.....		
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>		<u>open/forest</u>	<u>open/forest</u>
Peatland Complex	1	1 (0/1)	2 (1/1)	15	6 (0/6)	9 (6/3)

Ecosystem Composition:

Acidic open peatland: 6 patches (Northern Appalachian variant).

Acidic moist flats upland forest: 6 patches (Northern Appalachian variant).

Acidic mineral soil wetland forest: 3 patches (Northern Appalachian variant).

Ecosystem Accuracy: fully assessed from careful air photo review and moderate field evaluation.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

Acidic open peatland:

wetlands (Inland Poor Fen, Black Spruce-Tamarack Bog, Dwarf Shrub Bog, Sedge Meadow, Shallow Emergent Marsh, Spruce-Fir Swamp, Highbush Blueberry Bog Thicket, Shrub Swamp, Deep Emergent Marsh, Red Maple-Hardwood Swamp, Hemlock-Hardwood Swamp), streams (Marsh Headwater Stream, Intermittent Stream), lakes (Oligotrophic Pond, Eutrophic Pond).

Acidic moist flats upland forest:

upland forests (Spruce Flats, Balsam Flats, Spruce-Northern Hardwood Forest, Pine-Northern Hardwood Forest, Hemlock-Northern Hardwood Forest), wetlands (Spruce-Fir Swamp, Hemlock-Hardwood Swamp, Red Maple-Hardwood Swamp, Shrub Swamp).

Acidic mineral soil wetland forest:

wetlands (Spruce-Fir Swamp, Hemlock-Hardwood Swamp), upland forests (Balsam Flats).

Importance (most important examples):

Spruce-Fir Swamp (county exemplary, global priority), Dwarf Shrub Bog (county exemplary, state significant), Inland Poor Fen (county exemplary, state significant), Sedge Meadow (county exemplary, state significant, NY Natural Heritage Program EO).

2. Rare Plant Concentration Area: yes (7 county-rare plants; see separate site fact sheet).

3. Important Animal Concentration Areas: yes. (2 types; see separate site fact sheet).

4. Rare Animal Populations: yes (1 animal species; see separate site fact sheet).

F. Associated Landscape Features:

Rensselaer Plateau Forest (see separate site description)

Poesten Kill Headwaters Network (see separate site description)

Sources:

Hunt, David M. 2013. Dustin Swamp Complex. Town of Grafton. Preliminary Ecological Summary. Ecological Intuition & Medicine. January. Rensselaer Plateau Ecosystem Complexes, Site Description Appendix. Working Draft.

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **East Poestenkill Flats** (Ecosystem Complex)

Ecosystem Complex Type: Riparian Complex

Complex Subtype Hierarchy: Unconfined River/Small Stream//Acidic-Circumneutral/Headwater Floodplain

Physiographic Setting: Rensselaer Plateau (Central Rensselaer Plateau).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. East Poestenkill Flats is a small riparian wetland complex situated in a localized flat of the Upper Poesten Kill Valley. It is situated along the mainstem of the Poesten Kill Aquatic Network, the largest network of the Rensselaer Plateau and one of several regionally-important networks on the plateau. It contains open confined riparian wetland ecosystem patches, representing portions of a relatively intact headwater stream with associated riverside terraces.

Regional Importance. The site was identified as a Rensselaer Plateau conservation target for ecosystem complexes. Its importance is derived from its large wetland size and high quality/good condition, as confirmed from roadside observations and limited field studies. Its importance and large size are reflected by the following statistics:

- 1) It is one of 12 important riparian complexes of the Rensselaer Plateau.
- 2) It is among the 5 largest basin wetlands in the county (all over 200 acres).

Community Composition. The open confined riparian wetland ecosystem is very diverse, dominated by Rocky Headwater Stream, Floodplain Forest, and Maple-Basswood Rich Mesic Forest, with several other characteristic associated riparian communities, mostly wetland types. A key community type, Floodplain Forest, is indicative and characteristic of this complex type and is a dominant feature at the site, reflecting a strong hydrological influence from the adjacent large headwater stream (a mosaic of Rocky Headwater Stream and Marsh Headwater Stream).

Important Natural Community Examples. Important examples of two natural community types, Rocky Headwater Stream and Floodplain Forest, occur at the site, both county-exemplary and thought to be state-significant. One of these communities (Floodplain Forest) is globally rare, although this community needs field checking for confirmation of its identity and condition. Two additional state and county-rare community types are known from the site.

Rare Species Synopsis.

no rare species known to date, but with designated county-important animal habitat.

Landscape Context.

The local landscape surrounding the complex is partially fragmented forest within large roadless blocks; at the edge of a centralized clearing within a much larger forest landscape. B-ranked (good).

Ecological Integrity.

in moderately good condition, but with some non-native invasive species spreading and some hydrological alterations.

Inventory Status (Species & Ecological Communities).

The site has been little explored to date but ecological communities have been fully mapped as part of comprehensive regional map.

Mapping Status.

Site boundaries were precisely delineated, as part of the comprehensive Rensselaer Plateau conservation plan treatment of important restricted ecosystem complexes and as inferred from the comprehensive regional ecological community map for the Rensselaer Plateau. Community types were, in turn, determined mostly from air photos and limited field observations (especially along County Route 40).

Conservation Status.

The site is entirely private. unknown conservation efforts.

Sources:

Hunt, David M. 2013. East Poestenkill Flats. Town of Poestenkill. Preliminary Ecological Summary. Ecological Intuition & Medicine. January 13. Working draft for Rensselaer Plateau Conservation Plan.
GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. June 25, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **East Poestenkill Flats** (Riparian Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: -
Included Subsites: -
Excluded but Related/Overlapping Sites: -
Related County-Important Ecological Features:
Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)
Forest Landscape: Rensselaer Plateau Forest (embedded within)
Aquatic Network: Poesten Kill Headwaters (embedded within)
Ecosystem Aggregate: Poesten Kill Corridor (embedded within)
Important Animal Habitat: Upper Poesten Kill (overlapping)

B. Site Priority

Regional Priority:
County Priority (County Plan 2017): Tier 2 (very high priority).
Rensselaer Plateau Priority (Conservation Plan -2013): Tier 2 (very high priority).

C. Site Description

Complex Hierarchy:
Wetland-Aquatic Complex/Wetland Complex/Riparian Complex/Non-Tidal River/Unconfined River/Small Stream/Acidic-Circumneutral/Headwater Floodplain.
Site Configuration:
Size: 226 acres; based on extent of characteristic community types on comprehensive regional community map.
Town Location: Poestenkill (100%).
Descriptive Summary:
small riparian wetland complex situated in a localized flat of the Upper Poesten Kill Valley and containing patches of Floodplain Forest. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....				.....Ecosystem Patches.....			
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>river</u> <u>confined/unconfined</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>river</u> <u>confined/unconfined</u>
Riparian Complex	1	0	0	1 (1/0)	1	0	0	1 (1/0)

Ecosystem Composition:
Open confined riparian wetland: 1 patch, (Lower New England variant; part of Confined Headwater Stream System).
Ecosystem Accuracy: fully assessed from careful air photo review and moderate field evaluation.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

streams (Rocky Headwater Stream, Marsh Headwater Stream), wetlands (Floodplain Forest, Shallow Emergent Marsh, Shrub Swamp, Sedge Meadow, Deep Emergent Marsh, Red Maple-Hardwood Swamp), lakes (Vernal Pool), upland forests (Maple-Basswood Rich Mesic Forest).

Importance (most important examples):

Rocky Headwater Stream (county-exemplary, state-significant), Floodplain Forest (county near-exemplary, state-significant); 0 NY Natural Heritage Program EOs.

2. Rare Plant Concentration Area: none known, but possible.

3. Important Animal Concentration Areas: yes. (3 types; see separate site fact sheet).

4. Rare Animal Populations: none known, but possible.

F. Associated Landscape Features:

Rensselaer Plateau Forest (see separate site description)
Poesten Kill Headwaters Network (see separate site description)

Sources:

Hunt, David M. 2013. East Poestenkill Flats. Town of Poestenkill. Preliminary Ecological Summary. Ecological Intuition & Medicine. January 13. Rensselaer Plateau Ecosystem Complexes, Site Description Appendix. Working Draft.
GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Hosford Pond Bog** (Ecosystem Complex)

Ecosystem Complex Type: Peatland Complex

Complex Subtype Hierarchy: Acidic/Northern Appalachian

Physiographic Setting: Rensselaer Plateau (Central Rensselaer Plateau).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. Hosford Pond Bog Complex is a peatland complex situated in a low kettlehole basin. The core of the site, Hosford Pond Bog (proper), represents an undisturbed open peatland complex of special regional significance, associated with surrounding areas of spruce and fir. Also included in this site concept is Madonna Lake Road Swamp, an undisturbed peatland complex with a mosaic of open and woodland patches, which drains across Madonna Lake Road south into Hosford Pond Bog (proper). The larger site contains both acidic open peatland and acidic forested lowlands ecosystem types. Small areas resembling acidic forested peatland/acidic boreal swamp are treated as part of the latter ecosystem type. The complex represents a Northern Appalachian peatland variant, with many boreal species. The site was a favorite biological study site for local colleges in the 1970s to 1980s.

Regional Importance. The site was identified as a Rensselaer Plateau conservation target for ecosystem complexes. Its importance is derived from its large wetland size and excellent quality/condition, as confirmed from numerous field studies. Its importance and large size are reflected by the following statistics:

- 1) The site is one of 12 important acidic peatlands & boreal swamps of the Rensselaer Plateau.
- 2) It was about the 5th most important acidic peatland complex identified for the plateau in 2010 (Hunt 2013).
- 3) It contains the 8th, 14th, and 24th largest CONUS datalayer peatland patches in the county.
- 4) It contains the 80th largest CONUS datalayer single wetland patch in the county.
- 5) It is among the largest 100 CONUS datalayer wetland complexes in the county.

Community Composition. The acidic open peatland is dominated by Bog Lake, Inland Poor Fen, Dwarf Shrub Bog, Sedge Meadow, and Marsh Headwater Stream, with other characteristic natural communities in this ecosystem including various wetland types. The acidic forested lowlands is dominated by Hemlock-Hardwood Swamp, Hemlock-Northern Hardwood Forest, and Intermittent Stream. The Dwarf Shrub Bog example at the site is typical of the community type and represents a regionally large occurrence. Highbush Blueberry Bog Thicket occurs within the Madonna Lake Road Swamp subsite and is represented by a small example. The site is important especially for its Bog Lake, fringed by wide open peatlands. Bog Lake is indicative and characteristic of this complex type and is the dominant centralized feature at the site. This and other community types at the site are typical of the Northern Appalachian peatland variant.

Important Natural Community Examples. Important natural communities at the site include a concentration of occurrences suspected to be state significant and 3 state-rare community types. The Lower New England Ecoregion community portfolio of The Nature Conservancy (2006) includes NYNHP-documented community occurrences on the Rensselaer Plateau from Hosford Pond Bog.

Rare Species Synopsis.

Hosford Pond Bog is among few individual sites of the plateau with the greatest concentration of county-rare plants. It also supports a county-important animal habitat and a potential county-rare animal species.

Landscape Context.

The site is contained within the broader Central Rensselaer Plateau Forest and is surrounded by the typical Hemlock-Beech Matrix of the plateau. It is located mostly within the relatively large and intact Dyken Pond Block.

Ecological Integrity.

The site is generally in very good condition. A small Reedgrass Marsh has become established as a disturbance within this ecosystem.

Inventory Status (Species & Ecological Communities).

The site has been moderately well explored to date with assistance from landowners. It was historically studied by local colleges in the 1970s to 1980s. Communities have been mapped as part of a comprehensive regional map.

Mapping Status.

Site boundaries were precisely delineated, as part of the comprehensive Rensselaer Plateau conservation plan treatment of important restricted ecosystem complexes and as inferred from the comprehensive regional ecological community map for the Rensselaer Plateau. Community types were, in turn, determined from air photos, field surveys, and roadside observations.

Conservation Status.

The site is entirely private land and is apparently being conserved, to some degree, for its natural features, in balance with treatment as a working forest, vulnerable to future subdivision and residential development.

Sources:

Hunt, David M. 2013. Hosford Pond Bog. Town of Poestenkill. Preliminary Ecological Summary. Ecological Intuition & Medicine. March. Working draft for Rensselaer Plateau Conservation Plan.
GIS layers (Rensselaer County: important ecological features).

ECOSYSTEM COMPLEX FACT SHEET

Site: **Hosford Pond Bog** (Peatland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: Poestenkill Bog (NYSM 1932 collection)
Included Subsites: Hosford Pond
Excluded but Related/Overlapping Sites: -
Related County-Important Ecological Features: -
Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)
Forest Landscape: Rensselaer Plateau Forest (embedded within)
Aquatic Network: Bonesteel Creek Network (embedded within)
Ecosystem Aggregate: Bonesteel Creek Headwaters (embedded within)
Exemplary Communities: Hosford Pond Bog (contained)
Rare Plant Concentration Area: Hosford Pond Bog (contained)
Important Animal Habitat: Hosford Pond Bog (contained)

B. Site Priority.

Regional Priority:
County Priority (County Plan 2017): Tier 2 (very high priority).
Rensselaer Plateau Priority (Conservation Plan ~2013): Tier 3 (high priority).

C. Site Description.

Complex Hierarchy: Wetland-Aquatic Complex/Wetland Complex/Peatland Complex/Acidic.
Site Configuration: Size: 86 acres; Shape/Boundary: relatively stable concept.
Town Location: Poestenkill (50%) > Grafton (50%).
Descriptive Summary:
acidic peatland complex situated in a kettlehole with a centralized Bog Lake, open bog mat, and surrounding boreal swamp of spruce and fir. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....				.....Ecosystem Patches.....			
	<u>total</u>	<u>upland</u>	<u>wetland</u>		<u>total</u>	<u>upland</u>	<u>wetland</u>	
		<u>open/forest</u>	<u>open/forest</u>			<u>open/forest</u>	<u>open/forest</u>	
Peatland Complex	1	1 (0/1)	1 (1/0)		3	1 (0/1)	2 (2/0)	

Ecosystem Composition:
Acidic open peatland: 2 patches (Northern Appalachian variant).
Acidic moist flats upland forest: 1 patch (Northern Appalachian variant).
Ecosystem Accuracy: fully assessed from careful air photo review and moderate field evaluation.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

Acidic open peatland:

lakes (Bog Lake), wetlands (Inland Poor Fen, Dwarf Shrub Bog, Sedge Meadow, Shallow Emergent Marsh, Deep Emergent Marsh, Red Maple-Hardwood Swamp, Highbush Blueberry Bog Thicket, Reedgrass Marsh), streams (Marsh Headwater Stream).

Acidic moist flats upland forest:

wetlands (Hemlock-Hardwood Swamp, Red Maple-Hardwood Swamp), upland forests (Hemlock-Northern Hardwood Forest), streams (Intermittent Stream)

Importance (most important examples):

Bog Lake (county-exemplary, state significant, NY Natural Heritage Program EO), Inland Poor Fen (state significant, NY Natural Heritage Program EO), other state significant: Dwarf Shrub Bog, Sedge Meadow.

2. Rare Plant Concentration Area: yes (1 state-rare plant, 16 county-rare plants; see separate site fact sheet).

3. Important Animal Concentration Areas: yes? (~1 type; see separate site fact sheet).

4. Rare Animal Populations: yes? (1 potentially rare animal; see separate site fact sheet).

F. Associated Landscape Features:

Rensselaer Plateau Forest; see separate site description)
Poesten Kill Headwaters Network (see separate site description)

Sources:

Hunt, David M. 2013. Hosford Pond Bog. Town of Poestenkill. Preliminary Ecological Summary. Ecological Intuition & Medicine. March. Rensselaer Plateau Ecosystem Complexes, Site Description Appendix. Working Draft.
GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Moules Lake** (Ecosystem Complex)

Ecosystem Complex Type: Peatland Complex

Complex Subtype Hierarchy: circumneutral peatland. (Lower New England var., Level 3-4 types)

Physiographic Setting: Taconic Foothills region (Western Rensselaer County).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. The Moules Lake peatland complex is one of the largest few peatlands in the county outside of the Rensselaer Plateau, where this ecosystem complex type is concentrated in the county. The peatland complex consists of one patch with a central pond, another patch with a peatland basin, and another patch with an open mineral soil wetland, all roughly surrounded by a forested wetland zone. It represents a locally unusual wetland complex, uncommon in the Taconic Foothills region, specifically a circumneutral Lower New England peatland variant.

Regional Importance. The importance of the Moules Lake complex is derived from its large wetland size and high quality/good condition, as confirmed from multiple field studies. Its importance and moderately large size is reflected by the following statistics:

County Peatland Importance: 1 of 26 important peatland complexes.

County Peatland Priority: one of 11 Tier-2 peatlands.

Circumneutral Peatland Importance: one of 9 important examples in the county.

County Wetland Importance: between the largest 100-200 CONUS datalayer wetland complexes in the county.

It contains the 4th most important of 9 county-important examples of a circumneutral peatland, behind Taplin Pond (Stephentown), Reicharts Lake (Sand Lake), and Mud Lake Bog (Sand Lake).

Community Composition. A key community type at the site is Bog Lake, indicative and characteristic of peatlands and dominant within this complex.

Rare Species Synopsis.

The peatland complex is known to support numerous regionally-rare plants characteristic of circumneutral bogs/fens including trees, shrubs, herbs, graminoids, aquatic macrophytes, and ferns. Among these rare species are multiple orchids.

Landscape Context.

The local landscape surrounding the peatland complex is a mix of residential land and fragmented forest, with forest concentrated as buffer around wetlands.

Ecological Integrity.

moderately good local condition, especially for the Taconic Foothills region.

Inventory Status (Species & Ecological Communities).

with limited detailed studies for biodiversity. The most thorough study of the site, from the 1980s, developed a site-wide list of plants and did not focus on community types. Recent community-based studies have been only in peripheral spots. Some of the unusual species present in the 1980s may have become extirpated. Additional rare species are suspected. high inventory priority for the Rensselaer County Taconic Foothills region.

Mapping Status.

precisely delineated, as part of comprehensive county conservation plan treatment of important restricted ecosystem complexes, from typical air photo signatures for peatland and other wetland patches. subsequently partially field confirmed.

Conservation Status.

apparently very vulnerable to expanding development, especially in the North Greenbush part of the site and especially since the 1980s. no known protection commitment other than interest from Vanderheyden Hall staff for walking trails.

Sources:

Hunt, David M. 2018. Moules Lake/Vanderheyden Hall Parcels: Significance of Ecological Features. Towns of North Greenbush & Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. May 12. Working Draft. includes: Moules Lake Peatland Fact Sheet. County-Important Ecological Features. GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 4, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Moules Lake** (Peatland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: Moules Lake Peatland
Included Subsites: Moules Lake (proper)
Excluded but Related/Overlapping Sites: -
Related County-Important Ecological Features:
Priority Conservation Sites: Wynants Kill Corridor (embedded within)
Ecosystem Complex: Moules Lake (contained)
Exemplary Communities: Moules Lake (contained)
Rare Plant Concentration Area: Moules Lake (contained)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): Tier 2 (very high priority).

C. Site Description.

Complex Hierarchy: Wetland-Aquatic Complex/Wetland Complex/Peatland. Complex/Circumneutral.

Site Configuration: Size: 54 acres; Shape/Boundary: relatively stable concept.

Town Location: North Greenbush (50%) > Poestenkill (50%).

Descriptive Summary:

locally unusual basin wetland complex containing a circumneutral Lower New England peatland variant with a central pond (Bog Lake) plus peatland and open mineral soil wetland communities. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....			.....Ecosystem Patches.....		
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>		<u>open/forest</u>	<u>open/forest</u>
Peatland Complex	2	0	2 (1/1)	2	0	2 (1/1)

Ecosystem Composition:

Circumneutral mineral soil wetland forest: 1 patch (Lower New England variant).

Circumneutral open peatland: -1 patch (Lower New England variant).

Ecosystem Accuracy:

rapid estimate based on limited field evaluation and prior air photo delineation, but pending careful air photo review.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

Circumneutral mineral soil wetland forest: wetlands (Red Maple-Hardwood Swamp).

Circumneutral open peatland:

lakes (Bog Lake), wetlands (Dwarf Shrub Bog, Highbush Blueberry Bog Thicket, Black Spruce-Tamarack Bog, Shrub Swamp).

Importance (most important examples): Bog Lake (county-exemplary), 0 NY Natural Heritage Program EOs.

2. Rare Plant Concentration Area:

yes (1 globally-rare plant, 1 state-rare plant, 17 county-rare plants; see separate site fact sheet).

3. Important Animal Concentration Areas: none known, but probable (odonates, birds).

4. Rare Animal Populations: none known, but possible.

F. Associated Landscape Features: relatively isolated.

Sources:

Hunt, David M. 2018. Moules Lake/Vanderheyden Hall Parcels: Significance of Ecological Features. Towns of North Greenbush & Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. May 12. Working Draft.
includes: Moules Lake Peatland Fact Sheet. County-Important Ecological Features.
GIS layers (Rensselaer County: important ecological features).

Draft 2: May 3, 2019. initial draft: May 12, 2018.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Newfoundland Creek Headwaters** (Ecosystem Complex)

Ecosystem Complex Type: Mineral Soil Wetland Complex

Complex Subtype Hierarchy: Acidic-Circumneutral/Riparian Wetland/Small Stream/1st-3rd Order Stream/Headwater Stream

Physiographic Setting: Taconic Foothills region (Western Rensselaer County).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. The Newfoundland Creek Headwaters is a mineral soil basin wetland complex of 8 patches. It has a central stream system with surrounding open to forested wetlands. The complex is situated on acidic to circumneutral substrate in a riparian setting along a small, 1st-3rd order headwater stream. Although it contains a central stream system, the complex is dominated by permanently-inundated basin wetland features with little or no floodplain features, thus it is not treated as a riparian complex.

Regional Importance. The importance of the site is derived from its relatively large wetland size and relatively high quality/good condition, as confirmed from partial field studies. Its importance and moderately large size are reflected by the following statistics:

- 1) It includes the 12th and 17th largest CONUS datalayer wetland complexes in the county.
- 2) It contains the 12th largest CONUS datalayer single wetland patch in the county.
- 3) It contains the 10th largest NYS DEC datalayer single wetland patch in the county.
- 4) It represents one of 28 important mineral soil wetland sites in the county.
- 5) It represents one of 86 Tier-1 ecosystem complex sites in the county.
- 6) It represents one of 9 Tier-1 mineral soil wetland sites in the county.
- 7) It represents one of 7 Tier-1 acidic/circumneutral mineral soil wetland sites in the county.
- 8) It is one of 5 Tier-1 acidic/circumneutral mineral soil wetland sites in a riparian setting in the county.

The other four comparable sites (Tier-1 acidic/circumneutral mineral soil wetland sites in a riparian setting) in the county are: Upper Otter Creek Wetlands (Pittstown), Shaver Pond-Foster Road Wetlands (Grafton), Stuffle Street Wetlands (Grafton), and Wyomanock Creek Wetlands (Stephentown).

Rare Species Synopsis.

few rare species are known from this site to date.

Landscape Context.

The local landscape surrounding the complex is partially fragmented forest within several moderate-sized roadless blocks, some at the edge of a much larger forest landscape. in good (B-ranked) condition.

Ecological Integrity.

in good condition; with some non-native species at low abundance including a small patch of Reedgrass Marsh.

Inventory Status (Species & Ecological Communities).

The site has been partially explored, with ecological communities casually mapped on two sets of parcels.

Mapping Status.

site boundaries precisely delineated, as part of comprehensive county conservation plan treatment of important restricted ecosystem complexes, inferred from air photos and limited field observations.

Conservation Status.

The site is entirely private; one tract has a conservation easement with Rensselaer Land Trust. This site and most of the other four comparable county sites (Tier-1 acidic/circumneutral mineral soil wetland sites in a riparian setting) are dependent on private landowners for any conservation efforts.

Sources:

- Hunt, David M. 2018. Poestenkill Center Bog/Van Slyke Parcels: Significance of Ecological Features. Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. November 15.
- Hunt, David M. 2019. Newfoundland Creek Headwaters/Alexander-Howard Parcels. Significance of Ecological Features. Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. March 22.
- GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 4, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Newfoundland Creek Headwaters** (Mineral Soil Wetland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms:

Vosburgh Pond Outlet Marshes

Snyders Corners Road Wetlands

Included Subsites: -

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Aquatic Network: Newfoundland Creek Network (embedded within)

B. Site Priority

Regional Priority: County Priority (County Plan 2017): Tier 1 (highest priority).

C. Site Description

Complex Hierarchy:

Wetland-Aquatic Complex/Wetland Complex/Mineral Soil Wetland Complex/Acidic-Circumneutral/Riparian Wetland/Small Stream/1st-3rd Order Stream/Headwater Stream.

Site Configuration:

Size: 403 acres; relatively stable concept, based on extent of characteristic community types on comprehensive federal wetland datalayer.

Town Location: Poestenkill (90%) > Sand Lake (10%).

Descriptive Summary:

mineral soil basin wetland complex with a central stream system that is surrounded by open to forested wetlands. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

.....Ecosystem Types.....				.....Ecosystem Patches.....			
	<u>total</u>	<u>upland</u>	<u>wetland</u>		<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>			<u>open/forest</u>	<u>open/forest</u>
Mineral Soil Wetland	2	0	2 (1/1)	~10	0	~10 (~3/~7)	

Ecosystem Composition:

Acidic-circumneutral mineral soil wetland forest: ~7 patches (Lower New England variant).

Acidic-circumneutral open mineral soil wetland: ~3 patches (Lower New England variant).

Ecosystem Accuracy:

based on limited field evaluation and prior air photo delineation, but pending careful air photo review.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition (Acidic-circumneutral mineral soil wetland forest):

streams (Spring, Rocky Headwater Stream), wetlands (Red Maple-Hardwood Swamp).

Composition (Acidic-circumneutral open mineral soil wetland):

streams (Marsh Headwater Stream), wetlands (Deep Emergent Marsh, Shallow Emergent Marsh, Shrub Swamp).

Importance: 0 NY Natural Heritage Program EOs.

2. Rare Plant Concentration Area: none known, but possible.

3. Important Animal Concentration Areas: none known, but possible.

4. Rare Animal Populations: none known, but possible.

F. Associated Landscape Features:

Aquatic Network (Newfound Creek Headwaters Network; see separate site description).

Sources:

Hunt, David M. 2018. Poestenkill Center Bog/Van Slyke Parcels: Significance of Ecological Features. Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. November 15.

Hunt, David M. 2019. Newfoundland Creek Headwaters/Alexander-Howard Parcels. Significance of Ecological Features. Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. March 22.

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Poesten Kill Barberville** (Ecosystem Complex)

Ecosystem Complex Type: Riparian Complex

Complex Subtype Hierarchy: Confined River/Medium River/Acidic-Circumneutral/Gorge

Physiographic Setting: Rensselaer Plateau (Rensselaer Plateau Escarpment).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. Poesten Kill Barberville is a large river riparian complex situated in a localized gorge at the transition between the Upper Poesten Kill (a relatively intact headwater stream) and the Poesten Kill Midreach. It is situated along the mainstem of the Poesten Kill Aquatic Network, the largest network of the Rensselaer Plateau and one of several regionally-important networks on the plateau. It extends from just upstream of Barberville to the base of the plateau escarpment, where the Poesten Kill, forming here the beginning of its Confined River segments, cuts through the escarpment, leaving much exposed rock along the stream channel and banks including Barberville Falls, undoubtedly the largest waterfall on the plateau and in the county. It contains patches of open confined riparian wetland ecosystem. The open confined riparian wetland ecosystem is very diverse, dominated by Confined River, Floodplain Forest, and Maple-Basswood Rich Mesic Forest, with four other characteristic associated open riparian upland communities.

Regional Importance. The site was identified as a Rensselaer Plateau conservation target for ecosystem complexes. Its importance is derived from its large size and high quality/good condition, as confirmed from many field studies. Its importance and moderately large size are reflected by the following statistics:

- 1) Poesten Kill Barberville is one of 12 important riparian complexes of the Rensselaer Plateau.
- 2) It represents one of two roughly equivalent moderate-sized circumneutral confined river gorges in the county, comparable to the Poesten Kill West Brunswick site.

Community Composition. Associated with the river are relatively intact adjacent riparian communities and a relatively intact but rather narrow buffer of rich upland forests. Associated riparian communities lining the stream include Floodplain Forest, Riverside Sand/Gravel Bar, Cobble Shore, and Shoreline Outcrop, most represented as narrow strips within the stream channel or along the banks of the stream. These communities support a high diversity of native plant species, some county rare, that are adapted to the natural disturbance patterns of flooding and scouring and thus not found in typical upland forested communities of the county. The toeslopes and lowslopes of the valley bordering the stream are covered with rich forest types (mostly Maple-Basswood Rich Mesic Forest). These forests support a high diversity of calciphilic native plant species, many of which are spring ephemerals and some of which are also county rare. Floodplain Forest is scattered in patches along the course of the Poesten Kill in this site. Key community types, Confined River and multiple riverside open uplands, are indicative and characteristic of this complex type and are dominant features at the site. The open uplands reflect a strong hydrological influence from the adjacent large Confined River. The Confined River (the Poesten Kill), one of the largest rivers in the county interior, likely serves as a good coarse conservation filter for common native species of fish, aquatic macroinvertebrates, and freshwater algae of the county. It is the only example of this community on the Rensselaer Plateau.

Important Natural Community Examples. Four important natural community types at the site include one county-exemplary example. One global-rare community type is known from the site (Floodplain Forest) plus several state- and county-rare types, many of which are apparently restricted or most pronounced in the county within this ecosystem type.

Rare Species Synopsis.

with a concentration of county-rare plants including leatherwood, among the rarest of plant taxa in the county known from the Rensselaer Plateau, within a Maple-Basswood Rich Mesic Forest; also with county-important animal habitat.

Landscape Context.

The site is embedded within the moderately large and relatively intact Davitt Pond Block at the uppermost reaches of the Poesten Kill Midreach Corridor, which extends downstream from the Town of Poestenkill into the Town of Brunswick off the Rensselaer Plateau. The reach of the Poesten Kill onsite is fed upstream by the Upper Poesten Kill, flowing through an intact forest landscape and thus with high water quality.

Ecological Integrity.

The river corridor, including the stream and uplands, is in very good condition.

Inventory Status (Species & Ecological Communities).

The site has been moderately well explored. Communities have been mapped as part of a comprehensive regional map.

Mapping Status.

site boundaries were precisely delineated, as part of comprehensive Rensselaer Plateau conservation plan treatment of important restricted ecosystem complexes, inferred from comprehensive regional ecological community map for the Rensselaer Plateau. Community types were determined mostly from air photos and several field surveys.

Conservation Status.

The site is entirely private including a large part within a nature preserve held by a private global non-profit conservation organization.

Sources:

Hunt, David M. 2013. Poesten Kill Barberville. Town of Poestenkill. Preliminary Ecological Summary. Ecological Intuition & Medicine. January 13. Working draft for Rensselaer Plateau Conservation Plan. GIS layers (Rensselaer County: important ecological features).

ECOSYSTEM COMPLEX FACT SHEET

Site: **Poesten Kill Barberville** (Riparian Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: Barberville Falls (sensu lato), Barberville Gorge

Included Subsites: Barberville Falls (sensu stricto)

Excluded but Related/Overlapping Sites:

Barberville Falls Preserve

Poesten Kill Midreach

Snake Hill Poestenkill

Western Rensselaer Plateau Escarpment

Related County-Important Ecological Features:

Ecosystem Aggregate: Poesten Kill Corridor (embedded within)

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Priority Conservation Sites: Poesten Kill Midreach Corridor/Network (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Networks: Poesten Kill Headwaters/Poesten Kill Midreach (embedded within)

Exemplary Communities: Barberville Falls (contained), Poesten Kill Midreach (overlapping)

Rare Plant Concentration Area: Barberville Gorge (embedded within/equivalent)

Important Animal Habitat: Upper Poesten Kill (overlapping)

B. Site Priority.

Regional Priority:

County Priority (County Plan 2017): Tier 1 (highest priority).

Rensselaer Plateau Priority (Conservation Plan ~2013): Tier 1 (highest priority).

C. Site Description.

Complex Hierarchy:

Wetland-Aquatic Complex/Wetland Complex/Riparian Complex/Non-Tidal River/Confined River/Medium River/Acidic-Circumneutral/Gorge.

Site Configuration: Size: 40 acres; Shape/Boundary: relatively stable concept.

Town Location: Poestenkill (100%).

Descriptive Summary:

large river riparian complex situated in a localized gorge. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....				.....Ecosystem Patches.....			
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>river</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>river</u>
				<u>confined/unconfined</u>				<u>confined/unconfined</u>
Riparian Complex	1	0	0	1 (1/0)	1	0	0	1 (1/0)

Ecosystem Composition:

Open confined riparian wetland: 1 patch (Lower New England variant; part of Confined Headwater Stream System).

Ecosystem Accuracy: fully assessed from careful air photo review and moderate field evaluation.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

river (Confined River), wetlands (Floodplain Forest), upland forests (Maple-Basswood Rich Mesic Forest), open uplands (Cobble Shore, Shoreline Outcrop, Cliff Community, Calcareous Cliff Community).

Importance (most important examples):

Confined River (county-exemplary, state-significant), Maple-Basswood Rich Mesic Forest (state-significant), Cliff Community (county significant), Calcareous Cliff Community (county significant); 0 NY Natural Heritage Program EOs.

2. Rare Plant Concentration Area: yes (4 county-rare plants; see separate site fact sheet).

3. Important Animal Concentration Areas: yes (1-2 types; see separate site fact sheet).

4. Rare Animal Populations: none known, but possible.

F. Associated Landscape Features:

Rensselaer Plateau Forest (see separate site description)

Poesten Kill Midreach Network (see separate site description)

Sources:

Hunt, David M. 2013. Poesten Kill Barberville. Town of Poestenkill. Preliminary Ecological Summary. Ecological Intuition & Medicine. January 13. Rensselaer Plateau Ecosystem Complexes, Site Description Appendix. Working Draft.

GIS layers (Rensselaer County: important ecological features).

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Poesten Kill Headwaters** (Ecosystem Complex)

Ecosystem Complex Type: Peatland Complex

Complex Subtype Hierarchy: Acidic/Northern Appalachian

Physiographic Setting: Rensselaer Plateau (Central Rensselaer Plateau).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. The Poesten Kill Headwaters Complex is a very large peatland complex situated in a high-level headwater basin. It contains acidic open peatland, acidic forested lowlands, and acidic forested peatland/acidic boreal swamp ecosystem types. Peatland patches have developed along small unconfined streams (Marsh Headwater Stream) within the basin. Although it contains small streams, the complex is dominated by peatland features and is most strongly influenced by peatland characteristics, thus it is not treated as a riparian wetland complex. The broader ecological aggregate is split into two ecosystem complexes based on its ecosystem composition: Poesten Kill Headwaters proper (a wide flat area with slow drainage), addressed here, and Poesten Kill Headwaters Outlet (a narrower and more sloping area with more noticeable flow and drainage), addressed separately under river complexes. A smaller embedded site is Mud Pond Berlin, an undisturbed large bog lake associated with open plus forested peatlands. The larger site includes two other smaller subsites: Bucks Corner Swamp and a small bog along Plank Road at the Poestenkill/Berlin town line. Poesten Kill Headwaters is important especially for its concentration of several county-exemplary boreal wetland and forest community types. Poesten Kill Headwaters represents the largest spruce-fir complex in the county, thus it has special regional significance. The site supports scattered patches of moderate-sized open peatland surrounded by abundant areas of red spruce-dominated forest communities. The broad area of moist upland forests that surround the open and forested wetlands represents the most pronounced area of "boreal flats" on the plateau and in the county.

Regional Importance. The site was identified as a Rensselaer Plateau conservation target for ecosystem complexes. Its importance is derived from its very large wetland size and excellent quality/condition, as confirmed from many field studies. Its large size is reflected by the following statistics:

- 1) Poesten Kill Headwaters is one of 12 regionally-important acidic peatlands/boreal swamps of the Rensselaer Plateau.
- 2) It contains the largest peatland patch in the county.
- 3) It is among the largest 100 CONUS datalayer wetland complexes in the county.
- 4) It contains the 23rd largest CONUS datalayer single wetland patch in the county.

Community Composition. The acidic open peatland is dominated by Inland Poor Fen, Dwarf Shrub Bog, Sedge Meadow, Shallow Emergent Marsh, Shrub Swamp, and Marsh Headwater Stream, with other characteristic natural communities in this ecosystem including a diverse set of multiple wetland and lake types. The acidic boreal swamp is dominated by Spruce-Fir Swamp, with other characteristic natural communities in this ecosystem including multiple wetland and stream types. The acidic forested lowlands is dominated by Spruce Flats, Balsam Flats, and Spruce-Fir Swamp, with other characteristic natural communities in this ecosystem including multiple upland forest, wetland, and stream types. A key community type, Dwarf Shrub Bog, is indicative and characteristic of this complex type and is a dominant feature in the complex. This and other community types at the site are typical of the Northern Appalachian peatland variant. In addition to boreal peatland types (bogs and fens), the open peatland patches also contain large areas of common mineral soil wetland types which include open canopy riverine and beaver-influenced Shrub Swamp, Shallow Emergent Marsh, and Sedge Meadow.

Important Natural Community Examples. Important natural community types at the site include the largest concentration of county-exemplary community occurrences among important peatland complexes of the Rensselaer Plateau, with 11 different types. Five community examples at this site are globally significant; 9 additional ones are state significant including Bog Lake and Inland Poor Fen at (Mud Pond Berlin) plus Hemlock-Northern Hardwood Forest. Four other community examples are simply county significant. Moderately globally-rare community types at the site are Spruce-Fir Swamp and Spruce-Northern Hardwood Forest. There are also 5 additional state-rare community types and 2 additional county-rare community types at the site. The Lower New England Ecoregion community portfolio of The Nature Conservancy includes multiple regionally-important NYNHP-documented community occurrences from this site.

Rare Species Synopsis.

known concentration area with many county-rare plants, in the northern half of the site; also with county-important animal concentration areas and county-rare animal species.

Landscape Context.

The site is contained within the broader Central Rensselaer Plateau Forest, specifically, the Spruce-Fir Core of the plateau. It is situated at the upper reaches of the Poesten Kill (river) and spans the central part of two large matrix forest blocks including the Poesten Kill Headwaters Block and Perigo Hill Block. Thus, it is essentially relatively undisturbed.

Ecological Integrity.

generally in very good condition, although with heavy logging in many areas, as a long-term working forest. only one small area of "Disturbed Forested Lowlands" occurs at the edge of the site in association with a long-established cluster of residential developments along Plank Road near Bucks Corner.

Inventory Status (Species & Ecological Communities).

The site has been partially explored to date with assistance from landowners, especially Cowee Lumber. Communities have been mapped as part of a comprehensive regional map. Some state-significant community occurrences are documented at NY Natural Heritage Program.

Mapping Status.

site boundaries were precisely delineated, as part of comprehensive Rensselaer Plateau conservation plan treatment of important restricted ecosystem complexes, inferred from comprehensive regional ecological community map for the Rensselaer Plateau. Community types were determined from air photos, field visits, plus documentation from NY Natural Heritage Program.

Conservation Status.

The site has been entirely private land. Much of the site has been in the midst of working forest on large tracts owned by private timber companies. pending more formal conservation as a working forest.

Sources:

Hunt, David M. 2013. Poesten Kill Headwaters. Town of Berlin. Preliminary Ecological Summary. Ecological Intuition & Medicine. March. Working draft for Rensselaer Plateau Conservation Plan.
GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. June 25, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: Poesten Kill Headwaters (Peatland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites:

- Poesten Kill Headwaters North (Level-1) (North of Plank Road)
- Bucks Corner Swamp (Level-2) (Berlin/Poestenkill)
- Poesten Kill Headwaters South (Level-1) (South of Plank Road)
- Poesten Kill Headwaters Poestenkill (Level-1) (South of Plank Road)
- [only Berlin, not in Poestenkill]
- Poesten Kill Headwaters Berlin (Level-1)
- Mud Pond Berlin (Level-2)
- Mud Pond Berlin Woods (Level-2)
- Poesten Kill Headwaters Plank Road (Level-2)

Excluded but Related/Overlapping Sites:

- Poesten Kill Headwaters Northwest (Boreal Flats ecosystem complex)
- Upper Poesten Kill Corridor
- Old Albany Road

Related County-Important Ecological Features:

- Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)
- Forest Landscape: Rensselaer Plateau Forest (embedded within)
- Aquatic Network: Poesten Kill Headwaters (embedded within)
- Exemplary Communities: Poesten Kill Headwaters (overlapping)
- Rare Plant Concentration Area: Poesten Kill Headwaters North (contained)
- Important Animal Habitat: Poesten Kill Headwaters (equivalent)

B. Site Priority.

Regional Priority:

County Priority (County Plan 2017): Tier 1 (highest priority).

Rensselaer Plateau Priority (Conservation Plan ~2013): Tier 1 (highest priority).

C. Site Description.

Complex Hierarchy: Wetland-Aquatic Complex/Wetland Complex/Peatland Complex/Acidic.

Site Configuration: Size: 2273 acres. Shape/Boundary: relatively stable concept.

Town Location: Berlin (95%) > Poestenkill (5%).

Descriptive Summary:

Northern Appalachian (acidic) variant of peatland complex situated in a wide flat headwater basin with slow drainage and characteristic community types including Dwarf Shrub Bog. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....			.....Ecosystem Patches.....		
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>		<u>open/forest</u>	<u>open/forest</u>
Peatland Complex	1	1 (0/1)	2 (1/1)	15	6 (0/6)	9 (6/3)

Ecosystem Composition:

Acidic open peatland: 6 patches (Northern Appalachian variant).

Acidic mineral soil wetland forest: 6 patches (Northern Appalachian variant).

Acidic moist flats upland forest: 3 patches (Northern Appalachian variant).

Ecosystem Accuracy: fully assessed from careful air photo review and moderate field evaluation.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

Acidic open peatland:

wetlands (Inland Poor Fen, Dwarf Shrub Bog, Sedge Meadow, Shallow Emergent Marsh, Shrub Swamp, Black Spruce-Tamarack Bog, Spruce-Fir Swamp, Deep Emergent Marsh, Red Maple-Hardwood Swamp, Hemlock-Hardwood Swamp), streams (Marsh Headwater Stream, Backwater Slough, Intermittent Stream), lakes (Bog Lake, Oligotrophic Pond, Flow-Through Pond).

Acidic mineral soil wetland forest:

wetlands (Spruce-Fir Swamp, Hemlock-Hardwood Swamp, Red Maple-Hardwood Swamp, Shrub Swamp), streams (Marsh Headwater Stream, Intermittent Stream), upland forests (Balsam Flats).

Acidic moist flats upland forest:

upland forests (Spruce Flats, Balsam Flats, Spruce-Northern Hardwood Forest, Hemlock-Northern Hardwood Forest), wetlands (Spruce-Fir Swamp, Black Spruce-Tamarack Bog, Hemlock-Hardwood Swamp), streams (Marsh Headwater Stream, Intermittent Stream).

Importance (most important examples):

Spruce-Northern Hardwood Forest (county-exemplary, global priority), Spruce-Fir Swamp (county-exemplary, global priority), Shallow Emergent Marsh (county-exemplary, global priority), Sedge Meadow (county-exemplary, global priority), Shrub Swamp (county-exemplary, global priority), Balsam Flats (county-exemplary, state-significant), Spruce Flats (county-exemplary, state-significant), Dwarf Shrub Bog (county-exemplary, state-significant), Marsh Headwater Stream (county-exemplary, state-significant), Black Spruce-Tamarack Bog (county-exemplary, state-significant, NY Natural Heritage Program EO), Backwater Slough (county-exemplary, state-significant).

2. Rare Plant Concentration Area: yes (1 state-rare plant, 13 county-rare plants; see separate site fact sheet).

3. Important Animal Concentration Areas: yes (4 types; see separate site fact sheet).

4. Rare Animal Populations: yes (2-3 animal species; see separate site fact sheet).

F. Associated Landscape Features:

Rensselaer Plateau Forest (see separate site description)
Poesten Kill Headwaters Network (see separate site description)

Sources:

Hunt, David M. 2013. Poesten Kill Headwaters. Town of Berlin. Preliminary Ecological Summary. Ecological Intuition & Medicine. March. Rensselaer Plateau Ecosystem Complexes, Site Description Appendix. Working Draft.
GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. June 25, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Poesten Kill Headwaters Northwest** (Ecosystem Complex)

Ecosystem Complex Type: Boreal Flats Complex

Complex Subtype Hierarchy: -

Physiographic Setting: Rensselaer Plateau (Central Rensselaer Plateau).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. Poesten Kill Headwaters Northwest is a boreal flats complex adjacent to a large peatland in a high-level headwater basin, the Poesten Kill Headwaters. This complex type is more typical of the Northern Appalachian ecoregion and is restricted to the central zone of the Rensselaer Plateau within the county. It is a moist forested complex with subtly rolling topography, often with hummock-hollow microtopography.

Regional Importance. Although this ecosystem complex type was overlooked in the Rensselaer Plateau conservation plan, because it is dominated by upland forests, it was highlighted in the county conservation plan because of its very restricted nature within the county. The importance of this site is derived from its very large size and excellent quality/condition, as confirmed from many field studies.

Community Composition. A key community type, Spruce Flats, is indicative and characteristic of this complex type and is a dominant feature in the complex.

Rare Species Synopsis.

few rare species known from this site, mostly boreal species.

Landscape Context.

in very good (AB-ranked) condition. The local landscape surrounding the complex is essentially unfragmented forest within large roadless blocks (Poesten Kill Headwaters and Dyken Pond Blocks) and a much larger forest landscape.

Ecological Integrity.

in good to very good condition, much as working forest.

Inventory Status (Species & Ecological Communities).

The site has been partially explored, with ecological communities fully mapped as part of the comprehensive regional map for the Rensselaer Plateau.

Mapping Status.

site boundaries were precisely delineated, as part of comprehensive county conservation plan treatment of important restricted ecosystem complexes, inferred from comprehensive regional ecological community map for the Rensselaer Plateau.

Conservation Status.

much of site pending intentional conservation designation through easements on private lands that will sustain them as working forest.

Sources:

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 5, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Poesten Kill Headwaters Northwest** (Boreal Flats Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites:

Fifty Six Hunt Club

Excluded but Related/Overlapping Sites:

Poesten Kill Headwaters

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Exemplary Communities: Poesten Kill Headwaters (overlapping)

Important Animal Habitat: Rensselaer Plateau Forest (embedded within)

B. Site Priority

Regional Priority:

County Priority (County Plan 2017): Tier 1 (highest priority).

Rensselaer Plateau Priority (Conservation Plan -2013): not included (not designated as type).

C. Site Description

Complex Hierarchy: Upland Complex/Boreal Flats Complex.

Site Configuration:

Size: 1724 acres; relatively stable concept, based on extent of characteristic community types on comprehensive regional community map.

Town Location: Poestenkill (70%) > Grafton > Berlin.

Descriptive Summary:

moist forest complex with subtly rolling topography, often with hummock-hollow microtopography, dominated by Spruce Flats and characteristic of boreal lowland settings. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....			.....Ecosystem Patches.....		
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>		<u>open/forest</u>	<u>open/forest</u>
Boreal Flats	1	1 (0/1)	0	1	1 (0/1)	0

Ecosystem Composition: Acidic moist flats upland forest: 1 patch (Northern Appalachian variant).

Ecosystem Accuracy: fully assessed from careful air photo review and moderate field evaluation.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition: upland forests (Spruce Flats, Balsam Flats), wetlands (Spruce-Fir Swamp).

Importance (most important examples): Spruce-Fir Swamp (county-exemplary, NY Natural Heritage Program EO).

2. Rare Plant Concentration Area: none known, but possible (up to a few rare plants).

3. Important Animal Concentration Areas: none known, but probable.

4. Rare Animal Populations: none known, but probable.

F. Associated Landscape Features: Rensselaer Plateau Forest (see separate site description)

Sources:

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Poesten Kill Headwaters Outlet** (Ecosystem Complex)

Ecosystem Complex Type 1: Peatland Complex

Complex Subtype Hierarchy: Acidic/Northern Appalachian

Ecosystem Complex Type 2: Mineral Soil Wetland Complex

Complex Subtype Hierarchy: Acidic-Circumneutral/Riparian Wetland/Large Stream/3rd Order Stream

Physiographic Setting: Rensselaer Plateau (Central Rensselaer Plateau).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. The Poesten Kill Headwaters Outlet Complex is a diverse and intricate ecosystem aggregate with a mosaic of 2 ecosystem complex types: a central riparian mineral soil wetland complex along a large, relatively intact headwater stream, the upper reaches of the Poesten Kill (river), plus a surrounding peatland complex, with less influence from the stream hydrology. The most characteristic ecosystem type is an open unconfined riparian wetland, but the site also contains multiple peatland ecosystem types, like the connected Poesten Kill Headwaters peatland complex just upstream to the east, however much smaller here. Peatland ecosystem types are: acidic open peatland, acidic boreal swamp, and acidic forested lowlands. The site is situated at the outlet of a very large high-level headwater basin, where an increased flow rate is manifested from the gradual slope. Each of the 2 complex types consists of multiple ecosystem components, making a diverse mix of community types.

Regional Importance. The site was identified as a Rensselaer Plateau conservation target for ecosystem complexes. Its importance is derived from its large wetland size and excellent quality/condition, as confirmed from field studies. Its importance and large size are reflected by the following statistics:

- 1) The site is one of 12 important riparian complexes of the Rensselaer Plateau.
- 2) It contains the 132nd largest CONUS datalayer single wetland patch in the county.

Community Composition. A prominent feature of the site is large examples of common mineral soil wetland types including open canopy riverine and beaver-influenced occurrences of Shrub Swamp, Shallow Emergent Marsh, and Sedge Meadow. These communities are surrounded by moist upland flats forests. The open unconfined riparian wetland ecosystem is moderately diverse. It is dominated by Marsh Headwater Stream, Sedge Meadow, Shrub Swamp, and Red Maple-Hardwood Swamp, with other characteristic associated riparian communities including Flow-Through Pond. Dominant and characteristic communities of the peatland complex at this site are similar to those of Poesten Kill Headwaters to the east, but not as diverse. It contains the mainstem of the Poesten Kill Aquatic Network, the largest network of the Rensselaer Plateau and one of several regionally-important networks identified from the plateau.

Important Natural Community Examples. Key community types, Sedge Meadow and Shallow Emergent Marsh, are indicative and characteristic of this complex type and are a dominant feature of the mineral soil wetland complex at this site. Similarly, spruce- and fir-dominated community types at the site such as Spruce Flats are typical of the Northern Appalachian peatland variant. The site contains 4 county-exemplary wetland community examples. One global and 2 county-rare community types are known from the site. The site also contains 4 global-priority community examples and other state- and county-significant communities.

Rare Species Synopsis.

very few county-rare plant species known from this site; with designated county-important animal habitat.

Landscape Context.

generally in very good (AB-ranked) condition. The local landscape surrounding the complex is essentially unfragmented forest. The site is situated within the boreal Spruce-Fir Core of the much larger Rensselaer Plateau Forest landscape, surrounded by a matrix of spruce- and fir-dominated forests. It is contained within the Perigo Hill Block, a large roadless block of several thousands of acres, essentially unbisected by large roads or public driveable roads.

Ecological Integrity.

in good to very good condition, much as working forest.

Inventory Status (Species & Ecological Communities).

The site has been partially explored, with ecological communities fully mapped as part of comprehensive regional map for the Rensselaer Plateau.

Mapping Status.

site boundaries were precisely delineated, as part of comprehensive Rensselaer Plateau conservation plan treatment of important restricted ecosystem complexes, inferred from comprehensive regional ecological community map for the Rensselaer Plateau. Community types were determined mostly from air photos and limited field observations.

Conservation Status.

The site is entirely private; much of the site is pending intentional conservation designation through easements on private lands that will sustain them as working forest.

Sources:

Hunt, David M. 2013. Poesten Kill Headwaters Outlet, Tows of Berlin & Poestenkill. Preliminary Ecological Summary. Ecological Intuition & Medicine. February 9. Working draft for Rensselaer Plateau Conservation Plan. GIS layers (Rensselaer County: important ecological features).

ECOSYSTEM COMPLEX FACT SHEET

Site: Poesten Kill Headwaters Outlet

(2 types: Peatland Complex/Mineral Soil Wetland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites:

East Poestenkill Woods

Excluded but Related/Overlapping Sites:

Poesten Kill Headwaters South (South of Plank Road)

Poesten Kill Headwaters Poestenkill (South of Plank Road)

Upper Poesten Kill Corridor

Old Albany Road

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Poesten Kill Headwaters (embedded within)

Exemplary Communities: Poesten Kill Headwaters (overlapping)

Important Animal Habitat: Poesten Kill East Poestenkill (overlapping)

B. Site Priority

Regional Priority:

County Priority (County Plan 2017): Tier 2 (very high priority).

Rensselaer Plateau Priority (Conservation Plan -2013): Tier 1 (highest priority).

C. Site Description

Complex (Type 1):

Hierarchy: Wetland-Aquatic Complex/Wetland Complex/Peatland Complex/Acidic.

Site Configuration: Size: 230 acres; relatively stable concept.

Complex (Type 2):

Hierarchy:

Wetland-Aquatic Complex/Wetland Complex/Mineral Soil Wetland Complex/Acidic-Circumneutral/Riparian Wetland/Large Stream/3rd Order Stream.

Site Configuration: Size: 24 acres; relatively stable concept.

Town Location: Poestenkill (80%) > Berlin (20%).

Descriptive Summary:

intricate wetland ecosystem aggregate with a mosaic of 2 ecosystem complex types: a central riparian mineral soil wetland complex along a large headwater stream, the Poesten Kill, plus a surrounding peatland complex, with less influence from the stream hydrology, all supporting a diverse mix of community types. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....				.....Ecosystem Patches.....			
	<u>total</u>	<u>upland</u> <u>open/</u> <u>/forest</u>	<u>wetland</u> <u>open/</u> <u>/forest</u>	<u>river</u> <u>confined/</u> <u>/unconfined</u>	<u>total</u>	<u>upland</u> <u>open/</u> <u>/forest</u>	<u>wetland</u> <u>open/</u> <u>/forest</u>	<u>river</u> <u>confined/</u> <u>/unconfined</u>
Total	4	1 (0/1)	2 (1/1)	1 (0/1)	6	1 (0/1)	3 (1/2)	2 (0/2)
Peatland Complex	3	1 (0/1)	2 (1/1)	0	4	1 (0/1)	3 (1/2)	0
Mineral Soil Wetland	1	0	0	1 (0/1)	2	0	0	2 (0/2)

Ecosystem Composition (peatland):

Acidic mineral soil wetland forest: 2 patches (Northern Appalachian variant).

Acidic moist flats upland forest: 1 patch (Northern Appalachian variant).

Acidic open peatland: 1 patch (Northern Appalachian variant).

Ecosystem Composition (mineral soil wetland):

Open unconfined riparian wetland: 2 patches (Northern Appalachian variant; Unconfined Headwater Stream System).

Ecosystem Accuracy: fully assessed from careful air photo review and moderate field evaluation.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

Open unconfined riparian wetland:

streams (Marsh Headwater Stream), wetlands (Sedge Meadow, Shrub Swamp, Red Maple-Hardwood Swamp, Hemlock Hardwood Swamp), lakes (Flow-Through Pond).

Acidic mineral soil wetland forest: wetlands (Spruce-Fir Swamp, Shrub Swamp).

Acidic moist flats upland forest:

upland forests (Spruce Flats, Balsam Flats, Beech-Maple Mesic Forest), wetlands (Red Maple-Hardwood Swamp, Hemlock Hardwood Swamp), streams (Rocky Headwater Stream).

Acidic open peatland:

wetlands (Shrub Swamp, Shallow Emergent Marsh, Red Maple-Hardwood Swamp, Hemlock Hardwood Swamp), streams (Marsh Headwater Stream),

Importance (most important examples):

Sedge Meadow (county sole-exemplary, global-priority, NY Natural Heritage Program EO), Shallow Emergent Marsh (county-exemplary, global priority, NY Natural Heritage Program EO), Shrub Swamp (county-exemplary, global-priority), Spruce Flats (county-exemplary, state-significant, NY Natural Heritage Program EO).

2. Rare Plant Concentration Area: none known, but possible.

3. Important Animal Concentration Areas: yes (~1 type; see separate site fact sheet).

4. Rare Animal Populations: none known, but probable.

F. Associated Landscape Features:

Rensselaer Plateau Forest (see separate site description)

Poesten Kill Headwaters Network (see separate site description)

Sources:

- Hunt, David M. 2013. Poesten Kill Headwaters Outlet, Tows of Berlin & Poestenkill. Preliminary Ecological Summary. Ecological Intuition & Medicine. February 9. Rensselaer Plateau Ecosystem Complexes, Site Description Appendix. Working Draft.
- GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Poestenkill Center Bog** (Ecosystem Complex)

Ecosystem Complex Type: Peatland Complex

Complex Subtype Hierarchy: circumneutral peatland. (Level 3 type)

Lower New England variant characteristic in the county of peatlands off the Rensselaer Plateau, typically on circumneutral substrate.

Physiographic Setting: Taconic Foothills region (Western Rensselaer County).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. The Poestenkill Center Bog peatland complex consists of a wide central open peatland surrounded by a forested wetland zone. It is situated in an isolated kettlehole, separated from any nearby important aquatic networks. It represents a locally unusual wetland complex, uncommon in the Taconic Foothills region, specifically a Lower New England peatland variant. A key community type at the site is Highbush Blueberry Bog Thicket, indicative and characteristic of Lower New England peatlands and dominant within this complex. The site was initially inferred from its air photo signature plus a historic description, suggesting that the dominant community type was instead Dwarf Shrub Bog. The air photo signature is typical of a peatland setting and the historic species list had many characteristic peatland species. A recent field evaluation confirmed the ecosystem complex type as a peatland, as well as its size and species diversity. However, the community type and peatland variant were identified as the Lower New England variant of Highbush Blueberry Bog Thicket, with a circumneutral substrate more typical of the Taconic Foothills region than the corresponding acidic variant characteristic of the Rensselaer Plateau.

Regional Importance. The importance of this complex is derived from its moderately large wetland size and high quality/excellent condition, as confirmed from field studies. Its importance and moderately large size are reflected by the following statistics:

County Peatland Importance: one of 26 important peatland complexes in the county.

County Peatland Priority: one of 11 Tier-2 peatlands in the county.

County Circumneutral Peatland Importance: one of 9 important circumneutral peatland examples in the county.

County Circumneutral Peatland Priority: one of 3 Tier-2 circumneutral peatland sites in the county.

Taconic Foothills Peatland Importance:

one of only few sizeable peatlands known from the Rensselaer County Taconic Foothills.

one of only about 6 circumneutral peatland sites known from the Rensselaer County Taconic Foothills,

As a Tier-2 circumneutral peatland site, Poestenkill Center Bog is behind 3 County Tier-1 sites in importance: Taplin Pond Complex (Stephentown), Reicharts Lake (Sand Lake), and Mud Lake Bog (Sand Lake). Those sites are all within or near the Taconic Foothills region of the county. The site is one of only two sizeable circumneutral peatlands in the Town of Poestenkill.

Rare Species Synopsis.

The site supports two regionally-rare peatland community types (Highbush Blueberry Bog Thicket and Black Spruce-Tamarack Bog) and multiple county-rare plant species. Swamp azalea, a county-rare plant, is among the most interesting plant, with a large, healthy population in this peatland.

Landscape Context.

The landscape surrounding the bog is essentially fragmented forest, dissected by residential structures and associated clearings.

Ecological Integrity.

Only minor human disturbances were noted in association with the peatland including a small confined population of the invasive wetland plant purple loosestrife.

Inventory Status (Species & Ecological Communities).

moderately well explored despite challenging access into the dense wetland shrub thicket.

Mapping Status.

Precisely delineated, as part of comprehensive county conservation plan treatment of important restricted ecosystem complexes, from typical air photo signature for peatland and later field confirmed.

Conservation Status.

Moderately well protected through private landowner efforts. Among the largest peatlands of the Taconic Foothills, only two are "formally" protected: Mud Lake Sand Lake (Rensselaer Land Trust's Youngs Bog Preserve) and Mud Pond Nassau (Town of Nassau's Mud Pond Preserve).

Sources:

Hunt, David M. 2018. Poestenkill Center Bog/Van Slyke Parcels: Significance of Ecological Features. Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. November 15.
GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 5, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Poestenkill Center Bog** (Peatland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: Poestenkill Center Southwest Bog

Included Subsites: -

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Exemplary Communities: Poestenkill Center Bog (equivalent)

Rare Plant Concentration Area: Poestenkill Center Bog (equivalent)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): Tier 2 (very high priority).

C. Site Description.

Complex Hierarchy: Wetland-Aquatic Complex/Wetland Complex/Peatland Complex/Circumneutral.

Site Configuration: Size: 10 acres; Shape/Boundary: relatively stable concept.

Town Location: Poestenkill (100%).

Descriptive Summary:

circumneutral peatland complex in a kettlehole basin (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....			.....Ecosystem Patches.....		
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>		<u>open/forest</u>	<u>open/forest</u>
Peatland Complex	1	0	1 (1/0)	1	0	1 (1/0)

Ecosystem Composition: Circumneutral open peatland: 1 patch (Lower New England variant).

Ecosystem Accuracy:

based on careful field evaluation and prior air photo delineation, but pending careful air photo review.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

wetlands (dominant: Highbush Blueberry Bog Thicket; others: Black Spruce-Tamarack Bog, Shallow Emergent Marsh, Shrub Swamp)

Importance (most important examples):

Highbush Blueberry Bog Thicket (county near-exemplary; changed 2018 from former county near-exemplary Dwarf Shrub Bog); 0 NY Natural Heritage Program EOs.

2. Rare Plant Concentration Area: yes (3 county-rare plants; see separate site fact sheet).

3. Important Animal Concentration Areas: none known, unlikely.

4. Rare Animal Populations: none known, but possible.

F. Associated Landscape Features: isolated.

Sources:

Hunt, David M. 2018. Poestenkill Center Bog/Van Slyke Parcels: Significance of Ecological Features. Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. November 15.

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Reicherts Lake** (Ecosystem Complex)

Ecosystem Complex Type: Peatland Complex

Complex Subtype Hierarchy: circumneutral peatland. (Lower New England var., Level 3-4 types)_

Physiographic Setting: Taconic Foothills region (Western Rensselaer County).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. The Reicherts Lake peatland complex represents one of two complexes within an ecological aggregate (Reicherts Lake in the broader sense) that also contains an adjacent lake complex to the south (all in the Town of Sand Lake). The peatland complex consists of a central pond (Bog Lake) with a surrounding open peatland zone, then a forested wetland zone. It represents a locally unusual wetland complex, uncommon in the Taconic Foothills region and off the Rensselaer Plateau, and is presumed to be a circumneutral (Lower New England) variant of the complex type. A key community type at the site is Black Spruce-Tamarack Bog, indicative and characteristic of peatlands and dominant within this complex. Although it is adjacent to Reicherts Lake, the complex is dominated by features more characteristic of peatlands than a lake complex, thus it is distinguished and treated separately from the adjacent lake complex.

Regional Importance. The importance of this complex is derived from its large wetland size and high quality/excellent condition, as confirmed from field studies. It is among the largest 100 CONUS datalayer wetland complexes in the county.

Rare Species Synopsis.

The peatland complex supports multiple regionally-rare plants characteristic of open bogs including trees, shrubs, herbs, graminoids, plus floating and submergent aquatic macrophytes. Among these rare species are multiple orchids.

Landscape Context.

The local landscape surrounding the peatland complex is a mix of residential land and fragmented forest, with forest concentrated as buffer around wetlands.

Ecological Integrity.

good local condition, especially for the Taconic Foothills region.

Inventory Status (Species & Ecological Communities).

with limited studies, all rapid casual surveys. additional rare species are suspected. high inventory priority for the Rensselaer County Taconic Foothills, especially for refined evaluation of communities, then rare species.

Mapping Status.

precisely delineated, as part of comprehensive county conservation plan treatment of important restricted ecosystem complexes, from typical air photo signatures for peatland and other wetland patches.

Conservation Status.

unknown efforts of private landowners and Town of Poestenkill, the latter as the owner of four parcels at the site.

Sources:

GIS layers (Rensselaer County: important ecological features).
pending review of site community-species matrix.

Draft: D.M.Hunt. May 5, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Reichert's Lake** (Peatland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms:

Reichert Lake
Reicharts Lake
Raquet Lake
Raquette Lake

Included Subsites: -

Excluded but Related/Overlapping Sites: -

Reicharts Lake (lake complex)

Related County-Important Ecological Features:

Priority Conservation Site: Wynants Kill Corridor (embedded within)
Priority Conservation Site: Sand Lake Lakes (embedded within)
Aquatic Network: Wynants Kill Network (embedded within)
Exemplary Communities: Reicharts Lake (contained & overlapping)
Rare Plant Concentration Area: Reicherts Lake (embedded within)

B. Site Priority.

Regional Priority: County Priority (County Plan 2017): Tier 1 (highest priority).

C. Site Description.

Complex Hierarchy: Wetland-Aquatic Complex/Wetland Complex/Peatland Complex/Circumneutral.

Site Configuration: Size: 45 acres; Shape/Boundary: relatively stable concept.

Town Location: Sand Lake (60%) > Poestenkill (40%).

Descriptive Summary:

circumneutral peatland complex with open and forested peatland zones, in association with adjacent lake complex. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....				.....Ecosystem Patches.....			
	<u>total</u>	<u>upland</u>	<u>wetland</u>		<u>total</u>	<u>upland</u>	<u>wetland</u>	
		<u>open/forest</u>	<u>open/forest</u>			<u>open/forest</u>	<u>open/forest</u>	
Peatland Complex	2	0	2 (1/1)		2	0	2 (1/1)	

Ecosystem Composition:

Circumneutral mineral soil wetland forest: 1 patch (Lower New England variant).

Circumneutral open peatland: 1 patch (Lower New England variant).

Ecosystem Accuracy:

rapid estimate based on limited field evaluation and prior air photo delineation, but pending careful air photo review.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

Circumneutral mineral soil wetland forest: wetlands (Red Maple-Hardwood Swamp).

Circumneutral open peatland:

lakes (Bog Lake), wetlands (Medium Fen, Highbush Blueberry Bog Thicket, Black Spruce-Tamarack Bog).

Importance (most important examples):

Black Spruce-Tamarack Bog (county-exemplary), 0 NY Natural Heritage Program EOs.

2. Rare Plant Concentration Area: yes (12 county-rare plants; see separate site fact sheet).

3. Important Animal Concentration Areas: none known, but probable (odonates, fish, birds).

4. Rare Animal Populations: none known, but possible.

F. Associated Landscape Features: relatively isolated.

Sources:

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Snake Hill Poestenkill** (Ecosystem Complex)

Ecosystem Complex Type: Rocky Slope-Summit Complex

Complex Subtype Hierarchy: True Rocky Summit/Lower New England-Central Appalachian variant/Plateau Escarpment Slope_

Physiographic Setting: Rensselaer Plateau (Rensselaer Plateau Escarpment).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. Snake Hill Poestenkill is a rocky slope/summit complex with much exposed Rensselaer Graywacke bedrock substrate. It is situated on the Western Rensselaer Plateau Escarpment south of the Barberville Gorge along the Poesten Kill. Multiple open summits and upper slopes at the site are representative of this complex type. It contains both acidic forested rocky summit and acidic open rocky summit ecosystem types. The latter ecosystem has two patches, one at the north end of Snake Hill, the other on the southern half of the hill. Although the northern patch of this ecosystem has some rich/circumneutral to calcareous areas, it is thought to be best treated as an acidic variant, not a calcareous variant, of this ecosystem. Red Cedar Rocky Summit and other community types at the site are typical of a Central Appalachian variant of the complex type.

Regional Importance. The site was identified as a Rensselaer Plateau conservation target for ecosystem complexes. Its importance is derived from its large size, very good quality/condition, and high diversity for the complex type, as confirmed from many field studies. Its large size is reflected by the following statistics:

- 1) Snake Hill is one of 14 regionally-important rocky summit/slope complexes of the Rensselaer Plateau.
- 2) It contains the 19th largest exposed bedrock patch in the county (211 acres).

Community Composition. The acidic forested rocky summit ecosystem is dominated by Appalachian Oak-Hickory Forest and Appalachian Oak-Pine Forest. Other characteristic natural communities in this ecosystem include two other forest types. The northernmost acidic open rocky summit ecosystem patch is diverse. This ecosystem is dominated by Red Cedar Rocky Summit, Cliff Community, Acidic Talus Slope Woodland, Calcareous Cliff Community, Chestnut Oak Forest, and Appalachian Oak-Hickory Forest. A key community type, Red Cedar Rocky Summit, is indicative and characteristic of this complex type, although only in one patch of the complex. It is important especially for its Red Cedar Rocky Summit and Cliff Community.

Important Natural Community Examples. Snake Hill Poestenkill is one of several sites on the Rensselaer Plateau with concentrations of county-exemplary communities (see site fact sheet). Important natural community types here also include several other community occurrences suspected to be state significant: Appalachian Oak-Hickory Forest, Appalachian Oak-Pine Forest, Acidic Talus Slope Woodland, and Maple-Basswood Rich Mesic Forest. Additional community examples are suspected to be only county significant. The one moderately globally-rare community type at the site is Red Cedar Rocky Summit. There are 3 other state-rare community types and two additional county-rare community types at the site. The Red Cedar Rocky Summit example is unique for the plateau, being the only known site of this community in the region. It is a very rare community type in the county, otherwise known from only 1 or 2 spots in the Taconic Valley. It is more characteristic of traprock areas in the Taconic Valley of counties to the south.

Rare Species Synopsis.

Rare Plants. As of 2006, Snake Hill Poestenkill represented the one individual site on the Rensselaer Plateau with the greatest known concentration of county-rare plants (16 taxa). County-wide, Snake Hill contained the 8th most abundant concentration of county-rare plants in Rensselaer County, as of 2006. Snake Hill harbors the greatest known concentration of county-rare plants in the Town of Poestenkill. Two of these plant taxa are among the rarest in the county known from the plateau: Silvery-Flowered or Hay Sedge (*Carex argyrantha*) and Four-Leaf Milkweed (*Asclepias quadrifolia*).

Important Animal Habitat. The site was designated, for the county conservation plan, as an important animal habitat, with important concentration areas and at least one suspected county-rare animal species.

Landscape Context.

The site is contained within the broader Western Rensselaer Plateau Escarpment, one of about 8 specific escarpment faces surrounding the plateau. More locally, it is within the moderately large and relatively intact Snake Hill Block.

Ecological Integrity.

other than habitat edge displacements, the site appears in very good condition, with scattered minor unnatural disturbances.

Inventory Status (Species & Ecological Communities).

Only the northern end of the site has been well explored. This site was historically known to be special and explored by state and county botanists in the 1800s through mid 1900s. Communities have been mapped as part of a comprehensive regional map. additional rare species are expected to be found upon further searches.

Mapping Status.

Site boundaries were precisely delineated, as part of comprehensive Rensselaer Plateau conservation plan treatment of important restricted ecosystem complexes, inferred from the comprehensive regional ecological community map for the Rensselaer Plateau. Community types were determined on the southern half from air photos and the northern half from a combination of air photos, field visits, and observations from Plank Road.

Conservation Status.

The site consists of entirely private land, with casual protection commitments by at least one to two current landowners. The site is generally vulnerable to increased subdivision and residential development, based on trends in recent decades.

Sources:

Hunt, David M. 2016. Snake Hill Poestenkill. Town of Poestenkill. Preliminary Ecological Summary. Ecological Intuition & Medicine. April 9. Working Draft.

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 5, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Snake Hill Poestenkill** (Rocky Slope-Summit Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: Snake Hill

Included Subsites:

Snake Hill North (Level-1)

Barberville Cliffs (Level-2)

Snake Hill Road Cliffs (Level-2)

Snake Hill West (Level-1)

Snake Hill West (Snake Hill Block) (Level-2)

Snake Hill West (Snake Hill West Block) (Level-2)

Excluded but Related/Overlapping Sites:

Snake Hill Road

Snake Hill West Block

Related County-Important Ecological Features:

Priority Conservation Site: Rensselaer Plateau Forest (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Exemplary Communities: Snake Hill Poestenkill (contained & overlapping)

Rare Plant Concentration Area: Snake Hill Poestenkill (equivalent)

Important Animal Habitat: Snake Hill Poestenkill (equivalent)

B. Site Priority.

Regional Priority:

County Priority (County Plan 2017): Tier 1 (highest priority).

Rensselaer Plateau Priority (Conservation Plan ~2013): Tier 1 (highest priority).

C. Site Description.

Complex Hierarchy:

Upland Complex/Rocky Slope-Summit Complex/Circumneutral/True Rocky Summit/Lower New England-Central Appalachian variant/Plateau Escarpment Slope.

Site Configuration:

Size: 460 acres; Shape/Boundary: relatively stable concept. Areas W of Snake Hill Road have some similar characteristic habitat but lack more typical open rocky upper slope/summit.

Town Location: Poestenkill (85%) > Sand Lake (15%).

Descriptive Summary:

Central Appalachian variant of a rocky slope/summit complex situated on the Western Rensselaer Plateau Escarpment with multiple open summits and upper slopes and characteristic Red Cedar Rocky Summit community. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....			.....Ecosystem Patches.....		
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>
	<u>open/forest</u>	<u>open/forest</u>	<u>open/forest</u>	<u>open/forest</u>	<u>open/forest</u>	<u>open/forest</u>
Rocky Slope/Summit	2	2 (1/1)	0	5	5 (3/2)	0

Ecosystem Composition:

Acidic Rocky Slope/Summit Open Upland: 3 patches (Central Appalachian Variant).

Acidic Dry-Mesic Rocky Slope Upland Forest: 2 patches (Central Appalachian Variant).

Ecosystem Accuracy: fully assessed from careful air photo review and moderate field evaluation.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

Acidic Rocky Slope/Summit Open Upland:

open uplands (Red Cedar Rocky Summit, Calcareous Cliff Community, Cliff Community, Acidic Talus Slope Woodland, Pitch Pine-Oak-Heath Rocky Summit), upland forests (Chestnut Oak Forest, Appalachian Oak-Hickory Forest, Appalachian Oak-Pine Forest).

Acidic Dry-Mesic Rocky Slope Upland Forest:

upland forests (Appalachian Oak-Hickory Forest, Appalachian Oak-Pine Forest, Maple-Basswood Rich Mesic Forest, Hemlock-Northern Hardwood Forest).

Importance (most important examples):

Red Cedar Rocky Summit (county co-exemplary, county-significant), Calcareous Cliff Community (county-exemplary, state-significant), Cliff Community (county-exemplary, state-significant); 0 NY Natural Heritage Program EOs.

2. Rare Plant Concentration Area:

yes (1 globally-rare plant, 3 state-rare plants, 30 county-rare plants; see separate site fact sheet).

3. Important Animal Concentration Areas: yes (1 type; see separate site fact sheet).

4. Rare Animal Populations: none known, but probable.

F. Associated Landscape Features: Rensselaer Plateau Forest (see separate site description)

Sources:

Hunt, David M. 2016. Snake Hill Poestenkill. Town of Poestenkill. Preliminary Ecological Summary. Ecological Intuition & Medicine. April 9. Rensselaer Plateau Ecosystem Complexes, Site Description Appendix. Working Draft.

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Southeast Brunswick Grasslands** (Ecosystem Complex)

Ecosystem Complex Type: Lowland Grassland Complex

Complex Subtype Hierarchy: hayfield/pastureland (semi-natural/agricultural)

Physiographic Setting: Taconic Foothills region (Western Rensselaer County).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. The Southeast Brunswick Grasslands complex consists of a relatively large assemblage of adjacent land cover patches designated in the National Land Cover Dataset (NLCD) as "pasture/hay". This cover type has been deemed the best habitat in the county for grassland birds. It is designated as a lowland grassland complex, specifically hayfield/pastureland (cultural communities dependent upon agricultural management). The primary habitat at this site, large areas of grassland, was inferred using both the remote NLCD model as well as a preliminary air photo evaluation and rapid distant roadside observations. Although in need of careful field assessment for the presence and longevity of any semi-natural grassland patches as well as the presence and viability of any grassland bird populations, it is assumed that this site is among several in the county with the best chance of supporting populations of grassland birds. Verification of the seral state, size, contiguity, and consistency of any potential semi-natural grassland patches is pending, although the management regime for those patches is unknown (especially whether or not they are managed at all for grassland bird nesting. The site is assumed to have good grassland habitat from the land cover datalayer patch boundaries). The site is roughly centered around NY Route 351 (Brunswick), Dater Hill Road (Brunswick), Dearstyne Road (Brunswick), and Garfield Road (Brunswick/Poestenkill). The size, shape, and naturalness of any semi-natural grasslands are likely to change frequently over time with changing landowners and any rotation of agricultural cover.

Regional Importance. The site contains the 8th largest NLCD pasture/hay patch in the county. It is among the few areas in the county suspected to support a viable suite of grassland biota.

Rare Species Synopsis.

No rare species are known to date from this site, however there is good potential for rare bird species.

Landscape Context.

the surrounding landscape is essentially fragmented forest, dissected by additional agricultural land, residential structures, and associated clearings.

Ecological Integrity.

in uncertain condition, especially in regards to the naturalness of the habitat and the degree of native biota.

Inventory Status (Species & Ecological Communities).

with little to no field evaluation. needs verification of any patches of grassland in a semi-natural state, especially to characterize their size, contiguity, consistency, and associated biota, especially any grassland birds. moderately high inventory priority for the Town of Poestenkill, focusing on rapid evaluation of community types, then rare species.

Mapping Status.

Precisely delineated, as part of comprehensive county conservation plan treatment of important restricted ecosystem complexes, from National Land Cover Dataset patch boundaries and roughly correlated with corresponding air photo signature. However, the site boundary needs field verification for appropriate habitat and the habitat is constantly subject to short-term changes year to year.

Conservation Status.

unknown efforts of private landowners, including any management regimes. uncertain whether any landowners are managing fields for grassland bird nesting.

Sources:

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 5, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Southeast Brunswick Grasslands** (Lowland Grassland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: -
Included Subsites: -
Excluded but Related/Overlapping Sites: -
Related County-Important Ecological Features: -

B. Site Priority

Regional Priority: County Priority (County Plan 2017): Tier 3 (high priority).

C. Site Description

Complex Hierarchy: Upland Complex/Lowland Grassland Complex/Hayfield-Pastureland Complex.

Site Configuration:

Size: 979 acres; relatively stable concept, based on extent of characteristic community types on comprehensive regional land cover datalayer; however, site boundaries should be refined based on functional use by grassland birds and they are subject to short-term change based on unpredictable land use and management regime dynamics.

Town Location: Brunswick (75%) > Poestenkill (25%).

Descriptive Summary:

relatively large assemblage of adjacent "pasture/hay" land cover patches with potential for some of the best grassland bird habitat in the county. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....			.....Ecosystem Patches.....		
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>		<u>open/forest</u>	<u>open/forest</u>
Lowland Grassland	1	1 (1/0)	0	1	1 (1/0)	0

Ecosystem Composition:

Acidic-circumneutral open graminoid upland: 1 dissected patch (~Lower New England variant).

Ecosystem Accuracy:

based on limited field evaluation and prior air photo delineation, but pending careful air photo review, especially to distinguish semi-natural uplands from pure agricultural (cultural) uplands.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition: none known.

Importance: none known. 0 NY Natural Heritage Program EOs.

2. Rare Plant Concentration Area: none known, uncertain.

3. Important Animal Concentration Areas: none known, but possible.

4. Rare Animal Populations: none known, but probable.

F. Associated Landscape Features: relatively isolated.

Sources:

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Vosburgh Swamp** (Ecosystem Complex)

Ecosystem Complex Type: Mineral Soil Wetland Complex

Complex Subtype Hierarchy: Acidic-Circumneutral/True Basin Wetland/Ponded Wetland/Headwater Source Wetland

Physiographic Setting: Taconic Foothills region (Western Rensselaer County).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. Vosburgh Swamp is a basin wetland complex with a central pond (Eutrophic Pond) and surrounding open to forested wetlands. Although it contains a lake, the complex is dominated by wetland features and is most strongly influenced by wetland characteristics, thus it is not treated as a lake complex.

Regional Importance. The importance of the site is derived from its large wetland size and high quality/good condition, as confirmed from multiple field studies. Its importance and moderately large size are reflected by the following statistics:

- 1) It contains one of only 2 large basin wetland ponds among the largest 500 wetlands of the county.
- 2) It is the 55th largest wetland complex in the county.
- 3) It is among the largest 100 CONUS datalayer wetland complexes in the county.
- 4) It is among the 11th to 16th largest basin wetlands in the county (all of 50-100 acres).
- 5) It contains one of the largest 15 CONUS datalayer single wetland patches in the county.

Rare Species Synopsis.

The wetland complex supports multiple regionally-rare plants characteristic of circumneutral wetlands including trees, herbs, and graminoids. The site has also been designated as county-important animal habitat, with at least two concentration area types.

Landscape Context.

The local landscape surrounding the wetland complex is a mix of residential land and forest, with the forest representing the dissected edge of the large Rensselaer Plateau Forest. The site is also integrally situated within the Newfoundland Creek Headwaters aquatic network.

Ecological Integrity.

moderately good local condition, especially for the Taconic Foothills region. only minor disturbances have been noted such as a small boardwalk.

Inventory Status (Species & Ecological Communities).

with limited studies, most near the pond. The central part of the swamp has challenging access due to deep muck. additional rare species are suspected. moderately high inventory priority for the Town of Poestenkill.

Mapping Status.

precisely delineated, as part of comprehensive county conservation plan treatment of important restricted ecosystem complexes, from typical air photo signatures for lake and wetland patches.

Conservation Status.

protected to some degree by multiple surrounding private landowners that value this feature for conservation; however, vulnerable to impacts such as septic runoff. presumably relatively stable for decades.

Sources:

GIS layers (Rensselaer County: important ecological features).
pending review of site community-species matrix.

Draft: D.M.Hunt. May 5, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Vosburgh Swamp** (Mineral Soil Wetland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites: Vosburgh Pond

Excluded but Related/Overlapping Sites: -

Related County-Important Ecological Features:

Priority Conservation Sites: Rensselaer Plateau Forest (embedded within)

Priority Conservation Sites: Poesten Kill Midreach Corridor/Network (embedded within)

Forest Landscape: Rensselaer Plateau Forest (embedded within)

Aquatic Network: Newfoundland Creek Network (embedded within)

Exemplary Communities: Vosburgh Swamp (contained & overlapping)

Rare Plant Concentration Area: Vosburgh Swamp (embedded within)

Important Animal Habitat: Vosburgh Swamp (equivalent)

B. Site Priority

Regional Priority: County Priority (County Plan 2017): Tier 1 (highest priority).

C. Site Description

Complex Hierarchy:

Wetland-Aquatic Complex/Wetland Complex/Mineral Soil Wetland Complex/Acidic-Circumneutral/True Basin Wetland/Ponded Wetland/Headwater Source Wetland.

Site Configuration: Size: 51 acres; Shape/Boundary: relatively stable concept.

Town Location: Poestenkill (90%) > Sand Lake (10%).

Descriptive Summary:

basin wetland complex with a central pond and surrounding open to forested wetlands. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

.....Ecosystem Types.....				.....Ecosystem Patches.....			
	<u>total</u>	<u>upland</u>	<u>wetland</u>		<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>			<u>open/forest</u>	<u>open/forest</u>
Mineral Soil Wetland	1	0	1 (0/1)		1	0	1 (0/1)

Ecosystem Composition:

Acidic-circumneutral open mineral soil wetland: 1 patch (Lower New England variant).

Ecosystem Accuracy:

rapid estimate based on moderate field evaluation and prior air photo delineation, but pending careful air photo review.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition: lakes (Eutrophic Pond), wetlands (Deep Emergent Marsh, Sedge Meadow, Shrub Swamp).

Importance (most important examples): Deep Emergent Marsh (county-exemplary), 0 NY Natural Heritage Program EOS.

2. Rare Plant Concentration Area: yes (5 county-rare plants; see separate site fact sheet).

3. Important Animal Concentration Areas: yes. (2 types; see separate site fact sheet).

4. Rare Animal Populations: none known, but possible.

F. Associated Landscape Features:

Aquatic Network (Newfound Creek Headwaters Network; see separate site description)

Sources:

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Western Rensselaer Plateau Escarpment** (Ecosystem Complex)

Ecosystem Complex Type: Rocky Slope-Summit Complex

Complex Subtype Hierarchy: True Rocky Summit/Lower New England-Central Appalachian variant/Plateau Escarpment Slope_

Physiographic Setting: Rensselaer Plateau (Rensselaer Plateau Escarpment).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. Western Rensselaer Plateau Escarpment is a rocky slope/summit complex containing multiple open summits and upper slopes representative of this complex type. It is situated on the Western Rensselaer Plateau Escarpment (physiographic subdivision), generally between Barberville Gorge along the Poesten Kill (to the south) and Quacken Kill Narrows along the Quacken Kill (to the north). The Western Rensselaer Plateau Escarpment, as a similar physiographic subdivision of the Rensselaer Plateau, represents one of three steep and well-defined escarpments of about 7 escarpment faces surrounding the plateau. The larger site consists of 4 patches, with 2 important local subsites: Wheeler Mountain and Davitt Pond Ledges. The site contains both acidic forested rocky summit and acidic open rocky summit ecosystem types, present at both subsites. Acidic Talus Slope Woodland and other community types at the site are typical of a Central Appalachian variant of the complex type.

Regional Importance. The site was identified as a Rensselaer Plateau conservation target for ecosystem complexes. Its importance is derived from its large size, very good quality/condition, and high diversity for the complex type, as confirmed from many field studies. Its importance and large size are reflected by the following statistics:

- 1) The Western Rensselaer Plateau Escarpment is one of 14 important rocky summit/slope complexes of the Rensselaer Plateau.
- 2) It is specifically one of 12 important acidic rocky slope/summit sites of the plateau.
- 3) It contains the 3rd largest exposed bedrock patch in the county (974 acres).

Community Composition. A key community type, Acidic Talus Slope Woodland, is indicative and characteristic of this complex type, although scattered in small patches throughout the complex. Rocky, circumneutral Central Appalachian community types are common at the site including patches of Appalachian Oak-Hickory Forest and Chestnut Oak Forest. Hemlock-Northern Hardwood Forest forms the matrix for this site. Local patches of Acidic Talus Slope Woodland and Cliff Community are found on the steepest slopes. The acidic forested rocky summit is dominated by Chestnut Oak Forest, Appalachian Oak-Hickory Forest, Appalachian Oak-Pine Forest, and Hemlock-Northern Hardwood Forest. The acidic open rocky summit is dominated by Cliff Community, Acidic Talus Slope Woodland, Chestnut Oak Forest, and Appalachian Oak-Hickory Forest. Other characteristic natural communities in this ecosystem include other forest types. The composition of both the acidic forested rocky summit and acidic open rocky summit ecosystems is similar at the two subsites. Pitch Pine-Oak-Heath Rocky Summit patches have not been found at this site, but there is potential for small examples to occur here.

Important Natural Community Examples. The Western Rensselaer Plateau Escarpment is one of several sites on the plateau with county-exemplary community concentrations, with multiple such occurrences (see site fact sheet). Global significant communities at the site include the Hemlock-Northern Hardwood Forest. Several additional community occurrences are suspected to be state significant: Appalachian Oak-Hickory Forest (2 subsites), Appalachian Oak-Pine Forest, Acidic Talus Slope Woodland (2 subsites), Beech-Maple Mesic Forest, Cliff Community (2 subsites), Chestnut Oak Forest, and Intermittent Stream. One state-rare community type and two additional county-rare community types are known from the site. The A-ranked Hemlock-Northern Hardwood Forest sub-occurrence at this site blankets the Davitt Pond Block. It is large and one of the best among many block examples of this forest which are widespread throughout the Rensselaer Plateau. Large core areas are in a mature state. It was determined to be the only community example of global priority in the Town of Brunswick (Hunt 2012), meaning that by itself it warrants a site biodiversity rank of B1 to B3. This community occurrence is mapped by the New York Natural Heritage Program (NYNHP) throughout much of the northern half of the plateau, including areas surrounding Wheeler Mountain and Davitt Pond Ledges. The Appalachian Oak-Hickory Forest centered around Davitt Pond Ledges/Camp Rotary Woods was thought to be one of the several largest and best examples on the plateau (Hunt 1996), comparable to others such as Slide Mountain Grafton. Although the Cliff community patches are small and fair examples globally, they are relatively large for the county, as this is a county-rare community type.

Sub-Site Description. **Davitt Pond Ledges** (Towns of Poestenkill, Brunswick, & Grafton)

A portion of the Western Escarpment of the plateau W and NW of Davitt Pond with very steep slopes and abundant rock outcroppings, covering ~250 acres. State-significant examples of Hemlock-Northern Hardwood Forest and Appalachian Oak-Pine Forest cover most of the site. Small examples of open rocky summit communities (Cliff Community and Acidic Talus Slope Woodland) are embedded within the forest. The open canopy rocky summit communities are some of the best developed along this escarpment. Several county-rare plants are known in the Poestenkill part of this site. Some county-rare plants and animals are suspected there. Parts of the site have also been referred to as Camp Rotary Woods or the Pattison Preserve.

Rare Species Synopsis.

Among numerous regionally-rare plants of the site are included ones at Davitt Pond Ledges (Poestenkill), Penny Royal Lane Slope, and Wheeler Mountain. The Appalachian Oak-Hickory Forest provides important habitat for county-rare plants. One potential county-rare resident animal (bobcat) is reported from the site; many more county-rare plants and animals are suspected. The site is designated as county-important animal habitat, with at least two animal concentration types.

Landscape Context.

It is situated entirely within the relatively large and intact Davitt Pond Block.

Ecological Integrity.

in very good condition, with very few and minor unnatural disturbances.

ECOSYSTEM COMPLEX SITE DESCRIPTION **Western Rensselaer Plateau Escarpment**

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Inventory Status (Species & Ecological Communities).

The site has been partially explored to date with assistance from several landowners. Communities have been mapped as part of a comprehensive regional map.

Mapping Status.

Site boundaries were precisely delineated, as part of comprehensive Rensselaer Plateau conservation plan treatment of important restricted ecosystem complexes, inferred from comprehensive regional ecological community map for the Rensselaer Plateau. Community types were determined from air photos, multiple field visits and views along Route 351 at the base of the site.

Conservation Status.

The site is entirely private land, with portions under conservation easement with the Rensselaer Land Trust, other areas within the large Boy Scouts of America tract, and other private lands managed using good conservation practices.

Sources:

- Hunt, David. 2012. Sites with Known or Potential High Biodiversity Conservation Value. Town of Brunswick, Rensselaer County, NY. (including inventory status and known & suspected community composition). Ecological Intuition & Medicine. Draft 1: March 21.
- Hunt, David M. 2013. Western Rensselaer Plateau Escarpment. Towns of Brunswick, Poestenkill, Grafton. Preliminary Ecological Summary. Ecological Intuition & Medicine. January. Working draft for Rensselaer Plateau Conservation Plan. GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. June 25, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Western Rensselaer Plateau Escarpment** (Rocky Slope-Summit Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: -

Included Subsites:

Western Rensselaer Plateau Escarpment Ledges (Level-1) (Poestenkill) (=Davitt Pond Ledges)
Camp Rotary Woods (Level-2) (=Davitt Pond Woods; Camp Rotary) (Poestenkill + Grafton) (overlapping)
Common Farms (Level-2) (Poestenkill) (overlapping)
Kirchner Easement (Level-2) (=Pattison Preserve) (Poestenkill) (overlapping)
Penny Royal Lane Slopes (Level-1) (Brunswick + Grafton)
Wheeler Mountain (Level-1) (Brunswick)

Excluded but Related/Overlapping Sites:

Barberville Gorge

Related County-Important Ecological Features:

Priority Conservation Site: Rensselaer Plateau Forest (embedded within)
Forest Landscape: Rensselaer Plateau Forest (embedded within)
Exemplary Communities: Western Rensselaer Plateau Escarpment (contained & overlapping)
Rare Plant Concentration Area: Western Rensselaer Plateau Escarpment (equivalent)
Important Animal Habitat: Western Rensselaer Plateau Escarpment (equivalent)

B. Site Priority.

Regional Priority:

County Priority (County Plan 2017): Tier 1 (highest priority).

Rensselaer Plateau Priority (Conservation Plan ~2013): Tier 1 (highest priority).

C. Site Description.

Complex Hierarchy:

Upland Complex/Rocky Slope-Summit Complex/Acidic/True Rocky Summit/Lower New England-Central Appalachian variant/Plateau Escarpment Slope.

Site Configuration:

Size: 415 acres. Shape/Boundary: relatively stable concept. Slopes lower than site boundaries lack more typical open rocky habitats.

Town Location: Brunswick > Poestenkill (43%) > Grafton. part of 2 of 4 total patches in Poestenkill.

Descriptive Summary:

Central Appalachian variant of rocky slope/summit complex situated on the Western Rensselaer Plateau Escarpment (physiographic subdivision) with multiple open summits and upper slopes containing characteristic open uplands such as Acidic Talus Slope Woodland. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

	.....Ecosystem Types.....			.....Ecosystem Patches.....		
	<u>total</u>	<u>upland</u>	<u>wetland</u>	<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>		<u>open/forest</u>	<u>open/forest</u>
Rocky Slope/Summit	2	2 (1/1)	0	10	10 (4/6)	0

Ecosystem Composition:

Acidic Dry-Mesic Rocky Slope Upland Forest: 6 patches (Central Appalachian Variant).

Acidic Rocky Slope/Summit Open Upland: 4 patches (Central Appalachian Variant).

Ecosystem Accuracy: fully assessed from careful air photo review and moderate field evaluation.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

Acidic Dry-Mesic Rocky Slope Upland Forest:

upland forests (Chestnut Oak Forest, Appalachian Oak-Hickory Forest, Appalachian Oak-Pine Forest, Hemlock-Northern Hardwood Forest, Beech-Maple Mesic Forest), open uplands (Acidic Talus Slope Woodland), lakes (Vernal Pool).

Acidic Rocky Slope/Summit Open Upland:

open uplands (Acidic Talus Slope Woodland, Cliff Community), upland forests (Chestnut Oak Forest, Appalachian Oak-Hickory Forest, Hemlock-Northern Hardwood Forest, Appalachian Oak-Pine Forest), lakes (Vernal Pool), streams (Intermittent Stream).

Importance (most important examples):

Acidic Talus Slope Woodland (county-exemplary, state-significant), Cliff Community (county near-exemplary, state-significant), Chestnut Oak Forest (county-exemplary) Hemlock-Northern Hardwood Forest (county-exemplary, global-priority/state-significant, NY Natural Heritage Program EO).

2. Rare Plant Concentration Area:

yes (1 globally-rare plant, 2 state-rare plants, 25 county-rare plants; see separate site fact sheet).

3. Important Animal Concentration Areas: yes (2 types; see separate site fact sheet).

4. Rare Animal Populations: none known, but probable.

F. Associated Landscape Features: Rensselaer Plateau Forest (see separate site description)

Sources:

Hunt, David M. 2013. Western Rensselaer Plateau Escarpment. Towns of Brunswick, Poestenkill, Grafton. Preliminary Ecological Summary. Ecological Intuition & Medicine. January. Rensselaer Plateau Ecosystem Complexes, Site Description Appendix. Working Draft.

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

ECOSYSTEM COMPLEX SITE DESCRIPTION

Site: **Wynants Kill Snyders Corners** (Ecosystem Complex)

Ecosystem Complex Type: Mineral Soil Wetland Complex

Complex Subtype Hierarchy: Acidic-Circumneutral/Riparian Wetland/Large Stream/4th Order Stream

Physiographic Setting: Taconic Foothills region (Western Rensselaer County).

Descriptive Account (Ecosystem & Ecological Community Composition).

Overview. The Wynants Kill Snyders Corners (Wynants Kill North Greenbush) wetland complex consists of a central stream apparently surrounded by forested to shrub wetlands. Although in a riparian setting, the complex is classified as a basin wetland, not a floodplain, apparently with permanently-inundated conditions. The stream, the 4th order mainstem of the Wynants Kill, consists of a mosaic of a large Rocky Headwater Stream and Marsh Headwaters stream. The site is located along NY Route 150 in the vicinity of the community of Snyders Corners and Snyders Corners Road.

Regional Importance. The importance of this complex is derived from its moderately large wetland size and its good to fair quality/condition, as noted from casual field observations. Its moderately large size is reflected by the following statistics:

- 1) It is the 43rd largest wetland complex in the county.
- 2) It is among the 11th to 16th largest basin wetlands in the county (all 50-100 acres).

The site has the best landscape context among large examples of this complex type in the county.

Rare Species Synopsis.

The site was designated for the county conservation plan as an important animal habitat for its state-designated trout stream. No rare species are known to date from this site, however there is potential for rare fish species.

Landscape Context.

The site is integral to the Wynants Kill Network. Although the surrounding landscape is essentially fragmented forest, dissected by residential structures and associated clearings, it is moderately good as a natural landscape for large wetland examples in the Taconic Foothills region and is in good to fair (B- to C-ranked) condition. includes moderate sized and somewhat intact Coopers Pond Block.

Ecological Integrity.

apparently in moderately good condition from air photo examination.

Inventory Status (Species & Ecological Communities).

essentially no field evaluation: high inventory priority for Town of Poestenkill, focusing on rapid evaluation of communities, then rare species.

Mapping Status.

Precisely delineated, as part of comprehensive county conservation plan treatment of important restricted ecosystem complexes, from typical air photo signature for wetland complex but with field confirmation limited to rapid casual observations at one road crossing.

Conservation Status.

unknown efforts of private landowners.

Sources:

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 5, 2019.

ECOSYSTEM COMPLEX FACT SHEET

Site: **Wynants Kill Snyders Corners** (Mineral Soil Wetland Complex)

A. Site Nomenclature & Concepts.

Site Synonyms: Wynants Kill North Greenbush
Included Subsites: Wynants Kill Snyders Corners (proper)
Excluded but Related/Overlapping Sites: -
Related County-Important Ecological Features:
Priority Conservation Sites: Wynants Kill Corridor (embedded within)
Aquatic Network: Wynants Kill Network (embedded within)
Important Animal Habitat: Wynants Kill Snyders Corners (overlapping)

B. Site Priority

Regional Priority: County Priority (County Plan 2017): Tier 2 (very high priority).

C. Site Description

Complex Hierarchy:
Wetland-Aquatic Complex/Wetland Complex/Mineral Soil Wetland Complex/Acidic-Circumneutral/Riparian Wetland/Large Stream/4th Order Stream.
Site Configuration:
Size: 82 acres; relatively stable concept, based on extent of characteristic community types on comprehensive wetland datalayer.
Town Location: North Greenbush (90%) > Poestenkill (10%).
Descriptive Summary:
forested to shrub wetlands surrounding a central stream. (see more complete 1-page site description).

D. Ecosystem Tallies/Composition.

.....Ecosystem Types.....				.....Ecosystem Patches.....			
	<u>total</u>	<u>upland</u>	<u>wetland</u>		<u>total</u>	<u>upland</u>	<u>wetland</u>
		<u>open/forest</u>	<u>open/forest</u>			<u>open/forest</u>	<u>open/forest</u>
Mineral Soil Wetland	1	0	1 (0/1)		3	0	3 (~3)

Ecosystem Composition:

Acidic-circumneutral mineral soil wetland forest: ~3 patches (Lower New England variant).

Ecosystem Accuracy:

based on very limited field evaluation and prior air photo delineation, but pending careful air photo review.

E. Small-Scale Biodiversity Composition.

1. Natural Communities:

Composition:

streams (Marsh Headwater Stream, Rocky Headwater Stream), wetlands (Red Maple-Hardwood Swamp).

Importance: 0 NY Natural Heritage Program EOs.

2. Rare Plant Concentration Area: none known, but possible.

3. Important Animal Concentration Areas: yes (1 type, possibly more; see separate site fact sheet).

4. Rare Animal Populations: none known, but possible.

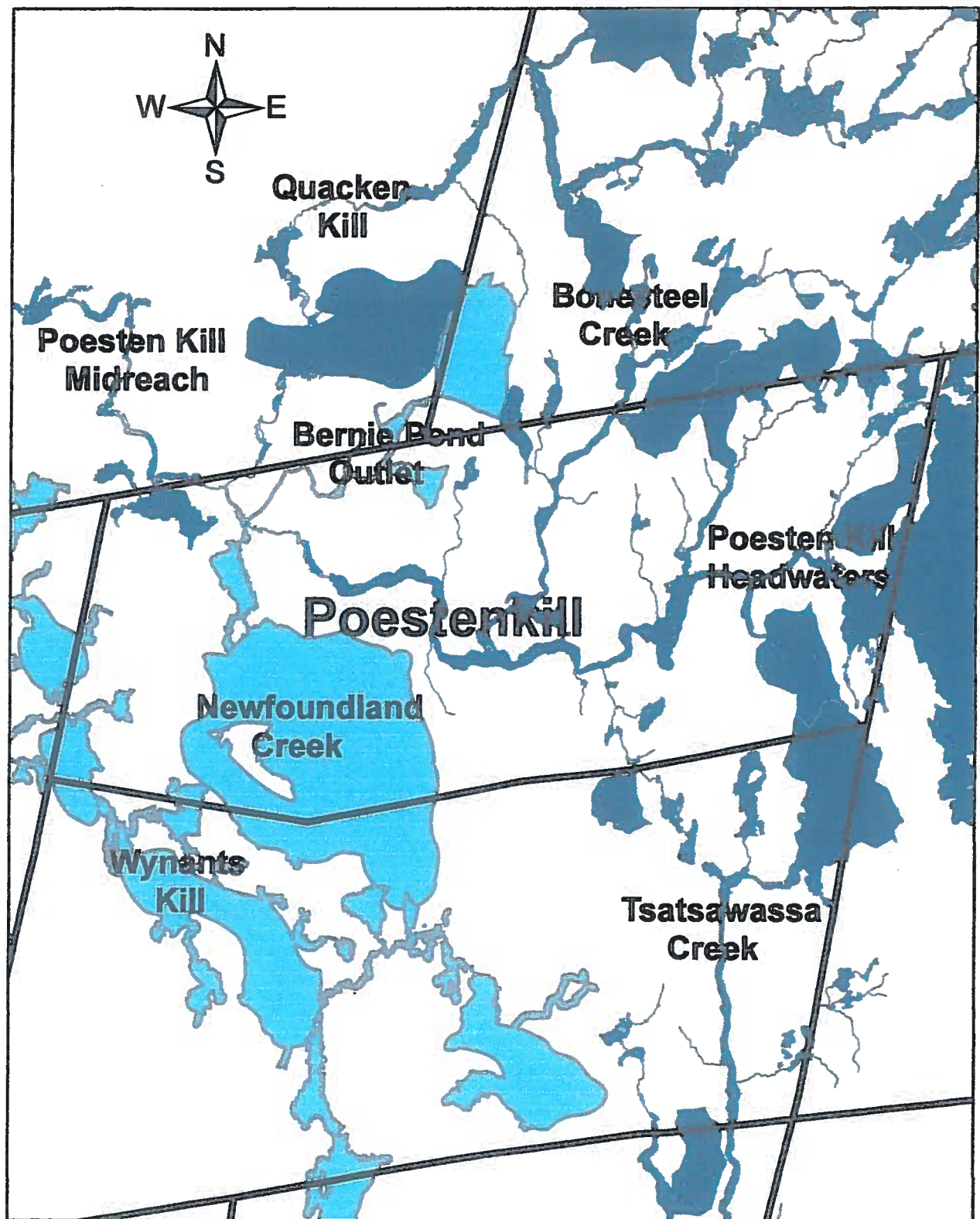
F. Associated Landscape Features: Wynants Kill Aquatic Network (see separate site description).

Sources:

GIS layers (Rensselaer County: important ecological features).

Draft: D.M.Hunt. May 3, 2019.

County-Important Aquatic Networks



Rensselaer County Importance



Tier 1



Tier 3

Town of Poestenkill: Important Aquatic Networks
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
June 2019

1. Introduction.

The goal for this feature, as part of the Town of Poestenkill Natural Resources Inventory, was to provide site descriptions for all **8 county-important aquatic network sites** in town (see Map 3) identified for the 2017 Rensselaer County Conservation Plan (compiled by the Rensselaer Land Trust). The 2017 collective of sites represents the first attempt of RCBGP to design a **comprehensive, carefully, and accurately determined set of countywide-important aquatic networks**, either manually or into a GIS system. The 2017 effort expanded upon the comprehensive GIS set of important aquatic networks for the Rensselaer Plateau region and more casual hypotheses of important networks previously prepared for local towns as part of their comprehensive planning documents (e.g., Mill Hollow Brook and Deep Kill as important networks for the Town of Schaghticoke, Poesten Kill for the Town of Brunswick, Kinderhook Creek for the Town of Nassau, and the Wynants Kill for the Town of Sand Lake).

Work for the Town of Poestenkill in 2019 focused mostly on consolidation of information into concise site descriptions and review of previously-prepared GIS information. Only **minor refinements were made to GIS information** (beyond the project scope). **Minor boundary refinements were made for only two networks** (also beyond the project scope). No supplementary sites are suggested, the set of important networks already covering most of the stream segments in town. Because the site concept is precisely defined and was accurately analyzed, the set of designated sites is likely very stable, with any additions unlikely in the near future.

2. Feature Concept.

(modified slightly and supplemented for clarity from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

Sites throughout Rensselaer County, New York that represent the best chance for the long-term conservation of native aquatic biota (plants and animals) characteristic of large contiguous and relatively little disturbed aquatic landscapes, especially riverine landscapes, and especially on the order of several miles or more long. In general, aquatic networks are conceptualized as large- to moderate-scale areas ("networks") that best contribute to stream system integrity, especially natural water quality and native aquatic biota. Sites are typically constructed from associated "aquatic components" such as mainstem and tributary streams, connected lakes, mainstem and headwater wetlands, intact riparian corridors, plus intact subcatchments. Important Aquatic networks are defined as stream systems with high integrity (with a high percentage of native aquatic plant and animal species and in good condition, especially with good water quality) plus the most essential surrounding areas required to maintain those aquatic features. These networks are thought to be most important for "aquatic" features, which include several community system habitats ("rivers", "lakes", "estuaries" and some "wetlands") and aquatic biota (especially fish). Aquatic networks are the aquatic equivalent of "Important Intact Natural/Forest Landscapes", the latter intended to capture the terrestrial biodiversity component of larger landscapes.

Important aquatic network sites are predicted to support groups of native aquatic species, especially native fish taxa, restricted to the most natural settings, especially habitats with naturally relatively clean water and relatively unimpeded water flow. These sites consider the overall quality of the aquatic landscape, focusing on those with 1) the largest size [suggesting a high degree of geomorphology, habitat, and species diversity], 2) the lowest degree of impact from anthropogenic dams & diversions, predicted to be necessary to best support species of large

Town of Poestenkill: Important Aquatic Networks

p. 2

connected aquatic areas [high contiguity and low bisection], and, to a lesser degree, 3) the best condition [especially relatively high water quality].

The interpretation and design of aquatic network boundaries, especially existing relatively intact areas that are currently most influential in creating a cleanwater stream system, generally follows a model developed primarily by Ecological Intuition & Medicine/D.Hunt for regional planning efforts of the Adirondack Nature Conservancy, where all regionally-important aquatic networks of the Adirondacks were mapped. Thus, included within each site are 1) "intact subcatchments" of essentially 100% natural communities that feed into a stream system, usually near its headwaters, 2) "intact riparian corridors" of essentially 100% natural communities that laterally surround sections of a stream system, usually in scattered reaches along its midreach and/or main channel segments, with corridor width determined based on proximity and the degree slope of surrounding areas, and 3) connected associated key examples of aquatic/riparian features, mostly lakes, riparian wetlands, and open riparian/riverside upland communities. Large reservoirs are generally treated as "cultural disturbances" from an aquatic perspective and were heavily factored into the overall importance assessment for each aquatic network (i.e., the best networks ideally have no or the fewest and smallest reservoirs).

3. Site Assembly and Prioritization Methods.

(see Hunt January 2017 for basic methods; prepared for Rensselaer Land Trust County Conservation Plan; available upon request)

includes extensive details on: Priority Set Determination Method Summary, Site Boundary Method Summary, Prioritization Status Determination Method Summary.

Supplemental Site Boundary Methods (2019): While regionally-important aquatic networks were precisely mapped for the Rensselaer Plateau region (eastern part of the Town of Poestenkill) in 2013, networks in the Taconic Foothills region (western part of the Town of Poestenkill) involved rapid modelling of forested riparian buffer zones in 2017 as a coarse first iteration. Thus, riparian corridors in the latter region may have a "blocky" appearance, and future shape refinements are recommended (see below). The only site boundary change made in 2019 was for the Poesten Kill Headwaters and Poesten Kill Midreach Networks. The 2017 versions of these two networks were overlapping, preserving a past delineation from the Rensselaer Plateau Conservation Plan (see site descriptions for discussion). A single precise line was suggested and delineated in 2019 as the best ecological transition point between these networks to ensure two mutually exclusive network boundaries.

4. GIS Information Available

(updated slightly from Hunt January 2017; for Rensselaer Land Trust County Conservation Plan)
(with minor updates catered to Town of Poestenkill in 2019)

Data Tallies:

- 1) Town of Poestenkill: total of 8 important aquatic network sites mapped in 2017.
- 2) Rensselaer County/county-level analyses: see Hunt January 2017, for Rensselaer Land Trust County Conservation Plan.

File Name:

Important_AqNets_Poestenkill (town subset of RensCo_Important_AqNets)

RensCo_AqNet_Important_Components.

aquatic components used to form networks; see Hunt January 2017, for Rensselaer Land Trust County Conservation Plan.

Important Fields for Users:

* = values newly populated for Town of Poestenkill Natural Resources Inventory.

** = metadata updated for Town of Poestenkill Natural Resources Inventory.

1. Important Aquatic Network Identity Fields.

AqNetName: Landscape-Level Placename; assigned mostly by RCBGP/D.Hunt using TNC methodology.

AqNetCode: Unique Network identifier for county tracked by RCBGP.

HUC_8, HUC_10: HUC-8 and HUC-10 Watershed Units in which network is located.

HUC_12*, **: HUC-12 Watershed Units in which network is located; fully populated anew in 2019.

2. Important Aquatic Network Priority Fields.

RensCoTier:

Priority Tier within county for this feature, important aquatic landscapes.

Tier 1:

sites of highest priority conservation focus for natural aquatic landscapes in the county; usually the best example or equivalent examples for each HUC-10 watershed unit; representing a combination of those of the largest size, highest water quality, lowest degree of aquatic fragmentation from dams & diversions, and highest biodiversity of aquatic biota/habitat features (ecosystem complexes, natural communities, coarse geomorphology).

Tier 2:

sites of high priority conservation focus for natural aquatic landscapes in the county; usually good supplemental examples for each HUC-10 watershed unit; generally smaller, more disturbed, and/or less diverse than comparable Tier 1 choices in the same watershed unit.

Tier 3:

other sites of recommended or alternate conservation focus (moderately high priority) for natural aquatic landscapes in the county that may add diversity, complementarity, and broader regional landscape connectivity to Tier 1 and Tier 2 sites, especially sites in different physiographic regions and possibly also different Rensselaer County towns than those of Tier 1 and Tier 2 sites; typically smaller, more disturbed, and/or less diverse than comparable Tier 1 and 2 choices in the same watershed unit.

Tier 4:

connecting segments of moderate conservation priority that link together Tier 1 to Tier 3 networks, attempting to provide countywide connectivity between important networks. These sites generally link headwater networks to larger networks (main channel and large midreach networks) through disturbed segments (e.g., a large reservoir) or through segments outside of Rensselaer County (e.g., Hoosic River tributaries).

FeatureTyp: Region for which the network was originally designated as an important site.

3. Site Characteristics.

SzCategory:

Coarse Network Size, based mainly on position within larger stream system: 5 values: headwater network, headwater to midreach network, midreach network, main channel network: non-tidal, main channel network: freshwater tidal.

Size_Class:

Size Class of Stream System Mainstem; roughly following TNC classification via coarse estimate; values range from 1 to 4, based on the drainage area of stream segments.

Acreage: Size of Aquatic Network in acres.

Viable*, **: Long-Term Viability of Aquatic Network Site; 2 values:

Yes (viable), Yes? (with enough disturbances that important features may be threatened).

ConsGoal*, **: General Recommended Conservation Goal for Site; 2 values:

Conserve (sufficient protection of site alone should conserve all or most contained important ecological features)

Conserve/Restore ("restore" implying that site restoration is desirable to restore the conservation value of the site, likely to a higher importance tier, via improved condition and/or more viable examples of contained important ecological features).

TroutStr*, **: status of network mainstem plus major tributaries for viable populations of one or more trout species.

WQ_Class*, **: water quality class in NYS DEC classification.

WQ_Trout*, **: trout habitat designated in NYS DEC water quality classification.

Estuary*, **: presence of at least a small stretch of estuarine stream segments in the network.

Dams_All*, **: number of dams along entire stream system.

Dams_Est*, **: number of dams along estuarine stream segments of the network.

Dams_Trout*, **: number of dams along trout stream segments of the network.

Other Potentially Useful Fields not yet fully populated.

LengthMi (Length of Mainstem; more time needed for complex calculations from component layers).

5. Ecological Interpretation Summary.

(slightly modified for clarity and supplemented from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

The Rensselaer County important aquatic network layer is planned to be used to prioritize regional aquatic biodiversity conservation efforts for Rensselaer County, New York and put aquatic landscapes of the county into larger contexts of regions such as the Hudson River Estuary and the Lower New England Ecoregion, both of which are known to have organizations involved in ongoing conservation planning and prioritization efforts for aquatic features.

The county-wide display of the most important aquatic networks, especially a display showing priority levels, reveals a pattern that parallels priorities for many of the smaller-scale aquatic ecological features (ecosystems, communities, rare species, important animal habitats). Some of the most important aquatic networks of Rensselaer County are those of the large river systems in the county, especially the largest one, the Tidal Hudson River. Aquatic networks within the county long recommended as the highest conservation priorities for the county include: the Hudson River and Hoosic River Corridors, the two largest aquatic networks in the county, centered around the two largest rivers in the county. However, other smaller, but still relatively large, midreach networks highlighted here, ones of relatively good condition and high diversity, are often emphasized at a county level, at least by anglers, including: the Poesten Kill and Kinderhook Creek (Tier-1 networks) plus the Waloomsac River (Tier-2 network). Additionally, other smaller and/or more disturbed, but perhaps still locally important, aquatic networks are recommended as supplementary conservation priorities such as the Wynants Kill (a Tier-3 midreach network). Important aquatic networks are spread throughout all major physiographic areas of the county, including the more developed Hudson Valley, Taconic Foothills, and Taconic/Hoosic Valley regions. Similarly, all of the 16 towns of the county contain a portion of at least one important aquatic network, including ones in the SW part of the county, which border on the Tidal Hudson River network. While most of the watersheds in the county are well represented by constituent networks deemed county important, some (e.g., the Owl Kill watershed) have no mapped stream systems within the county because they are at the edge of the county and the bulk of their watersheds are in other counties. Other watersheds in the Upper Hoosic drainage, flowing eastward into Massachusetts from the crest of the Taconic Mountains, contain only small segments of stream systems at that high elevation. These segments were identified as important, due to stratification principles, but needed to be connected to the Hoosic River of New York via Tier-4 Massachusetts stream segments (e.g., the Green River). Similarly, some disjunct important aquatic networks on the Rensselaer Plateau are connected to the Lower Hoosic River via the impounded Tier-4 Tomhannock Creek network, as is an important network in the Taconic Mountains to the Middle Hoosic River via the disturbed Tier-4 Little Hoosic River Headwater network.

As road corridors and dams within a river corridor become more abundant and more developed, the "functional natural corridor" across which aquatic biota can be exchanged through processes such as migration decreases. In extreme cases, multiple stream segments within a single river corridor may no longer be considered as interacting units, but rather "isolated" sites. Therefore, maintenance of the importance status of these designated county-important aquatic networks relies heavily on a relatively unfragmented state for each network.

6. Site Description Summaries

The specific goal for this feature for the Town of Poestenkill Natural Resource Inventory was to produce a 1-page site description/fact sheets for each of the 8 county-important aquatic network sites in town designated for the 2017 Rensselaer County Conservation Plan. Site descriptions are provided using fine print. They are longer for the larger and more complex sites plus sites that had more lengthy historical description documents. Documents were integrated, condensed, and polished from all readily available prior electronic files of the Rensselaer County Biodiversity Greenprint Project (see below). The document format was attempted to be as consistent as possible across all 8 sites, to allow meaningful site comparisons. These documents are intended to be "first iteration" drafts for public use to provide the following:

1. a visual image of the nature of each site, especially beyond just its name.
2. a concise document with consolidated but detailed information on the ecological characteristics, regional importance, and geography of each site.
3. a template which can be refined with more detailed information in the future, especially to fill in any information gaps.
4. a pilot model which could be followed for important aquatic network sites in other towns of the county.

Because many of these site concepts (boundaries and associated ecological characteristics), as biodiversity conservation sites, were envisioned by the Rensselaer County Biodiversity Greenprint Project, it is thought that the most informative description of each site to date is represented in this product. Future improvements, requiring more time beyond the project scope, could involve:

1. refinement of site boundaries for entire networks or parts of networks in the Taconic Foothills region, where only a coarse, rapid remote GIS model was used to delineated natural riparian buffer; refining the boundary by using air photos to improve natural riparian buffer precision and designing smoothed boundary edges to eliminate blockiness.
2. population of additional GIS fields abbreviated from information in the site descriptions.
3. further review of manual files of the Rensselaer County Biodiversity Greenprint Project.
4. review and integration of documents of other organizations.

Sources (2019 update):

1. Rensselaer County Conservation Plan documents.
(prepared for Rensselaer Land Trust 2017 including GIS datalayer, summary memo, cover memo).
2. Rensselaer County Biodiversity Greenprint Project electronic site files.
(see individual sites for relevant references).
3. Rensselaer Plateau Conservation Plan documents.
(see individual sites for relevant references, especially in working draft of Rensselaer Plateau Ecological Features Documentation Series: Aquatic Networks).

Aquatic Network Site: Bernie Pond Outlet Network

SITE FACT SHEET & DESCRIPTION

County Network Code: AN4.

Watershed Hierarchy: Poesten Kill (HUC 10)/Poesten Kill-Bonesteel Creek (HUC 12).

County Conservation Priority: Tier 3 (moderately high priority).

Size: 716 acres, with 5.1 miles of mapped streams.

Stream Size: headwater (TNC Size Class 1).

Landscape Conservation Status: needs more assessment. probably viable, with both conservation & restoration goals.

Water/Fisheries Quality: suspected viable trout populations, with designated trout-spawning stream C(TS) segments.

Tidal Classification: non-tidal.

Flow Impacts: 0 dams.

Embedded Within: Rensselaer Plateau Forest (a much larger terrestrial landscape).

Contained Features:

County-Exemplary Natural Communities: 1 community type at 1 site (Bernie Pond, lakes: Oligotrophic Pond, county-near-exemplary).

Important Animal Habitats: 1 site (Bernie Pond Brook).

No aquatic ecosystem complexes or rare plant concentration areas are designated.

Town Locations: Grafton > Poestenkill (~20%) > Brunswick.

Site Description.

The Bernie Pond Outlet Network is a moderate-sized network for Rensselaer County, originating and mostly within the intact Rensselaer Plateau Forest landscape, thus with high ecological integrity. It was identified as an important network for aquatic biodiversity conservation within both the Rensselaer Plateau and Rensselaer County, as part of their respective conservation plans. The network is centered around Bernie Pond Outlet (perhaps also known as Bernie Pond Brook), a moderate-sized tributary of the much larger Poesten Kill river.

Aquatic Components.

The map of the Bernie Pond Outlet Network was compiled from 24 aquatic network components for the Rensselaer Plateau Conservation Plan including 21 ecological community patches for 2 stream mainstems, 5 stream tributaries, 3 headwater lakes, 2 restorable lakes, 4 mainstem wetlands, and 5 headwater wetlands. Also included are 2 intact subcatchments and 1 intact riparian corridor. Components in the Town of Poestenkill include the stream mainstem, the riparian corridor, and 1 intact subcatchment on the plateau escarpment.

Contained Features.

Regionally-important ecological features contained within this network include 1 county-exemplary community and 1 important animal habitat, both associated with aquatic feature. Bernie Pond Brook, a high quality stream system with trout-spawning designation, and Bernie Pond, an Oligotrophic Pond with county near-exemplary and state-significant community status. The lower half of the stream system, where the highest aquatic diversity is expected, is within the Town of Poestenkill. Limited network-wide biota information is available or has been compiled from this network.

Sources:

Hunt, David M. 2013. Rensselaer Plateau GIS ecological feature layers (including aquatic networks, aquatic network components).

Hunt, David M. 2017. Rensselaer County GIS ecological feature layers (including aquatic networks, aquatic network components).

Future Sources/Improvements:

more detailed review of Rensselaer County Biodiversity Greenprint Project site files for the upper part of the network; seek out and integrate any NYS DEC/NY State Museum fisheries/macrobenthic data. Site boundary improvements for the Taconic Foothills part of the network are pending, refining the coarsely modelled riparian corridors there with careful review of forest/natural land cover on actual air photos plus topographic contours.

Edition: Draft 1: June 24, 2019.

Aquatic Network Site: Bonesteel Creek Network

SITE FACT SHEET & DESCRIPTION

County Network Code: AN56.

Watershed Hierarchy: Poesten Kill (HUC 10)/Poesten Kill-Bonesteel Creek (HUC 12).

County Conservation Priority: Tier 1 (highest priority).

Size: 1161 acres, with 17.5 miles of mapped streams.

Stream Size: headwater (TNC Size Class 1).

Landscape Conservation Status: viable, with both conservation & restoration goals.

Water/Fisheries Quality: suspected viable trout populations, with designated trout-spawning stream C(TS) segments.

Tidal Classification: non-tidal.

Flow Impacts: 2 dams, 0 in designated trout stream segments.

Embedded Within: Rensselaer Plateau Forest (a much larger terrestrial landscape).

Contained Features:

Ecosystem Complexes: 2 lakes (Bonesteel Pond, Wager Pond-Snyder Swamp), 1 mature forest (Mud Pond Grafton North Forest), peatlands (Hosford Pond Bog, Long Swamp-Cranberry Pond, Wager Pond-Snyder Swamp).

County-Exemplary Natural Communities: 15 community examples including ones at Hosford Pond Bog, Mud Pond Grafton, Wager Pond-Snyder Swamp, Madonna Lake, Forest Lake, Gravel Pond, Upper Poesten Kill, and Bonesteel Pond. community types include Rocky Headwater Stream, Oligotrophic Dimictic Lake, Bog Lake, Oligotrophic Pond, Eutrophic Pond, Dwarf Shrub Bog, Highbush Blueberry Bog Thicket, Deep Emergent Marsh, and Shallow Emergent Marsh.

Important Animal Habitats: 3 sites (Hosford Pond Bog, Upper Poesten Kill, Wager Pond-Snyder Swamp Complex).

Rare Plant Concentration Areas: 5 sites (Hosford Pond Bog, Long Swamp-Cranberry Pond, Madonna Lake, Forest Lake, Newcomb Swamp Grafton).

Town Locations: Grafton >= Poestenkill (~45%).

Site Description.

The Bonesteel Creek Network is a moderately large-sized network for Rensselaer County, originating and entirely within the intact Rensselaer Plateau Forest landscape, thus with high ecological integrity. It was identified as an important network for aquatic biodiversity conservation within both the Rensselaer Plateau and Rensselaer County, as part of their respective conservation plans. It is a Tier-1 network for both geographic areas. Tier-1 networks are of highest conservation importance for a region. This designation can be attributed to the large size of intact portions of this stream system and the intact nature of its stream system, buffer, and headwater subcatchments. Although a major tributary of the Poesten Kill, because Bonesteel Creek has its corresponding HUC-10 watershed, it is treated as a separate network (the Bonesteel Creek Network) from the Poesten Kill Headwaters Network. It originates from three peatland complexes, Long Swamp-Cranberry Pond Complex, Snyder Swamp Complex, and Hosford Pond Bog, all regionally-important ecosystem complex sites which include integral upstream aquatic sources such as Mud Pond Grafton and Forest Lake. It then flows through two large lakes of the plateau (Wager Pond, more recently changed to "Madonna Lake", and Bonesteel Pond), both regionally-important ecosystem complex sites. Among aquatic network components are the mainstem of Bonesteel Creek and narrow intact riparian corridors. The "C(TS)" water quality classification designation for the portion of Bonesteel Creek below Bonesteel Pond indicates waters able to support viable trout populations and trout spawning habitat. Above the pond are multiple cleanwater stream segments with Class "A" and "B" water quality designations. Although no reports of native brook trout are yet known from this network, that fish is suspected here. Although the riparian corridor of the stream has intact forest cover, it is known, however, to have been compromised by a spreading population of the invasive herbaceous riverside plant Japanese Knotweed, especially along Blue Factory Road in the Town of Poestenkill.

Aquatic Components.

The map of the Bonesteel Creek Network was compiled from 98 aquatic network components for the Rensselaer Plateau Conservation Plan including 86 ecological community patches for 19 stream mainstem segments, 16 stream tributary segments, 8 headwater lakes, 2 restorable lakes, 6 mainstem floodplains, 12 mainstem wetlands, and 23 headwater wetlands. Also included are 4 ecosystem complex types (1 mainstem complex, 1 mainstem lake complex, 1 headwater lake complex, and 3 headwater wetland complexes). The site also contains 2 intact subcatchments and 4 intact riparian corridors. Components in the Town of Poestenkill include the stream mainstem, riparian corridors, and portions of both intact subcatchments, spanning both the Central Plateau and the Plateau Escarpment. The lower half of the stream system, where the highest aquatic diversity is expected, is within the Town of Poestenkill.

Contained Features.

Important ecological features contained within this network include several ecosystem complexes, numerous county-exemplary natural communities, a few rare plant concentration areas, and a few important animal habitats, most associated with aquatic features (Bonesteel Pond, Madonna Lake, Forest Lake) and wetland features (Hosford Pond Bog, Wager Pond-Snyder Swamp, Mud Pond Grafton, Newcomb Swamp Grafton). Among the 15 county-exemplary natural communities within this network are included several aquatic types (Rocky Headwater Stream, Oligotrophic Dimictic Lake, Bog Lake, Oligotrophic Pond, Eutrophic Pond) and wetland types (Dwarf Shrub Bog, Highbush Blueberry Bog Thicket, Deep Emergent Marsh, Shallow Emergent Marsh). The Bonesteel Creek mainstem is a high quality stream system with trout-spawning designation. Limited network-wide biota information has been compiled from this network, although much is available for individual sites in the files of the Rensselaer County Biodiversity Greenprint Project.

Sources:

Hunt, David M. 2013. Rensselaer Plateau GIS ecological feature layers (including aquatic networks, aquatic network components).

Hunt, David M. 2017. Rensselaer County GIS ecological feature layers (including aquatic networks, aquatic network components).

Hunt, David M. 2018. Bonesteel Creek/Tucker Parcels: Significance of Ecological Features. Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. April 26.

Future Sources/Improvements:

more detailed review of Rensselaer County Biodiversity Greenprint Project site files for the network (including a 2018 Bonesteel Creek Forest Garden survey); seek out and integrate any NYS DEC/NY State Museum fisheries/macrobenthic data.

Edition: Draft 2 (June 9, 2019).

initial draft (Draft 1: April 2018).

Aquatic Network Site: Newfoundland Creek Network

SITE FACT SHEET & DESCRIPTION

County Network Code: AN57.

Watershed Hierarchy: Poesten Kill (HUC 10)/Poesten Kill-Bonesteel Creek (HUC 12).

County Conservation Priority: Tier 3 (moderately high priority).

Size: 3515 acres, with 3.6 miles of mapped streams.

Stream Size: headwater (TNC Size Class 1).

Landscape Conservation Status: needs more assessment. probably viable, with both conservation & restoration goals.

Water/Fisheries Quality: suspected viable trout populations, with some designated trout-spawning stream C(TS) segments.

Tidal Classification: non-tidal.

Flow Impacts: 0 dams.

Embedded Within: Poesten Kill Midreach Corridor (aquatic priority conservation site).

Contained Features:

Ecosystem Complexes: 2 mineral soil wetlands (Newfoundland Creek Headwaters, Vosburgh Swamp).

County-Exemplary Natural Communities: 2 community types at 1 site, Vosburgh Swamp (lakes: Eutrophic Pond, county-near exemplary; wetlands: Deep Emergent Marsh, county co-exemplary).

Important Animal Habitats: 2 sites (Newfoundland Creek Headwaters, Vosburgh Swamp).

Rare Plant Concentration Areas: 1 site (Vosburgh Swamp).

Town Locations: Poestenkill (~80%) > Sand Lake.

Site Description.

The Newfoundland Creek Network is a moderate-sized network for Rensselaer County, situated mostly in the Taconic Foothills region, just below the base of the large, intact Rensselaer Plateau Forest landscape. Because of its landscape setting, it has moderately high ecological integrity and was thus identified as an important network for aquatic biodiversity conservation within Rensselaer County, as part of its conservation plan. It is a Tier-3 network for Rensselaer County among 3 county importance tiers. Although deemed regionally-important, its lower tier stems from comparisons to larger and more intact networks in the county such as ones on the Rensselaer Plateau and in the Taconic Mountains. The Tier-3 designation can be attributed to the moderate size of intact portions of this stream system and the moderately intact nature of its stream system, buffer, and headwater subcatchment. Integral upstream aquatic sources include Vosburgh Swamp, a moderately large wetland complex at the headwaters of the network. The Newfoundland Creek mainstem flows into the Poesten Kill at the base of the network. Among aquatic network components are the mainstem of Newfoundland Creek and a wide intact subcatchment. Multiple stream segments of this network are classified as "C(TS)" water quality, indicating waters able to support viable trout populations and serve as trout-spawning areas. The riparian corridor of the stream has a broken forest cover and there are limited populations of moderately invasive riverside plants such as multiflora rose.

Aquatic Components.

The map of the Newfoundland Creek Network was compiled from 5 aquatic network components for the Rensselaer County Conservation Plan including 2 ecological community groups, namely 1 stream mainstem and 1 set of unnamed tributaries. Also included are 1 county-important example of general riparian ecosystem complexes, 1 intact subcatchment, and 1 set of natural riparian strips. All of these components occur in the Town of Poestenkill, especially spanning the Newfoundland Creek Headwaters and Vosburgh Swamp wetland complexes.

Contained Features.

Regionally-important ecological features contained within this network include two county-important ecosystem complexes, two county-exemplary natural communities, one rare plant concentration area, and two important animal habitats, all associated with wetland features (Newfoundland Creek Headwaters, Vosburgh Swamp). Newfoundland Creek is thought to be a moderately high quality stream system based on its trout habitat designation. Vosburgh Swamp, with its county-exemplary Eutrophic Pond and Deep Emergent Marsh, represents one of multiple sources of this stream network. Limited network-wide biota information has been compiled from this network, although some is available from the Rensselaer County Biodiversity Greenprint files on Newfoundland Creek Headwaters and Vosburgh Swamp. River otter has been reported from the lowermost segments of the network (J. DeWaalMalefyt, pers.com.). The only fish species observed to date in the streams onsite is eastern blacknose dace (a minnow), but multiple other species are expected. No first-hand reports of brook trout are yet known from this network and none have been observed during the limited, very casual field surveys.

Sources:

Hunt, David M. 2017. Rensselaer County GIS ecological feature layers (including aquatic networks, aquatic network components).

Hunt, David M. 2018. Poestenkill Center Bog/Van Slyke Parcels: Significance of Ecological Features. Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. November 15.

Hunt, David M. 2019. Newfoundland Creek Headwaters/Alexander-Howard Parcels, Significance of Ecological Features. Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine. March 22.

Future Sources/Improvements:

more detailed review of Rensselaer County Biodiversity Greenprint Project site files (including the Alexander-Howard Rensselaer Land Trust Easement summary 2019); seek out and integrate any NYS DEC/NY State Museum fisheries/macrobenthic data. Site boundary improvements for all Taconic Foothills networks such as this are pending, refining the coarsely modelled riparian corridors with careful review of forest/natural land cover from actual air photos plus topographic contours.

Edition: Draft 3 (June 9, 2019).

previous drafts (Draft 1: November 2018 for Poestenkill Center Bog site, Draft 2: March 2019 for Newfoundland Creek Headwaters site).

Aquatic Network Site: Poesten Kill Headwaters Network

SITE FACT SHEET & DESCRIPTION

County Network Code: AN2.

Watershed Hierarchy: Poesten Kill (HUC 10)/Poesten Kill-Dyken Pond (HUC 12).

County Conservation Priority: Tier 1 (highest priority).

Size: 5698 acres, with 38.7 miles of mapped streams.

Stream Size: headwater to midreach (TNC Size Class 1).

Landscape Conservation Status: viable, with both conservation & restoration goals.

Water/Fisheries Quality: suspected viable trout populations, with designated trout-stream C(T) segments.

Tidal Classification: non-tidal.

Flow Impacts: 5 dams, 3 in designated trout stream segments.

Embedded Within: Rensselaer Plateau Forest (a much larger terrestrial landscape).

Contained Features:

Ecosystem Complexes: 1 lake (Dyken Pond), 4 peatlands (Dustin Swamp, Poesten Kill Headwaters, Poesten Kill Headwaters Outlet, Long Swamp-Cranberry Pond), 1 mineral soil wetland (Poesten Kill Headwaters Outlet), 1 riparian complex (East Poestenkill Flats), 4 boreal flats (Poesten Kill Headwaters NW, Poesten Kill Headwaters NE, Poesten Kill Headwaters E, Poesten Kill Headwaters S), and 1 mature forest (Round Pond NE Swamp Forest).

County-Exemplary Natural Communities: 28 community examples including ones at 9 sites (Big Bowman Pond, Boundless Woods Marsh, Davitt Pond, Dustin Swamp Complex, East Poestenkill Flats, Hicks Pond, Long Swamp Grafton, Poesten Kill Headwaters, Upper Poesten Kill) and covering 18 community types among streams (Rocky Headwater Stream, Marsh Headwater Stream, Backwater Slough, Intermittent Stream), lakes (Oligotrophic Dimictic Lake, Mesotrophic Dimictic Lake, Oligotrophic Pond), wetlands (Floodplain Forest, Inland Poor Fen, Dwarf Shrub Bog, Black Spruce-Tamarack Bog, Sedge Meadow, Deep Emergent Marsh, Shallow Emergent Marsh, Shrub Swamp, Spruce-Fir Swamp), and moist flats (Balsam Flats, Spruce Flats).

Important Animal Habitats: 9 sites including Big Bowman Pond, Boundless Woods Marsh, Davitt Pond, Dustin Swamp Complex, Dyken Pond Complex, Poesten Kill East Poestenkill, Poesten Kill Headwaters, Upper Poesten Kill.

Rare Plant Concentration Areas: 8 sites (Big Bowman Pond, Davitt Pond, Dustin Swamp Complex, Dyken Pond Complex, Hicks Pond, Legenbauer Road Woods, Long Swamp-Cranberry Pond, Poesten Kill Headwaters North).

Town Locations: Poestenkill (~60%) > Berlin > Grafton > Sand Lake.

Site Description. (modified from Hunt 2014)

The Poesten Kill Headwaters Network is a large network for Rensselaer County, originating and entirely within the intact Rensselaer Plateau Forest landscape, thus with high ecological integrity. It was identified as an important network for aquatic biodiversity conservation within both the Rensselaer Plateau and Rensselaer County, as part of their respective conservation plans. It is a Tier-1 network for both geographic areas. Tier-1 networks are of highest conservation importance for a region. This designation can be attributed to the large size of intact portions of this stream system and the intact nature of its stream system, buffer, and headwater subcatchments. It is considered to be a "functional aquatic landscape", a large, relatively intact landscape-level site centered around a river corridor (the Upper Poesten Kill Corridor) that helps to sustain the aquatic biota of its region. This corridor, in turn, contains a central stream system (part of the larger Poesten Kill Stream System) plus surrounding riparian buffer, with some key forested buffer areas. Intact subcatchments of feeder streams in headwater areas round out the network. Integral upstream aquatic sources include Poesten Kill Headwaters, the largest peatland in the county, at the headwaters of the network. Other major aquatic sources are Dustin Swamp Complex, Dyken Pond, Big Bowman Pond, and Hicks Pond. The Poesten Kill mainstem throughout this site (designated as the Upper Poesten Kill section of the broader Poesten Kill Corridor) transitions into the Poesten Kill Midreach (the Middle Poesten Kill section of the corridor) at Barberville Falls near the base of the plateau. Among aquatic network components are the mainstem of the Poesten Kill and wide intact riparian corridors. The dominant stream communities throughout the Rensselaer Plateau are moderate to large-sized examples of headwater stream types, mostly Rocky Headwater Stream. The many segments of the Upper Poesten Kill with water quality classification designations "C(T)" and "C(TS)" indicate waters able to support viable trout populations and serve as trout spawning habitat, respectively. Much of the riparian corridor of the stream has intact forest cover. Populations of the highly invasive riverside plant Japanese Knotweed are known from long stretches of the network along Plank Road, although it appears to have not yet entered the stream channel as of 2019.

Site Importance.

Poesten Kill Headwaters Network is one of 46 important aquatic networks and 1 of 19 Tier-1 networks for Rensselaer County (Hunt 2017). It is one of 3 Tier-1 headwater to midreach networks in the county, along with Tsatsawassa Creek and the Black River. In the initial analysis of this network for the Rensselaer Plateau Conservation Plan (Hunt 2014), the area of the network on the plateau was mapped at 5569 acres, with 47.3 miles of stream, by far the longest network on the plateau. The upper reaches of the Poesten Kill mainstem, the Upper Poesten Kill, has been determined to be a site of "high global biodiversity significance" (Biodiversity Rank of B3).

Site Geography. (Modified from Hunt 2014, 2017)

The Poesten Kill Headwaters Network is part of the broader Poesten Kill Corridor site, the latter representing the entire stretch of the Poesten Kill mainstem plus its surrounding riparian communities and buffer from its source in the wet flats of the Towns of Berlin and Grafton to its mouth at the confluence with the Hudson River in the City of Troy. The broader Poesten Kill stream corridor has been partitioned into four sections: the Upper Poesten Kill, the Middle Poesten Kill, the Lower Poesten Kill, and Poesten Kill Mouth, each with a different suite of aquatic and bordering riparian community types: flat slopes and high elevations in the upper section (all on the Rensselaer Plateau within the Towns of Berlin, Poestenkill, and Grafton), steep to gentle slopes and moderate elevations in the middle section (mostly in the Taconic Foothills except for a small portion on the plateau within the Town of Poestenkill, flowing downstream off the plateau into the Town of Brunswick), plus steep to gentle slopes and low elevations in the lower two sections (extending from the Town of Brunswick into the City of Troy, where it flows into the Hudson River). The Upper Poesten Kill represents the core stream system within the Poesten Kill Headwaters Network. The broader Poesten Kill Headwaters Network site contains all of the headwaters of the Poesten Kill including many of the source lakes and intermittent subcatchments of the Upper Poesten Kill. At its source, the Poesten Kill stream system originates from a series of large lakes and wetlands. The Upper Poesten Kill mainstem originates from Dyken Pond and its artificially-linked South Long Pond to the north. That stream flows next through Poesten Kill Headwaters, the largest peatland complex on the plateau, an embedded important ecosystem complex site, with a separate stream branch draining from the south near Spring Lake and Round Pond. Separate tributaries link to the Upper Poesten Kill mainstem further downstream, the largest of which is Bonesteel Creek, associated with the separately-treated Bonesteel Creek Network. An additional tributary drains from the north, originating in the Dustin Swamp Complex, another important ecosystem complex site. Two other large tributaries drain even further below, one via two large lakes from the southeast (Big Bowman Pond and Hicks Pond), one from Davitt Pond from the north at the base of the network.

The Poesten Kill Headwaters Network stretches from the Poesten Kill Headwaters peatland complex in the Town of Berlin downstream to just above the base of the Rensselaer Plateau at the confluence with Davitt Pond Brook, where it is considered to transition to the Poesten Kill Midreach Network based on a slight redelineation of the lower limit of the network. It excludes a large adjoining network associated with Bonesteel Creek, one of its major tributaries. The delineation of the Poesten Kill Headwaters Network has been historically complex, especially determining a precise transition point between the Poesten Kill Headwaters and Poesten Kill Midreach Networks. Although the delineation has undergone multiple iterations, it is hopefully stabilizing as of 2019. For the Rensselaer Plateau conservation plan, the distinction of the Poesten Kill Headwaters Network from the Bonesteel Creek Network was challenging, both networks being within the Bonesteel Creek-Poesten Kill HUC 12 unit. It was decided to segregate the Bonesteel Creek Network as the only other important network along the Upper Poesten Kill, above Barberville Falls. Setting the lower limit of the Poesten Kill Headwaters Network has been just as challenging. It was originally set far below the Rensselaer Plateau boundary for the Rensselaer Plateau plan (Hunt 2014), at the confluence with the Quacken Kill. One rationale was to bring the network down to the base of the Bonesteel Creek-Poesten Kill HUC 12 unit (at that point), suggesting a substantive change in stream discharge above and below there. For the Rensselaer County conservation plan (Hunt 2017), the adjacent downstream network, the Poesten Kill Midreach Network, was delineated with its upper boundary at Barberville Falls, due the upper limit of the associated Confined River community. Barberville Falls was initially considered as the best transition point between the two networks in Hunt 2017. Desiring a definitive transition point between the Poesten Kill Headwaters and Poesten Kill Midreach Networks, the 2019 iteration is suggested instead as a point not far downstream of the confluence of the Poesten Kill mainstem with Davitt Pond Brook. Although probably not perfect in reflecting hydrology and stream geomorphology patterns, it is currently thought to be the best choice for a transition point. It lumps the Davitt Pond Brook drainage with the rest of the Poesten Kill Headwaters Network, being similar in water quality (all from the Rensselaer Plateau Forest landscape) and physiotopography (with a relatively steep-sloping mainstem). It roughly corresponds to a point along the Poesten Kill where the slopes flatten out below into the Taconic Foothills region from the plateau. The lowermost reaches of the Poesten Kill mainstem on the plateau are thus still considered part of the Poesten Kill Midreach Network (Hunt 2017), a separate network site. The slight redelineation of that network in 2019 has it still originating just inside the base of the plateau.

Aquatic Components.

The map of the Poesten Kill Headwaters Network was compiled from 185 aquatic network components for the Rensselaer Plateau Conservation Plan including ecosystem complexes for 2 types, representing 4 headwater wetland complexes and 2 mainstem complexes. Also included are 168 ecological community patches for 8 community-level components (48 stream mainstem segments, 35 stream tributary segments, 2 restorable streams, 8 headwater lakes, 7 restorable lakes, 1 mainstem floodplain, 3 mainstem wetlands, and 64 headwater wetlands). The site also contains 7 intact subcatchments and 6 intact riparian corridors. All or most of the component types are found in the Town of Poestenkill, although only a small portion of the widest part of the network, the large Poesten Kill Headwaters peatland complex, is in the town, most being situated in the Town of Berlin. The Poestenkill part of the network contains multiple headwater lakes (such as Hicks Pond), 3 intact subcatchments (Poesten Kill Headwaters NW Forest, Legenbauer Road Forest, Dustin Swamp Complex), much of the mainstem stream segments, including all of the lowest and widest segments, all of the mainstem wetlands and mainstem floodplain, both mainstem ecosystems (Poesten Kill Barberville and East Poestenkill Flats), and all of the riparian corridor area.

Contained Features. (modified from Hunt 2014)

Regionally-important ecological features contained within this network include 12 county-important ecosystem complexes, 28 county-exemplary natural communities, 8 rare plant concentration areas, and 9 important animal habitats, most associated with aquatic features (Dyken Pond, South Long Pond, Davitt Pond, Big Bowman Pond, Hicks Pond) and wetland features (Poesten Kill Headwaters, Dustin Swamp Complex). The uppermost reaches of the Poesten Kill are associated with large mineral soil wetlands, a few small peatlands, and a broad area of surrounding moist upland forests, all including abundant red spruce communities. Common mineral soil wetlands here include open canopy riverine and beaver-influenced Shrub Swamp, Shallow Emergent Marsh, and Sedge Meadow community types. This part of the network (the Poesten Kill Headwaters ecosystem complex) contains the most pronounced area of flats on the Rensselaer Plateau and much of it has been on large private timber company lands. Near the base of the network, the stretch of the Upper Poesten Kill upstream of the Poesten Kill Midreach is termed East Poestenkill Flats, which is also a regionally-important ecosystem complex site. The dominant stream communities of the Upper Poesten Kill mainstem are headwater stream types, Marsh Headwater Stream and especially Rocky Headwater Stream, represented by moderate to large-sized examples. The Upper Poesten Kill, as a high quality stream system with trout habitat designation, encompasses state-significant and county-exemplary sites for both stream types. Limited network-wide biota information has been compiled from this network, although much is available in the Rensselaer County Biodiversity Greenprint Project files on numerous individual sites throughout the network including a few sites in the Town of Poestenkill. Some stream segments of this network have a Class C(T) water quality designation and are suspected to contain native brook trout populations. There may be local reports of native brook trout from these stream segments and that fish is suspected there. The Poesten Kill Headwaters Network is currently known to contain relatively dense concentrations of county-rare plants and globally to county-rare community types, especially in the Poesten Kill Headwaters ecosystem complex. Information on the rare communities and species of that site can be found in the description of Poesten Kill Headwaters, as an ecosystem site.

Sources:

- Hunt, David M. 2013. Rensselaer Plateau GIS ecological feature layers (including aquatic networks, aquatic network components).
- Hunt, David M. 2014. Poesten Kill Network. Towns of Poestenkill, Berlin, & Grafton. Preliminary Ecological Summary. Working Draft. May 11. (part of the Rensselaer Plateau Conservation Plan, Ecological Features Documentation Series: Aquatic Networks, site description appendix).
- Hunt, David M. 2017. Rensselaer County GIS ecological feature layers (including aquatic networks, aquatic network components).
- Hunt, David M. 2017. Poestenkill Community Forest. Important Biodiversity Features. Town of Poestenkill, Rensselaer County, New York. Ecological Intuition & Medicine: Rensselaer County Biodiversity Greenprint Project. December 7.

Future Sources/Improvements:

more detailed review of Rensselaer County Biodiversity Greenprint Project site files throughout the network (including about 10 standard-size sites such as Poesten Kill Headwaters, Poesten Kill Barberville, Poesten Kill Pine Ridge, Dyken Pond Complex, Big Bowman Pond, and Davitt Pond); seek out and integrate any fisheries/macrobenthic data from NYS DEC/NY State Museum and other organizations including Trout Unlimited.

Edition: Draft 3 (June 25, 2019).

previous drafts (Draft 1: March 2014 for the Rensselaer Plateau Conservation Plan Aquatic Network site description appendix; Draft 2: December 2017 for the Poestenkill Community Forest [Rensselaer Plateau Alliance]).

Aquatic Network Site: Poesten Kill Midreach Network

SITE FACT SHEET & DESCRIPTION

County Network Code: AN36.

Watershed Hierarchy: Poesten Kill (HUC 10)/Poesten Kill-Sweet Milk Creek (HUC 12).

County Conservation Priority: Tier 1 (highest priority).

Size: 700 acres, with 27.9 miles of mapped streams.

Stream Size: midreach (TNC Size Class 2).

Landscape Conservation Status:

needs more assessment. probably viable throughout much of its area, with both conservation & restoration goals.

Water/Fisheries Quality: suspected viable trout populations, with mostly designated trout-stream C(T) segments.

Tidal Classification: non-tidal, except freshwater tidal in extreme lowest reaches.

Flow Impacts: 3 dams, 3 in designated trout stream segments.

Embedded Within: Poesten Kill Midreach Corridor (aquatic priority conservation site)

Contained Features/Sites:

Ecosystem Complexes: 4 riparian complexes (Poesten Kill Barberville, Poesten Kill Gorge, Poesten Kill Valley Troy, Poesten Kill West Brunswick), 1 mature forest (Barberville Gorge Forest), 1 rocky slope/summit complex (Poesten Kill Gorge).

County-Exemplary Natural Communities: 11 community examples including ones at 7 sites (including Barberville Falls, Middle Sweet Milk Creek Woods, Poesten Kill Gorge, Poesten Kill Midreach, Poesten Kill Valley Troy, Poesten Kill West Brunswick) and covering 9 community types among streams (Confined River), lakes (Oxbow Lake), wetlands (Floodplain Forest), and open riverside uplands (Calcareous Cliff Community, Cobble Shore, Riverside Sand/Gravel Bar, Shale Cliff & Talus Community, Shale Talus Slope Woodland, Shoreline Outcrop).

Important Animal Habitats: 2 sites (Sweet Milk Creek, Upper Poesten Kill).

Rare Plant Concentration Areas: 6 sites (Barberville Gorge, Mount Ida Pond, Poesten Kill Bott Lane, Poesten Kill Creekside Village, Poesten Kill Gorge, Poesten Kill West Brunswick).

Town Locations: Brunswick > Poestenkill (~30%) > Troy.

Site Description. (combined from various cited sources)

The Poesten Kill Midreach Network is a large network for Rensselaer County, situated mostly in the Taconic Foothills region. It is centered around the midreach section of the Poesten Kill, the Poesten Kill Midreach, which is mostly a Confined River within this site. The site concept includes key forested buffer areas and small intact subcatchments along the river. Other associated larger, relatively intact headwater networks of the Taconic Foothills region that flow into this midreach network (Sweet Milk Creek and Newfoundland Creek) are excluded from the site concept, although they form part of the larger county-priority conservation site, the Poesten Kill Midreach Corridor. The Poesten Kill Midreach mainstem originates within the Rensselaer Plateau Escarpment below Barberville Falls near the edge of the large, intact Rensselaer Plateau Forest landscape. Thus, it has moderately high ecological integrity, at least in its upper reaches, resulting in a designation of an important network for aquatic biodiversity conservation within Rensselaer County, as part of its conservation plan. It is a Tier-1 network for Rensselaer County, of highest conservation importance for the region. This designation can be attributed to the large size of intact portions of this stream system and the moderately intact nature of its stream system and riparian buffer. Integral upstream aquatic sources which drain into this network include 5 regionally-important headwater networks, 2 of which are entirely within the Rensselaer Plateau Forest (Poesten Kill Headwaters, Bonesteel Creek Network), 2 of which originate and are mostly within the Rensselaer Plateau Forest (Quacken Kill Network, Bernie Pond Outlet Network), and 1 of which originates at the base of the Rensselaer Plateau Forest (Newfoundland Creek Network), all contributing to high water quality of the mainstem stream, the Poesten Kill Midreach.

Site Importance. (modified from Hunt 2014)

The Poesten Kill Midreach Network is one of 46 Tier-1 aquatic networks in Rensselaer County. It is one of 4 Tier-1 midreach networks in the county, along with the Hoosic River Midreach, Kinderhook Creek Midreach, and Lower Hoosic River Midreach networks. The corresponding Poesten Kill Midreach Corridor is a county-priority conservation site of "moderate global biodiversity significance" (Biodiversity Rank of B4).

Site Geography. (modified from Hunt 2014)

The larger "Poesten Kill Network" is divided into the Poesten Kill Headwaters Network, Poesten Kill Midreach Network, Bonesteel Creek Network, Newfoundland Creek Network, Sweet Milk Creek Network, and Bernie Pond Outlet Network, with only the first two networks situated along the Poesten Kill mainstem. The Quacken Kill Network is treated as a separate network at that level of organization due to its large size and separate watershed classification. The Poesten Kill Corridor represents the entire stretch of the Poesten Kill mainstem plus its surrounding riparian communities and buffer from its source in the flats within the Towns of Berlin and Grafton to its mouth at the confluence with the Hudson River in the City of Troy. About half of its extent is within the Rensselaer Plateau. The larger stream corridor can be partitioned into four sections: the Upper Poesten Kill, the Middle Poesten Kill, the Lower Poesten Kill, and Poesten Kill Mouth, each with a different suite of aquatic and bordering riparian community types: flat slopes and high elevations in the Upper Poesten Kill section (all on the plateau within the Towns of Berlin, Poestenkill, and Grafton), steep to gentle slopes and moderate elevations in the Middle Poesten Kill section (mostly in the Taconic Foothills except for a small portion on the plateau within the Town of Poestenkill, flowing downstream off the plateau into the Town of Brunswick), and steep to gentle slopes and low elevations in the Lower Poesten Kill section (from the Town of Brunswick and into the City of Troy near the Hudson River). Poesten Kill Mouth is distinguished from the Lower Poesten Kill based on its estuarine nature, being near sea level and tidally influenced plus having estuarine biota. The Poesten Kill Midreach Network spans the lowest 3 sections of the stream corridor: the Middle Poesten Kill, the Lower Poesten Kill, and Poesten Kill Mouth.

The Poesten Kill Midreach Network represents a stretch of the Poesten Kill mainstem from the confluence of Davitt Pond Brook not far below Barberville Falls (Town of Poestenkill) downstream to the Hudson River (City of Troy) plus its associated riparian buffer. The site originates in the Rensselaer Plateau Escarpment, surrounding the Poesten Kill within the Poesten Kill Barberville ecosystem complex. It is fed by portions of the broader Poesten Kill Corridor above the falls (which includes Poesten Kill Headwaters in the Towns of Berlin and Poestenkill). The bulk of the Poesten Kill Midreach mainstem has been subdivided into two relatively morphologically homogeneous stream reaches: the Middle Poesten Kill (upstream of Eagle Mills) and the Lower Poesten Kill (roughly below Eagle Mills). Beyond the Lower Poesten Kill is the Poesten Kill Mouth section of the stream corridor at the base of the network, where the Poesten Kill Midreach mainstem flows into the Hudson River. Many smaller subsites are embedded in the network such as Barberville Gorge and the Poesten Kill Gorge.

Multiple points for the upper boundary of the Poesten Kill Midreach Network have been considered. For the Rensselaer County conservation plan (Hunt 2017), this network was delineated with its upper boundary at Barberville Falls, corresponding to the upper limit of the associated Confined River community. However, this network was shown as overlapping with the Poesten Kill Headwaters Network between Barberville Falls and the Quacken Kill confluence. Desiring a single definitive transition

point between the Poesten Kill Headwaters and Poesten Kill Midreach Networks, the revised 2019 iteration is now suggested as a point not far downstream of the confluence of the Poesten Kill mainstem with Davitt Pond Brook. Although probably not perfect in reflecting hydrology and stream geomorphology patterns, it is currently thought to be the best choice for a transition point. It lumps the Davitt Pond Brook drainage with the rest of the Poesten Kill Headwaters Network, being similar in water quality (all from the Rensselaer Plateau Forest landscape) and physiogeography. The network transition roughly corresponds to a point along the Poesten Kill where the slopes flatten out into the Taconic Foothills region from the Rensselaer Plateau, characteristic of the Poesten Kill Midreach. The lowermost reaches of the Poesten Kill mainstem on the plateau are thus considered part of the Poesten Kill Midreach Network (Hunt 2017), a separate network site. The slight redelineation of that network in 2019 has it still originating just inside the base of the plateau.

Aquatic Components.

The map of the Poesten Kill Midreach Network was compiled from 17 aquatic network components for the Rensselaer County Conservation Plan and 8 aquatic network components for the Rensselaer Plateau Conservation Plan. Among aquatic network components are the mainstem of the Poesten Kill Midreach, multiple relatively intact gorges including one at its upstream end, and scattered relatively wide and intact riparian buffers. Components downstream of NY Route 351 (off the plateau) include 4 county-important examples of general riparian ecosystem complexes, 1 intact natural/forest corridor, and 1 set of natural riparian strips. Also included are 11 ecological community groups, namely 1 stream mainstem, 1 set of unnamed tributaries, and 9 county-exemplary riparian community sites. In comparison, components from the Rensselaer Plateau plan ((between Barberville Falls and NY Route 351) include 1 stream mainstem, 5 mainstem floodplain patches, 1 mainstem ecosystem complex, and 1 intact riparian corridor. Components in the Town of Poestenkill include the uppermost reaches of the stream mainstem, the Poesten Kill Barberville ecosystem complex, and natural riparian strips (both upstream and downstream of NY Route 351). The latter set includes a large patch in the NW corner of the town associated with a small wetland complex near the Poesten Kill Bott Lane site.

Contained Features. (modified from Hunt 2006, 2012)

Regionally-important ecological features contained within this network include 6 county-important ecosystem complexes, 11 county-exemplary natural communities, 2 important animal habitats, and 6 rare plant concentration areas, all associated with floodplain terrace and rocky gorge features. The Poesten Kill Midreach is a moderately high quality stream system with trout habitat designation throughout. Two natural communities are dominant within the Poesten Kill Midreach Network, Confined River and Floodplain Forest. Both extend along much of the network length and both are suspected to be represented by state significant examples. The dominant stream type throughout the Poesten Kill Midreach Network is a Confined River, one of the largest rivers in the county interior. Typically associated with the river are relatively intact adjacent riparian communities and a relatively intact but rather narrow buffer of rich upland forests. Associated riparian communities lining the stream include Floodplain Forest, Riverside Sand/Gravel Bar, Cobble Shore, and Shoreline Outcrop, all relatively rare in the county and most represented as narrow strips within the stream channel or along the banks of the stream. The toeslopes and lowslopes of the valley bordering the stream are often covered with rich forest types (mostly Maple-Basswood Rich Mesic Forest).

Confined River.

The central river throughout the Poesten Kill Midreach site, namely the Poesten Kill, is a Confined River (formerly called Midreach Stream in the state community classification). It is estimated to be about 10 miles long and a B-ranked (good), thus state-significant, example of this community type. It was formerly tracked as the sole county exemplary site for the community (Hunt 2006) but was then revised to be a county co-exemplary site for the county conservation plan (Hunt 2017), along with the Hoosic River Midreach. Although not as long and large as the latter example, it is likely to be the second longest example in the county and is probably less impacted: originating in the forested landscape of the Rensselaer Plateau and probably having fewer impoundments. The Poesten Kill is the only river emanating from the Rensselaer Plateau that is large enough to reach a Confined River size before it leaves the plateau. Other large plateau streams, like the Quacken Kill, Tsatsawassa Creek, and Black River, are classified as Rocky Headwater Stream at their corresponding plateau boundary points. The Poesten Kill Confined River example likely serves as a good coarse conservation filter for common native species of fish, aquatic macroinvertebrates, and freshwater algae of the county.

Floodplain Forest.

Floodplain Forest patches are likely scattered along the course of the Poesten Kill mainstem within this network across several subsites. This community is represented by its Lower New England Ecoregion variant, a sycamore-dominated variant, within the site. The Floodplain Forest in this site is estimated as a good to fair example (BC- to C-ranked) of at least 20 acres and thus a state-significant example of this moderately-rare community type, for which A through C examples are deemed state significant. Although formerly hypothesized as one of two equivalent county co-exemplary sites for the community, shared with the Hoosic River Midreach (Hunt 2006), it is now not treated among the 10 best examples in the county (Hunt 2017), most of which are larger. One of the most mature Floodplain Forest patches in the Poesten Kill Midreach Network is in the Poesten Kill West Brunswick subsite, estimated to be about 20 acres. It contains multiple county-rare plant species.

Limited network-wide biota information has been compiled from this network, although much is available from files on several individual sites throughout the network from the Town of Poestenkill to the City of Troy including one site in the Town of Poestenkill (Poesten Kill Barberville). The Poesten Kill Midreach, as a Confined River, likely contains a good diversity of common native species of fish, aquatic macroinvertebrates, and freshwater algae of the county. The riparian wetland and open upland communities of the network support a high diversity of native plant species, some county rare, that are adapted to the natural disturbance patterns of flooding and scouring and thus not found in typical upland forested communities of the county. The buffer surrounding the Poesten Kill Midreach likely serves as a good coarse conservation filter for common native species of floodplain plants, as well as wildlife species such as kingfisher. Stream terraces with Maple-Basswood Rich Mesic Forest support a high diversity of native calciphilic plant species, many of which are spring ephemerals and some of which are also county rare. This network is likely to support wildlife species that depend on long natural riparian areas to persist in the county. Although observation and compilation of wildlife information for this site has not been a focus of the Rensselaer County Biodiversity Greenprint Project, it is suspected that some wide-ranging and area-sensitive mammals currently use this corridor and have the potential to be impacted if the corridor becomes fragmented. Some wide-ranging and area-sensitive native mammals have been observed to use this network, reportedly as an intact E-W migratory corridor along the Poesten Kill. Numerous stream segments of this network are classified as "C(T)" water quality, indicating waters able to support viable trout populations, with many more trout-spawning segments located in other important aquatic networks upstream of this site. Multiple native fish species and abundant cleanwater aquatic macroinvertebrates have been observed to date in the stream. No first-hand reports of brook trout are yet known from these segments and none have been observed during the limited, very casual field surveys.

The Poesten Kill Midreach Network is currently known to contain relatively dense concentrations of globally to county-rare community types and county-rare plants. County-rare community types within the network include Shoreline Outcrop, Cobble Shore, and Cliff Community, ranging from C1-ranked ("extremely rare and imperiled in the county") to C2C3-ranked ("very rare to rare in the county"). Concentrations of county-rare plants are known from sites such as Poesten Kill Creekside Village, Poesten Kill West Brunswick, and Poesten Kill Barberville. Most of these plants are characteristic of relatively undisturbed river floodplain forests with calcareous soils. Examples include long-beaked sedge (*Carex sprengleii*) and harefigwort (*Scrophularia lanceolata*) associated with the Floodplain Forest at the Poesten Kill West Brunswick site. Among the rarest of plant taxa in the county known from the Rensselaer Plateau is included leatherwood (from the Poesten Kill Barberville subsite of the network), with only very few sites known or suspected in the county.

Site Condition.

Although there are many ecological disturbances within the Poesten Kill Midreach Network, it is still considered to be a functional aquatic landscape. Dams along the Poesten Kill mainstem are small relative to others on larger rivers in the county such as those on the Hoosic River in Schaghticoke. The most advanced cases of aquatic fragmentation within this network may be a small dam on the Poesten Kill mainstem at Eagle Mills. While most of the Upper Poesten Kill passes through forested lands of the Central Rensselaer Plateau (see Poesten Kill Headwaters Network), the riparian corridor of the Poesten Kill Midreach (especially the combined Middle and Lower Poesten Kill segments) has a broken forest cover. The forest buffer within the Poesten Kill Midreach has been severely displaced in some areas and is relatively narrow throughout most of its length, especially along its lowest reaches in the urban Poesten Kill Mouth subsite. While river floodplain and calcareous soils are habitat features that have been relatively widely and intensively impacted countywide in Rensselaer County, small, relatively undeveloped examples are known in this network from sites such as Poesten Kill Creekside Village, Poesten Kill West Brunswick, and Poesten Kill Bott Lane. Only limited populations of moderately invasive riverside plants are known from the riparian corridor of the Poesten Kill Midreach.

Subsites: (adapted from Hunt 2012, 2014).

Middle Poesten Kill (adapted from Hunt 2012).

The Middle Poesten Kill represents the middle section of the Poesten Kill. It extends from the confluence of the Poesten Kill mainstem and Davitt Pond Brook near the base of the Rensselaer Plateau (downstream of Barberville Falls) downstream to Eagle Mills. Only a small portion on the site is on the plateau (within the Town of Poestenkill). It flows downstream off the plateau into the Taconic Foothills region in the Town of Brunswick.

--Middle Poesten Kill Flats

The Middle Poesten Kill Flats represents a morphologically homogeneous reach of the Poesten Kill Midreach Network situated between Poestenkill Center and Eagle Mills, mostly within the Poesten Kill Plains physiographic subdivision of the Taconic Foothills region. It occupies the bulk of the Middle Poesten Kill site (~400 acres). The river is moderately large here, with mostly an unconfined configuration and silty to gravelly substrate. In addition to the river, the site contains a wide, flat associated riparian buffer in the Towns of Poestenkill and Brunswick. The site is characterized by an undeveloped river floodplain and calcareous to circumneutral soils typical of the middle to lower segments of the broad Poesten Kill Valley, which spans the Taconic Foothills and Hudson Valley regions. The area that has been best explored is the Poesten Kill Bott Lane subsite. This smaller embedded site contains good examples of Floodplain Forest and Maple-Basswood Rich Mesic Forest on stream terraces, associated with narrow strips of streamside Riverside Sand/Gravel Bar. A few county-rare plants and animals are known from this site and a few more are suspected.

--Poesten Kill Barberville

The short uppermost portion of the Middle Poesten Kill, that within the Rensselaer Plateau, is termed Poesten Kill Barberville, all within the Town of Poestenkill. It corresponds to a regionally-important ecosystem complex site. Some of the global-, state-, and county-rare riparian communities at the site, such as Floodplain Forest (global rare), Backwater Slough (state rare), Riverside Sand/Gravel Bar (county rare), Shoreline Outcrop (county rare), and Cobble Shore (county rare), are apparently restricted or most pronounced on the Rensselaer Plateau within this geomorphologic feature.

Lower Poesten Kill (adapted from Hunt 2012)

The Lower Poesten Kill represents a lower section of the Poesten Kill Midreach with steep to gentle slopes at low elevations. It contains a relatively morphologically uniform reach of the Poesten Kill between Eagle Mills (Town of Brunswick) and the base of the Poestenkill Gorge (City of Troy near the Hudson River) that is mostly located within a narrowly confined valley and dominated by rocky substrate. It occupies ~450 acres, mostly in the Town of Brunswick. It is characterized by scattered patches of undeveloped river floodplain and calcareous soils typical of the middle to lower segments of the Poesten Kill Corridor, spanning the Taconic Foothills and Hudson Valley regions. Among the best explored areas is Poesten Kill West Brunswick near the Troy Country Club (otherwise previously referred to as the Poesten Kill Route 2 or Poesten Kill Floodplain site). This smaller site contains the core of a hypothesized state-significant example of Floodplain Forest, specifically ~20 acres of the sycamore-dominated Lower New England ecoregion variant. It also has narrow strips of Riverside Sand/Gravel Bar, Cobble Shore, and Shoreline Outcrop that are good examples of these community types for the county. County-rare plants are abundant at both the Poesten Kill West Brunswick subsite and the Poesten Kill Gorge downstream.

--Poesten Kill Mouth

The section of the Poesten Kill Midreach downstream of Poesten Kill Gorge, at the lowest elevations of the network, is designated as the Poesten Kill Mouth (located in the City of Troy). That reach is strongly channelized and apparently has some estuarine influence near the Hudson River. Dominant fish in this reach of the river include herring and American eel (P.Schroeder, pers.com.).

Sources:

- Hunt, David. 2004. County Rare Plants of Poesten Kill Creekside Village. Troy, Rensselaer County, New York. Ecological Intuition & Medicine. June 10.
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- Hunt, David M. 2017. Poesten Kill Valley Troy. Important Biodiversity Features. City of Troy, Rensselaer County, New York. Ecological Intuition & Medicine: Rensselaer County Biodiversity Greenprint Project. December 5.
- Hunt, David M. 2017. Rensselaer County GIS ecological feature layers (including aquatic networks, aquatic network components).

Future Sources/Improvements:

more detailed review of Rensselaer County Biodiversity Greenprint Project site files (including about 10 standard-size sites throughout the network); seek out and integrate any NYS DEC/NY State Museum fisheries/macrobenthic data including recent information from the Poesten Kill Mouth subsite. Refine information on any wide-ranging and area-sensitive mammals that use the network as a wildlife corridor, especially via interviews with local landowners and other experts on this site. Site boundary improvements for all Taconic Foothills networks such as this are pending, refining the coarsely modelled riparian corridors with careful review of forest/natural land cover from actual air photos plus topographic contours. An original precise delineation of a portion of the network in the Poesten Kill West Brunswick area (Hunt 2006) should be consulted.

Edition: Draft 7 (June 25, 2019).

previous drafts (Draft 1: June 2004 for Poesten Kill Creekside Village; Draft 2: February 2006 for Poesten Kill Route 2 [Brunswick Smart Growth], Draft 3: March 2012 for Town of Brunswick Comprehensive Plan, Draft 4: February 2013 for Rensselaer Plateau Ecological Documentation Series, Draft 5: August 2017 for Poesten Kill West Brunswick site [Rensselaer Land Trust], Draft 6: December 2017 for Poesten Kill Valley Troy site [Rensselaer Plateau Alliance]).

Aquatic Network Site: Quacken Kill Network

SITE FACT SHEET & DESCRIPTION

County Network Code: AN1.

Watershed Hierarchy: Poesten Kill (HUC 10)/Quacken Kill (HUC 12).

County Conservation Priority: Tier 1 (highest priority).

Size: 4804 acres, with 24.4 miles of mapped streams.

Stream Size: headwater (TNC Size Class 1).

Landscape Conservation Status: viable, with both conservation & restoration goals.

Water/Fisheries Quality:

suspected viable trout populations, with designated trout-stream segments {A(TS), A(T), C(TS), C(T)}.

Tidal Classification: non-tidal.

Flow Impacts: 7 dams, 6 in designated trout stream segments.

Embedded Within: Rensselaer Plateau Forest (a much larger terrestrial landscape).

Contained Features:

Ecosystem Complexes: 3 lakes (Long Pond, Shaver Pond, Dunham Reservoir), 4 peatlands (Long Swamp-Cranberry Pond, Quacken Kill Flats, Stuffle Street Wetlands, White Lily Pond), 4 riparian complexes (Quacken Kill Gorge, Quacken Kill Narrows, Quacken Kill Flats, Quacken Kill Marshes), 2 mineral soils wetlands (Shaver Pond-Foster Road Wetlands, Stuffle Street Wetlands), 3 mature forests (Jay Hakes Road Woods, Bunker Hill Forest, Quacken Kill Freds Falls Forest), and 1 boreal flats (Quacken Kill Flats).

County-Exemplary Natural Communities: 35 community examples including ones at 11 sites (Cranberry Pond Grafton, Long Pond Grafton, Long Swamp Grafton, Quacken Kill Flats, Quacken Kill Gorge, Quacken Kill Marshes, Quacken Kill Narrows, Shaver Pond, Shaver Pond Road Wetlands, Stuffle Street Wetlands, White Lily Pond Complex) and covering 25 community types including streams (Rocky Headwater Stream, Backwater Slough, Intermittent Stream), lakes (Oxbow Lake, Oligotrophic Dimictic Lake, Bog Lake, Eutrophic Pond, Flow-Through Pond), wetlands (Floodplain Forest, Inland Poor Fen, Dwarf Shrub Bog, Black Spruce-Tamarack Bog, Inland Non-Calcareous Lakeshore, Shallow Emergent Marsh, Shrub Swamp, Red-Maple-Hardwood Swamp, Spruce-Fir Swamp, Hemlock-Hardwood Swamp), open riverside uplands (Cobble Shore, Riverside Sand/Gravel Bar, Riverside/Lakeside Bluff, Shoreline Outcrop), and moist flats (Pine-Northern Hardwood Forest, Spruce Flats).

Important Animal Habitats: 7 sites (Bunker Hill, Cranberry Pond Grafton, Dunham Reservoir, Quacken Kill Brunswick, Quacken Kill Marshes, Quacken Kill West Grafton, Shaver Pond).

Rare Plant Concentration Areas: 10 sites (Bunker Hill Complex, Dunham Reservoir, Jay Hakes Road Woods, Long Pond Complex, Long Swamp-Cranberry Pond, Quacken Kill Flats, Quacken Kill Freds Falls, Quacken Kill Headwaters, Shaver Pond Complex, White Lily Pond Complex).

Town Locations: Grafton > Brunswick > Poestenkill (~1%).

Site Description. (modified from Hunt 2012, 2013)

The Quacken Kill Network is a large network for Rensselaer County, originating and mostly within the intact Rensselaer Plateau Forest landscape, thus with high ecological integrity. It was identified as an important network for aquatic biodiversity conservation within both the Rensselaer Plateau and Rensselaer County, as part of their respective conservation plans. It is a Tier-1 network for both geographic areas. Tier-1 networks are of highest conservation importance for a region. This designation can be attributed to the large size of intact portions of this stream system, the intact nature of its stream system, buffer, and headwater subcatchments, plus a high diversity of ecological features. The Quacken Kill Network is considered to be a functional aquatic landscape, a large relatively intact landscape-level site centered around a river corridor (the Quacken Kill Corridor) that helps to sustain the aquatic biota of a region. This corridor, in turn, contains a central stream system (the entire stretch of the Quacken Kill and many of its tributaries) plus surrounding riparian communities and buffer. Intact subcatchments of feeder streams in headwater areas round out the network. It originates near Grafton Lakes in the Town of Grafton and extends to its mouth at the confluence of the Poesten Kill just inside the Town of Poestenkill. Integral upstream aquatic sources include Cranberry Pond, a large peatland, multiple high quality lakes in the Grafton Lakes ecological aggregate, and two intact headwater subcatchments (the Stuffle Street and Quacken Kill Headwaters drainages), all in the scattered headwater areas of the network. The Quacken Kill mainstem flows into the Poesten Kill at the base of the network. Among aquatic network components are the mainstem of the Quacken Kill and wide intact riparian corridors. The dominant stream communities throughout the site are moderate-sized examples of headwater stream types, mostly Rocky Headwater Stream. The "A(T)" and "C(T)" water quality classification designations for various stream segments of the Quacken Kill indicate waters able to support viable trout populations, and the "A(TS)" and "C(TS)" designations of other stream segments indicate waters able to serve as trout-spawning habitat. The Class A stream segments are in the upper sections of the network while the Class C stream segments are in the lower sections. Much of the riparian corridor of the stream has intact forest cover and no populations of highly invasive riverside plants such as Japanese Knotweed are yet known from the network, although garlic mustard has been known from the lower reaches for about 10 years and that invasive herb is just starting to establish in local spots along the upper reaches of the network as of 2019.

Site Importance. (modified from Hunt 2013)

The Quacken Kill has been classified as a state-designated (New York State important) trout stream (over at least the Middle and Upper sections of the stream corridor). The Quacken Kill mainstem has been considered as the town-exemplary Rocky Headwater Stream for the Town of Grafton due to its large size and high floristic diversity (Hunt 1996).

Site Geography. (modified from Hunt 2012, 2013)

The Quacken Kill is a major tributary of the Poesten Kill, thus the Quacken Kill Network is delineated as a separate network from the two Poesten Kill mainstem networks. The Quacken Kill Network represents the entire stretch of the Quacken Kill plus its surrounding riparian communities and buffer from its source near Grafton Lakes, in the Town of Grafton, to its mouth at the confluence of the Poesten Kill just inside the Town of Poestenkill. About 90% of its extent is within the Rensselaer Plateau. The Quacken Kill Network and corresponding stream corridor can be partitioned into three sections: the Upper, Middle, and Lower Quacken Kill, each with a different suite of aquatic and bordering riparian community types: flat slopes and high elevations in the upper section (all on the plateau within the Town of Grafton), steep slopes and moderate elevations in the middle section (all on the plateau, mostly within the Town of Brunswick), and flat slopes and low elevations in the lower section (off the plateau in the Towns of Brunswick and Poestenkill). At its source, the Quacken Kill originates from a series of ponds, most recognized as regionally-important ecosystem complex sites. These include large lake complexes (Shaver Pond and Long Pond Complex) and two large peatland complexes (White Lily Pond Complex and Long Swamp-Cranberry Pond Complex). Downstream of those sites, the upper branches of the Quacken Kill flow through a series of large riparian wetlands, also important ecosystem complex sites. These include Quacken Kill Flats, Shaver Pond-Foster Road Wetlands, and Quacken Kill Marshes. The stretch of the Upper Quacken Kill just upstream of the Community of Quackenkill (all in the Town of Grafton) is termed the Quacken Kill Gorge, also an important ecosystem complex site. One area of intact feeder streams and wetlands within the Upper Quacken Kill just upstream of the community of Quackenkill has been called the

Quacken Kill Headwaters, essentially all within the Town of Grafton. The portion of the Middle Quacken Kill within the Town of Brunswick is termed the Quacken Kill Narrows, a site which extends downstream from the Community of Quackenkil (Town of Grafton) to the Community of Cropseyville near the base of the plateau escarpment (Town of Brunswick). It is also an important ecosystem complex site. Off the plateau, the Lower Quacken Kill contains two reaches with a relatively intact riparian forest buffer: Quacken Kill Clums Corner and Quacken Kill Dearstyne Road.

Aquatic Components.

The map of the part of the Quacken Kill Network on the Rensselaer Plateau was compiled from 173 aquatic network components for the Rensselaer Plateau Conservation Plan including 3 ecosystem complex types (5 mainstem complexes, 2 headwater lake complexes, and 5 headwater wetland complexes). Also included are 152 ecological community patches for 9 community-level components (48 stream mainstem segments, 26 stream tributary segments, 3 restorable streams, 8 headwater lakes, 9 restorable lakes, 7 mainstem floodplains, 7 mainstem wetlands, 43 headwater wetlands, and 1 restorable wetland). The site also contains 3 intact subcatchments and 6 intact riparian corridors, the largest aquatic components. The part of the network off the plateau was mapped as 1 stream mainstem, 1 natural riparian strip, and 1 natural corridor. Components in the Town of Poestenkill include only a very small portion (~0.5 miles) of the stream mainstem, representing the Quacken Kill Mouth subsite. That area is a key portion of the network, where the mainstem stream flows into the Poesten Kill. It is likely the area of the network with the highest stream discharge and it has high aquatic biodiversity.

Contained Features (modified from Hunt 2013).

Regionally-important ecological features contained within this network include 17 county-important ecosystem complexes, 35 county-exemplary natural communities, 10 rare plant concentration areas, and 7 important animal habitats, most associated with aquatic features, especially lakes (Shaver Pond, Long Pond, Second Pond, Dunham Reservoir) and wetland features (Quacken Kill Marshes, Quacken Kill Flats, White Lily Pond Complex, Long Swamp-Cranberry Pond), others with stream gorges (Quacken Kill Narrows, Quacken Kill Gorge). The Quacken Kill is a high quality stream system with trout habitat designation, encompassing state-significant examples of both Rocky Headwater Stream and Marsh Headwater Stream. Large county-exemplary lake communities in the network include Cranberry Pond, Shaver Pond, Long Pond Grafton, and Second Pond. Common mineral soil wetland types in the network include open canopy riverine and beaver-influenced Shrub Swamp, Shallow Emergent Marsh, and Sedge Meadow communities, especially along the Quacken Kill mainstem. This river corridor is important for natural communities also because several global-, state-, and county-rare communities, such as Floodplain Forest (global rare), Backwater Slough (state rare), Maple-Basswood Rich Mesic Forest (state rare), Riverside/Lakeside Bluff (state rare), Riverside Sand/Gravel Bar (county rare), Shoreline Outcrop (county rare), and Cobble Shore (county rare), are apparently restricted or most pronounced on the plateau and/or in the county within this network, especially sections with gorge-like geomorphology (Quacken Kill Narrows and Quacken Kill Gorge). The site also contains several town- to regional-exemplary community examples such as the Shoreline Outcrop and Cobble Shore of Quacken Kill Gorge (see various ecosystem summaries) (Hunt 1996). The Quacken Kill Headwaters subsite (see below) has been identified as one of several sites on the Rensselaer Plateau with a concentration of county-exemplary community occurrences. Also included at this site is a high quality Intermittent Stream (in one of the 3 large intact subcatchments of the network) and a smaller drainage area with a high quality Hemlock-Hardwood Swamp (Jay Hakes Road Woods). Limited network-wide biota information has been compiled from this network to date, although information is available in the Rensselaer County Biodiversity Greenprint Project files for numerous individual sites throughout the network including Quacken Kill Mouth in the Town of Poestenkill. The Jay Hakes Road Woods subsite, for example, is known to contain a concentration of 7 county-rare plants including Pale Coral-Root (in a Hemlock-Hardwood Swamp at Jay Hakes Road Swamp). Local naturalized (naturally-reproducing) populations of non-native brown trout are known from the upper parts of the Quacken Kill mainstem (Hunt 2006). There may be local reports of native brook trout from this stream and that fish may also occur here.

Site Condition. (modified from Hunt 2013).

Despite the importance of the Quacken Kill Network, much of the Quacken Kill mainstem is in fair condition due to upstream impoundments and the impacts of crossing and paralleling roads such as New York Route 2. The most advanced case of aquatic fragmentation within the Quacken Kill stream system is undoubtedly Dunham Reservoir within Grafton Lakes State Park and the Troy Holding Pond dam in the Community of Quackenkil, both on the Quacken Kill mainstem. Other dams and reservoirs along tributaries of the network include Mill Pond and Lake Elizabeth. Although Long Pond and Second Pond have small, low dams, those dams have apparently altered the water levels slightly compared to the original levels of those lakes, thus they are treated as "natural lakes". The water quality of the Quacken Kill mainstem has become severely compromised by siltation and run-off within the Middle Quacken Kill section from recent upstream intensive, industrial-scale hard rock mining activities. Most of the Upper and Middle Quacken Kill sections pass through forested lands of the plateau, an integral part of the intact Rensselaer Plateau Forest landscape. In contrast, the forest buffer within the Lower Quacken Kill section has been severely displaced in some areas and is relatively narrow in other places. The Lower Quacken Kill section has become impacted by invasive floodplain plants due, in part, to the clearing of adjacent forest buffer.

Subsites:

Quacken Kill Headwaters (modified from Hunt 2013).

The Quacken Kill Headwaters subsite has been identified as one of several sites on the plateau with a concentration of county-exemplary community occurrences. It contains 1) a large subcatchment with a high quality Intermittent Stream and 2) a smaller drainage area (Jay Hakes Road Woods) with a high quality Hemlock-Hardwood Swamp and a mature example of Hemlock-Northern Hardwood Forest. The latter site is known to contain a concentration of 7 county-rare plants including Pale Coral-Root (in Jay Hakes Road Swamp). That species is among the rarest of plant taxa in the county known from the Rensselaer Plateau, with only very few sites known or suspected in the county. The Intermittent Stream in this site was considered to be one of the largest and least disturbed of two moderate-sized examples known in the Town of Grafton (Hunt 1996) and has a good diversity of bryophytes. However, recent logging activities has compromised its quality.

Quacken Kill Clums Corner (modified from Hunt 2012).

This ~50-acre subsite of the network consists of a moderately short stretch of the Lower Quacken Kill with relatively intact forest buffer S of Clums Corner. There is potential for one to very few county-rare plants at this site and a slight chance of a county-significant example of a natural riparian community. The site has likely been impacted by invasive floodplain plants due to nearby forest clearing. This site has not yet been explored to assess its biodiversity value.

Quacken Kill Dearstyne Road (modified from Hunt 2012).

This ~200-acre subsite of the network consists of a relatively long stretch of the Lower Quacken Kill with relatively intact forest buffer from W of the Community of White Church to the confluence of the Quacken Kill with the Poesten Kill (i.e., Quacken Kill Mouth). Appalachian Oak-Hickory Forest may form part of the upland buffer. One potential county-rare aquatic animal is known near the town line at Quacken Kill Mouth. There is additional potential for one to very few county-rare plants and animals at the site and a slight chance of a county-significant example of a natural riparian community. The site is partially impacted by invasive floodplain plants due to nearby forest clearing. This site has been poorly explored to date for its biodiversity value.

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- Hunt, David M. 2013. Rensselaer Plateau GIS ecological feature layers (including aquatic networks, aquatic network components).
- Hunt, David M. 2017. Rensselaer County GIS ecological feature layers (including aquatic networks, aquatic network components).

Future Sources/Improvements:

more detailed review of Rensselaer County Biodiversity Greenprint Project site files throughout the network (including about 20 standard-size sites from the Upper Quacken Kill portion); seek out and integrate any NYS DEC/NY State Museum fisheries/macrobenthic data (especially recent NYS DEC information from Quacken Kill Narrows) and Trout Unlimited fish data (especially within Grafton Lakes State Park).

Edition: Draft 4 (June 10, 2019).

previous drafts (Draft 1: May 2006 for Dunham Road site [Town of Grafton], Draft 2: March 2012 for Town of Brunswick Comprehensive Plan; Draft 3: February 2013 for the Rensselaer Plateau Conservation Plan Aquatic Network site description appendix).

Aquatic Network Site: Tsatsawassa Creek Network

SITE FACT SHEET & DESCRIPTION

County Network Code: AN6.

Watershed Hierarchy: Kinderhook Creek (HUC 10)/Tsatsawassa Creek (HUC 12).

County Conservation Priority: Tier 1 (highest priority).

Size: 2603 acres, with 27.7 miles of mapped streams.

Stream Size: headwater to midreach (TNC Size Class 1).

Landscape Conservation Status: probably viable, with both conservation & restoration goals.

Water/Fisheries Quality:

suspected viable trout populations, with designated trout-spawning C(TS) segments on Rensselaer Plateau and trout-stream C(T) segments throughout.

Tidal Classification: non-tidal.

Flow Impacts: 0 dams.

Embedded Within: Rensselaer Plateau Forest (a much larger terrestrial landscape).

Contained Features:

Ecosystem Complexes: 1 example each of lake (Tsatsawassa Lake), peatland (Cranberry Vly), boreal flats (Cranberry Vly South), and mature forest (Tsatsawassa Lake Forest).

County-Exemplary Natural Communities: 11 including ones at 5 sites (Tsatsawassa Creek, Tsatsawassa Lake, Cranberry Vly, Little Bowman Pond, Black Pond Wetlands) and covering 11 community types which include streams (Rocky Headwater Stream, Marsh Headwater Stream), lakes (Mesotrophic Dimictic Lake, Oligotrophic Pond), and wetlands (Inland Poor Fen, Medium Fen, Black Spruce-Tamarack Bog, Sedge Meadow, Spruce-Fir Swamp, Hemlock-Hardwood Swamp).

Important Animal Habitats: 7 including ones at 6 sites (Tsatsawassa Creek, Tsatsawassa Lake, Tsatsawassa Creek Tributary, Little Bowman Pond, Cranberry Vly, Rendert Pond Peatland, Lower Dunham Hollow Wetlands). Rare animals include state-rare waterfowl, herptile, and raptor plus county-rare fish, boreal mammals, and invertebrate.

Rare Plant Concentration Areas: 3 sites (Cranberry Vly, Little Bowman Pond, Black Pond Wetlands).

Town Locations: Nassau = Sand Lake > Berlin > Poestenkill (~5%) & Stephentown.

Site Description.

The Tsatsawassa Creek Network is a relatively large network for Rensselaer County, originating and mostly within the intact Rensselaer Plateau Forest landscape, thus with high ecological integrity. It was identified as an important network for aquatic biodiversity conservation for both the Rensselaer Plateau and Rensselaer County in their respective conservation plans. It is a Tier-1 network for both the Rensselaer Plateau and Rensselaer County. Tier-1 networks are of highest conservation importance for a region. This designation can be attributed to the large size of intact portions of this stream system and the intact nature of its stream system, buffer, and headwater subcatchments. Integral upstream aquatic sources include Cranberry Vly, a large peatland, at the headwaters of the network. The Tsatsawassa Creek mainstem flows into Tsatsawassa Lake near the base of the network. Among aquatic network components are the mainstem of Tsatsawassa Creek and narrow intact riparian corridors. The "C(T)" water quality classification designation for Tsatsawassa Creek indicates waters able to support viable trout populations. There may be local reports of native brook trout from this stream and that fish species is suspected here. Much of the riparian corridor of the stream has intact forest cover and no populations of highly invasive riverside plants such as Japanese Knotweed are yet known from the network.

Aquatic Components.

The map of the Tsatsawassa Creek Network was compiled from 130 aquatic network components for the Rensselaer Plateau Conservation Plan including 130 ecological community patches for 41 stream mainstem segments, 15 stream tributary segments, 2 headwater lakes, 6 restorable lakes, 4 mainstem floodplains, 22 mainstem wetlands, and 40 headwater wetlands. Also included are 2 headwater wetland ecosystem complex types. The site also contains 3 intact subcatchments and 1 intact riparian corridor. Components in the Town of Poestenkill include part of an intact subcatchment surrounding Cranberry Vly in the headwaters of the network on the Central Plateau. Only a small tributary is present in the town from the stream system.

Contained Features.

Regionally-important ecological features contained within this network include a few county-important ecosystem complexes, several county-exemplary natural communities, a few rare plant concentration areas, and several important animal habitats, most associated with aquatic features (such as Tsatsawassa Creek, Tsatsawassa Lake, Little Bowman Pond) and wetland features (Cranberry Vly, Black Pond Wetlands, Rendert Pond Peatland). Within these sites are 11 county-exemplary natural communities, including multiple aquatic and wetland types. Among exemplary aquatic communities, Tsatsawassa Creek, a high quality stream system with trout habitat designation, contains state-significant and near county-exemplary sites for both Rocky Headwater Stream and Marsh Headwater Stream. These stream segments surround a county-exemplary Mesotrophic Dimictic Lake at Tsatsawassa Lake. Limited network-wide biota information has been compiled from this network, although some is available from the Rensselaer County Biodiversity Greenprint Project files on individual sites in the Towns of Sand Lake and Nassau.

Sources:

- Hunt, David M. 2011. County-Important Biodiversity Features of the Town of Nassau. June 10. Draft 1. Ecological Intuition & Medicine.
- Hunt, David. 2013. Rensselaer Plateau Aquatic Networks. Site Description Appendix. January. working draft.
- Hunt, David M. 2013. Rensselaer Plateau GIS ecological feature layers (including aquatic networks, aquatic network components).
- Hunt, David M. 2013. Tsatsawassa Creek Corridor. Town of Nassau. Preliminary Ecological Summary. Working Draft. January. (part of the Rensselaer Plateau Conservation Plan, Ecological Features Documentation Series: Aquatic Networks, site description appendix).
- Hunt, David M. 2017. Rensselaer County GIS ecological feature layers (including aquatic networks, aquatic network components).

Future Sources/Improvements:

more detailed review of Rensselaer County Biodiversity Greenprint Project site files (including recent surveys of Tsatsawassa Creek in Sand Lake & Nassau); seek out and integrate any NYS DEC/NY State Museum fisheries/macrobenthic data. Site boundary improvements for the Taconic Foothills part of the network is pending, refining the coarsely modelled riparian corridors there with careful review of forest/natural land cover from actual air photos plus topographic contours outside the Rensselaer Plateau in the Town of Nassau.

Edition: Draft 2 (June 9, 2019).

Draft 1: January 2013 for Rensselaer Plateau aquatic network site descriptions.

Aquatic Network Site: Wynants Kill Network

SITE FACT SHEET & DESCRIPTION

County Network Code: AN60.

Watershed Hierarchy: Wynants Kill (HUC 10)/ Wynants Kill (HUC 12).

County Conservation Priority: Tier 3 (moderately high priority).

Size: 4164 acres, with 17.5 miles of mapped streams.

Stream Size: headwater to midreach (TNC Size Class 1).

Landscape Conservation Status: needs more assessment; possibly viable, with both conservation & restoration goals.

Water/Fisheries Quality: suspected viable trout populations, with a few designated trout-stream C(T) segments.

Tidal Classification: non-tidal, except freshwater tidal in lowest reaches.

Flow Impacts: 10 dams, 13 in designated trout stream segments.

Embedded Within: Wynants Kill Corridor (aquatic priority conservation site).

Contained Features:

Ecosystem Complexes: 1 riparian complex & rocky slope/summit complex (Wynants Kill Burden Pond Park), 5 lakes (Crystal Lake, Burden Pond, Burden Lakes, Crooked & Glass Lakes, Reicharts Lake), 1 mineral soil wetland (Wynants Kill Snyders Corners), 2 peatlands (Pine Bowl Road Bog, Reicharts Lake).

County-Exemplary Natural Communities: 10 community examples including ones at 7 sites (Crooked Lake, Crystal Lake, First & Second Burden Lakes, Third Burden Lake, Glass Lake, Reicharts Lake, Wynants Kill Burden Pond Park) and covering 7 community types among lakes (Mesotrophic Dimictic Lake, Eutrophic Dimictic Lake, Eutrophic Pond), wetlands (Red-Maple-Hardwood Swamp, Black Spruce-Tamarack Bog), and open riverside uplands (Shoreline Outcrop, Shale Cliff & Talus Community).

Important Animal Habitats: 9 sites (Wynants Kill Averill Park, Wynants Kill Albia, Wynants Kill Mountain View, Wynants Kill Midreach, Third Burden Lake, Crystal Lake, Burden Pond Park).

Rare Plant Concentration Areas: 7 sites (Third Burden Lake, Crystal Lake, Reicharts Lake, Wynants Kill Averill Park, Wynants Kill Albia, Burden Pond Park, Hidley Farm).

Town Locations: Sand Lake > North Greenbush > Troy > Poestenkill (-5%) > Nassau > Brunswick.

Site Description.

The Wynants Kill Network is a moderately large network for Rensselaer County, situated mostly in the Taconic Foothills region. It originates just below the base of the large, intact Rensselaer Plateau Forest landscape, thus its upper reaches have moderately high ecological integrity, resulting in its designation as an important network for aquatic biodiversity conservation within Rensselaer County, as part of its conservation plan. It extends to the Hudson River, passing progressively through a suburban, then urban landscape, with increasing impacts downstream. However, there is enough buffer around the Wynants Kill mainstem throughout its stream course to constitute a "functional riparian corridor". It is a Tier-3 network for Rensselaer County, among 3 county importance tiers. Although deemed regionally-important, its lower tier stems from comparisons to larger and more intact networks in the county such as ones on the Rensselaer Plateau and in the Taconic Mountains. The Tier-3 designation can be attributed to the moderate size of intact portions of this stream system and the moderately intact nature of its stream system, riparian buffer, and its position along multiple relatively intact forest corridors. The Wynants Kill mainstem originates in the Town of Sand Lake near Burden Lake, then it flows NW through the SW part of the Town of Poestenkill, then through the NE part of the Town of North Greenbush, then into the S part of the City of Troy, where it finally empties directly into the Hudson River at the base of the network. Integral upstream aquatic sources include several moderately high quality lakes in the Sand Lake Lakes Complex (Crooked Lake, Glass Lake, Crystal Lake, Burden Lakes). Among aquatic network components are the mainstem of the Wynants Kill, its source lakes, and multiple rocky gorges. Numerous stream segments of this network are classified as "C(T)" water quality, indicating waters able to support viable trout populations, with only one small C(TS) segment, indicating waters able to serve as trout-spawning habitat.

Aquatic Components.

The map of the Wynants Kill network was compiled from 13 aquatic network components for the Rensselaer County Conservation Plan including ecological community patches for 1 stream mainstem, 1 set of unnamed tributaries, and 4 county-exemplary riparian communities sites. Also included are 6 county-important examples of general riparian ecosystem complexes. The site also contains 1 set of intact natural/forest corridors and 1 set of natural riparian strips. Components in the Town of Poestenkill include a small central part of the stream mainstem, plus a small area of riparian strips and natural/forest corridors near the SW corner of town. The stream reach at the Sand Lake Town Park plus associated wetlands and adjacent slopes are local components of the Wynants Kill Network with regional importance.

Contained Features.

Regionally-important ecological features contained within this network include 9 county-important ecosystem complexes, 10 county-exemplary natural communities, 7 rare plant concentration areas, and 9 important animal habitats, most associated with stream segments (Wynants Kill Averill Park, Wynants Kill Albia), lakes (7 in the Sand Lake Lakes complex), wetlands (Wynants Kill Averill Park, Wynants Kill Albia, Wynants Kill Snyders Corners), and rocky gorge features (Wynants Kill Burden Pond). The Wynants Kill is a moderately high quality stream system with some segments having trout habitat designation. Mainstem stream communities consist of a mosaic of Rocky Headwater Stream and Marsh Headwater Stream. Limited network-wide biota information has been compiled from this network, although much is available in the Rensselaer County Biodiversity Greenprint Project files on individual sites in the Town of Sand Lake and City of Troy. Several fish species have been observed to date in the mainstem stream from multiple sites including eastern blacknose dace, longnose dace, creek chub, tessellated darter, longnose sucker, yellow perch, bluegill, and non-native brown trout. Abundant and diverse caddisflies, mayflies, and stoneflies are known from the mainstem stream. Although no brook trout are yet certain to the Rensselaer County Biodiversity Greenprint Project from these segments, some may have been observed during limited, casual field surveys.

Site Condition.

The riparian corridor of the Wynants Kill has a broken forest cover and there are limited populations of moderately invasive plants such as common reedgrass and purple loosestrife in bordering riverside wetlands, as well as patches of Eurasian milfoil in the stream channel, at least in the upper reaches near the outlet of one lake. Many segments of the Wynants Kill Network contain relatively intact stream reaches including ones observed in the Town of Sand Lake downstream of Eastern Turnpike Road for about a mile and along the Staalsen Preserve in the City of Troy much further downstream. Some reaches of the Wynants Kill in Sand Lake are mapped in the federal hydrography GIS layer as "artificial channels", and historic information suggests that the stream was channelized and impounded in multiple spots in the vicinity for industrial use in the 1700s to 1800s. The geomorphology of the river corridor appears to have recovered to a semi-natural state since that time, with natural revegetation and reclaiming of some of the natural stream course. Air photos suggest that this stream area now has a relatively natural configuration. Field observations suggest the presence of an old dyke system, resembling a levee, generally on both sides of the stream, presumably set up to channel the stream through roughly a straight path

along this stream reach in the distant past. With maintenance of the dyke system presumed long abandoned, the stream appears to have broken through the dyke in many spots and to be slowly recovering its natural meandering state. The dyke seems comprised of cobbles and compacted soil and is vegetated with invasive plants in spots.

Sources:

- Hunt, David M. 2011. Wynantskill Way Tract, City of Troy, Rensselaer County, New York. Significance of Ecological Features. Ecological Intuition & Medicine. October 4.
- Hunt, David M. 2016. Wynants Kill Averill Park. Town of Sand Lake Property. Rapid Biodiversity Importance and Management Implication Assessment. Rensselaer County Biodiversity Greenprint Project. April 15.
- Hunt, David M. 2016. Wynants Kill Averill Park. Town of Sand Lake Property. Rapid Biodiversity Importance and Management Implication Assessment. Rensselaer County Biodiversity Greenprint Project. Draft 2: May 8.
- Hunt, David M. 2017. Rensselaer County GIS ecological feature layers (including aquatic networks, aquatic network components).
- Hunt, David. 2019. Wynants Kill Garner Road. Site Characterization. Important Local Ecological Features. Ecological Intuition & Medicine. February 7.
- Hunt, David. 2019. Wynants Kill Garner Road. Site Characterization/Importance. Supplemental Information from Doin Property Visit. Ecological Intuition & Medicine. February 12.

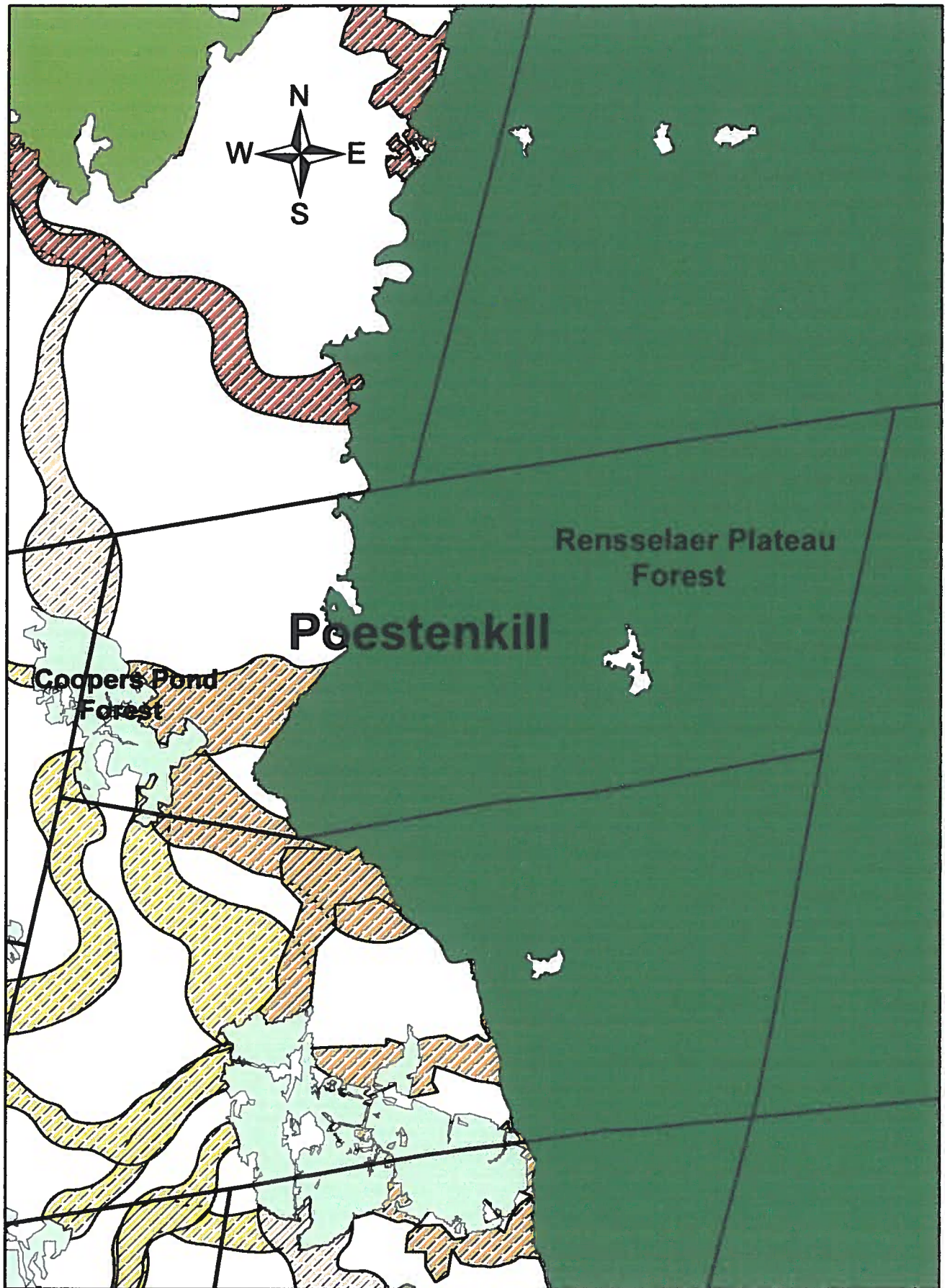
Future Sources/Improvements:

more detailed review of Rensselaer County Biodiversity Greenprint Project site files for the network (including Wynants Kill Albia, Wynants Kill Garner Road, and Wynants Kill Averill Park); seek out and integrate any NYS DEC/NY State Museum fisheries/macrobenthic data plus any relevant external documents of other organizations. Site boundary improvements for all Taconic Foothills networks such as this are pending, refining the coarsely modelled riparian corridors with careful review of forest/natural land cover from actual air photos plus topographic contours.

Edition: Draft 6 (June 9, 2019).

previous drafts include Draft 1 (October 2011 for Staalensen Preserve [Rensselaer Land Trust]), Drafts 2-3 (April-May 2016 for Wynants Kill Averill Park site [Town of Sand Lake]), and Draft 4 (February 2019 for Wynants Kill Garner Road site [Rensselaer Land Trust]).

County-Important Forest Landscapes & Forest Corridors



Rensselaer County Forest Landscape Importance



Tier 1



Tier 5



County-important forest corridors

Town of Poestenkill: Important Forest Landscapes
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
June 2019

1. Introduction.

The goal for this feature, as part of the Town of Poestenkill Natural Resources Inventory, was to provide site descriptions for all **2 Level-2 county-important forest landscape sites** in town identified for the 2017 Rensselaer County Conservation Plan (compiled by the Rensselaer Land Trust). These two landscapes are depicted (see Map 2) in conjunction with county-important forest corridors designated for the county conservation plan (not a part of the project scope) to reflect their role in forest linkages to other nearby forest landscapes in the central part of the county. Work focused mostly on consolidation of information into concise site descriptions and review of previously-prepared GIS information. Only **minor refinements were made to GIS information** (beyond the project scope). No changes to site boundaries were made, although periodic refinements are recommended every 10 to 25 years based on updated land cover datalayers that reflect changes in forest cover (see below). No supplementary sites are suggested. Because the site concept is precisely defined and accurately analyzed, the set of designated sites is likely very stable, with any additions unlikely in the near future. Level-2 sites represent the largest physiographic areas of contiguous natural land centered around the largest 50 individual largest contiguous natural land patches in the county. The 2017 collective of sites represents a **comprehensive, carefully, and accurately determined set of countywide important forest landscapes** that brings to a local level prior statewide GIS analyses of forest landscapes in 1995 for the New York Wildlife Society which suggested that the Rensselaer Plateau and Taconic Mountains landscapes of Rensselaer County are among the 5th to 9th largest forest landscapes of New York State, respectively.

2. Feature Concept.

(slightly revised for grammar & clarity from Hunt January 2017/Rensselaer Land Trust County Conservation Plan)

Sites throughout Rensselaer County, New York that represent the best chance for the long-term conservation of native terrestrial biota (plants and animals) characteristic of large, contiguous "natural landscapes", especially "forest landscapes", and especially on the order of 10,000s of acres or more in size, as "functional terrestrial landscapes". Natural landscapes are one of two types of functional landscapes typically considered for conservation in regions, along with aquatic networks. Important intact natural landscape sites depict large- to moderate-scale areas throughout the county thought to be most important for "terrestrial" features (which include both "uplands" and "wetlands"), especially those of large forested regions. In contrast, aquatic equivalents (large intact aquatic landscapes or "functional aquatic landscapes") are addressed instead under Important Aquatic Networks. These sites are noted for supporting groups of species restricted to the most natural areas in a region, especially forest-interior areas and mature forests. These sites consider the overall quality of the landscape, focusing on 1) those of the largest size, 2) configurations/shapes predicted to best support species of large natural areas [high contiguity and low dissection], and, to a lesser degree, 3) the best condition. The interpretation of "natural" landscapes generally follows regional landscape interpretation treatments of The Nature Conservancy, which, in turn, are based on the definition of "natural communities" in the state classification of the NY Natural Heritage Program. Natural landscapes are composed of not only natural forested uplands, but also natural wetlands, natural open uplands, as well as natural lakes, rivers, and estuaries. Reservoirs, including the Tomhannock Reservoir, are treated as "natural", coded in the National Land Cover Dataset (NLCD) as "open water". Early successional areas may be

treated as "natural" if interpreted as a natural type in NLCD (e.g., the "grassland/herbaceous" category). Important intact natural landscapes of Rensselaer County generally represent the largest clusters of near-contiguous forest areas. While this feature factored heavily into "the most important biodiversity conservation sites" of Rensselaer County, it does not necessarily correlate well with a high diversity of native biota, the other major factor that determines "the most important biodiversity conservation sites" of the county.

3. Site Assembly and Prioritization Methods.

(Hunt January 2017; prepared for Rensselaer Land Trust County Conservation Plan; available upon request)

includes: Site Boundary Method Summary, Prioritization Status Determination Method Summary.

4. GIS Information Available

(updated slightly from Hunt January 2017; for Rensselaer Land Trust County Conservation Plan)
(with minor updates catered to Town of Poestenkill in 2019)

Data Tallies:

- 1) Town of Poestenkill: total of 2 Level-2 forest landscape sites mapped in 2017.
- 2) Rensselaer County/county-level analyses: see Hunt January 2017, for Rensselaer Land Trust County Conservation Plan.

File Name:

Forest_Landsc_Level2_Largest44_RensCo_AllModels_Poestenkill

(town subset of Forest_Landsc_Level2_Largest44_RensCo_AllModels)

Level-1 sites: see Hunt January 2017, for Rensselaer Land Trust County Conservation Plan.

ForestLandscape_Linkages_RensCo

County-important forest corridors: see Hunt January 2017, for Rensselaer Land Trust County Conservation Plan).

Important Fields for Users:

- * = newly added and populated field for Town of Poestenkill Natural Resources Inventory.
- ** = values newly populated for Town of Poestenkill Natural Resources Inventory (mostly for Coopers Pond Forest).
- *** = metadata updated for Town of Poestenkill Natural Resources Inventory.

1. Intact Natural Terrestrial Landscape Identity Fields.

Landsc_Lev:

Landscape Level, reflecting the degree of aggregation of relatively large proximal contiguous forest patches. Levels 1 to 4, with Level 2 of greatest focus, and Level 1 also of potential conservation use.

Level_Desc:

Description of Level Aggregations (e.g., Level 1 = aggregated adjoining/essentially contiguous Level-2 sites).

Ls_Model:

Landscape Model, reflecting the degree of aggregation of relatively small proximal contiguous forest patches and the resolution/precision/scale of excluded disturbances. Models 1 to 5, with Model 1 (coarse resolution) of greatest recommended focus, Model 5 showing the finest-scale resolution.

Model_Desc:

Description of Model Formation (e.g., Model 1 = adjoining Level-5 sites in the same physiographic areas among the largest 44 sites aggregated, followed by smoothed outer boundary, filled internally with smoothed secondary natural land patches, then supplemented externally with secondary natural land patches, with "secondary natural land patches" not among the largest 44 in the county).

LsNameLev2**:

Landscape-Level Placename; assigned mostly by D.Hunt using TNC methodology. For Level-2 landscape sites, typically within only one physiographic region (e.g., the Rensselaer Plateau, the Taconic Mountains), thus usually treated separately from contiguous/nearly contiguous patches in adjacent physiographic regions.

LandscLev1**:

relational field for Level-2 sites indicating any Level-1 landscape in which they are embedded.

2. Intact Natural Terrestrial Landscape Priority Fields.

RensCoTier**:

Priority Tier within county for this feature, intact natural terrestrial landscapes.

Tier 1:

sites of highest priority conservation focus for natural terrestrial landscapes in the county; usually of the largest size (over 50,000 acres), highest level of contiguity, and lowest degree of dissection and bisection for the county; usually also in better condition and landscape context (connectivity to other nearby forest landscapes) than other high quality terrestrial landscape sites; usually well correlated with multiple examples of the largest roadless blocks and forest-interior areas within the county.

Tier 2:

other sites of high priority conservation focus for natural terrestrial landscapes in the county; usually of moderately large size (10,000-50,000 acres), high level of contiguity, and low degree of dissection and bisection for the county; usually also in good condition and landscape context (connectivity to other nearby forest landscapes) for county terrestrial landscape sites; usually well correlated with at least one example of large roadless blocks and forest-interior areas within the county.

Tier 3:

other supplementary sites of recommended conservation focus for natural terrestrial landscapes in the county that may add diversity, complementarity, and broader regional landscape connectivity to Tier 1 and Tier 2 sites, especially sites in different physiographic regions and possibly also different Rensselaer County towns than those of Tier 1 and Tier 2 sites; typically sites of moderate scale (5,000-10,000 acres) that are more dissected and bisected, thus may represent a cluster of nearby moderate-sized contiguous forest areas with narrow (road corridor) separations; typically in at least fair condition/landscape context; ideally correlated with at least one example of large roadless block and forest-interior area for the county.

Tiers 4***:

other sites that may also warrant conservation focus for natural terrestrial landscapes in the county, especially ones that may add diversity, complementarity, and broader regional landscape connectivity to Tier 1 through Tier 3 sites, especially sites in different Rensselaer County towns than those of Tier 1-3 sites; typically sites of moderately small scale (2,000-5,000 acres) that are even more dissected and bisected than Tier 3 sites, thus may represent a cluster of nearby moderate-sized contiguous forest areas with wider (road corridor) separations; typically in at least fair condition/landscape context; sometimes correlated with an example of roadless block or forest-interior area large for individual towns of the county.

Tier 5***:

other sites that may also warrant conservation focus for natural terrestrial landscapes in the county, especially ones that may add diversity, complementarity, and broader regional landscape connectivity to Tier 1 through Tier 3 sites, especially sites in different Rensselaer County towns than those of Tier 1-3 sites; typically sites of moderately small scale (1,000-2,000 acres) that are even more dissected and bisected than Tier 3 sites, thus may represent a cluster of nearby moderate-sized contiguous forest areas with wider (road corridor) separations; typically in at least fair condition/landscape context; sometimes correlated with an example of roadless block or forest-interior area large for individual towns of the county.

TierDesc**: Thresholds for Tier Sizes: see above under each tier.

3. Site Characteristics.

AcreLv2Md1: size of Level-2 site (using Model 1) in acres (within Rensselaer County).

AcreLv2Md4*: size of Level-2 site (using Model 4) in acres (within Rensselaer County).

TotalAcres: total size of site in acres (including any area outside Rensselaer County).

5. Ecological Interpretation Summary.

(from Hunt January 2017; prepared for Rensselaer Land Trust County Conservation Plan)

This intact natural/forest landscape layer is planned for use in prioritizing large-scale regional conservation efforts for Rensselaer County, New York and putting forest landscapes of the county into larger contexts of regions such as the Hudson River Estuary, Lower New England Ecoregion, Eastern New York, New York State, and the Northeastern U.S. Forest Landscape, all of which have multiple organizations involved in ongoing forest landscape conservation planning and prioritization efforts. The county-wide display of the most important intact natural/forest landscapes, especially a display showing priority levels, reveals a pattern that parallels conservation priorities for many of the smaller-scale ecological features (ecosystems, natural communities, rare species, important animal habitats). Natural/forest landscapes within the county long recommended as the highest conservation priorities include: the Rensselaer Plateau and Taconic Mountains, the two largest forest landscapes in the county. However, other smaller, but still relatively large areas, of contiguous nature landscape determined from GIS analyses and highlighted here are those not often emphasized at a county level: the Southern, Northwestern, and Northeastern Rensselaer County Forests. Additionally, several other smaller but perhaps still locally important natural landscapes are recommended as supplementary conservation priorities, especially at a town level. Important intact natural landscapes are spread throughout all major physiographic areas of the county, including the more developed Hudson Valley, Taconic Foothills, and Taconic/Hoosic Valley regions. Similarly, while these landscapes span most of the 16 towns of the county, essentially none were identified in the two cities of the county: Troy and Rensselaer, where dense development has eliminated any remaining large natural landscapes.

6. Site Description Summaries

The specific goal for this feature for the Town of Poestenkill Natural Resource Inventory was to produce a 1-page site description for each of the 2 county-important forest landscape sites in town designated for the 2017 Rensselaer County Conservation Plan. Site descriptions are provided using fine print. Documents were integrated, condensed, and polished from all readily available prior electronic files of the Rensselaer County Biodiversity Greenprint Project (see below). The document format was attempted to be as consistent as possible across both sites, to allow meaningful site comparisons. These documents are intended to be "first iteration" drafts for public use to provide the following:

1. a visual image of the nature of each site, especially beyond just its name.
2. a concise document with consolidated but detailed information on the ecological characteristics and regional importance of each site.
3. a template which can be refined with more detailed information in the future, especially to fill in any information gaps.
4. a pilot model which could be followed for priority conservation sites in other towns of the county.

Because many of these site concepts (boundaries and associated ecological characteristics), as biodiversity conservation sites, were envisioned by the Rensselaer County Biodiversity Greenprint Project, it is thought that the most informative description of each site to date is represented in this product. Future improvements, requiring more time beyond the project scope, could involve:

1. periodic refinement of site boundaries every 10 to 25 years based on updated land cover datalayers that reflect changes in forest cover.
2. population of additional GIS fields abbreviated from information in the site descriptions.
3. further review of manual files of the Rensselaer County Biodiversity Greenprint Project.
4. review and integration of documents of other organizations.

Sources (2019 update):

1. Rensselaer County Conservation Plan documents.
(prepared for Rensselaer Land Trust 2017 including GIS datalayer, summary memo, cover memo).
2. Rensselaer County Biodiversity Greenprint Project electronic site files.
(see individual sites for relevant references).
3. Rensselaer Plateau Conservation Plan documents.
(see individual sites for relevant references; only for Rensselaer Plateau Forest).

Important Forest Landscapes. 1. Rensselaer Plateau Forest

SITE DESCRIPTION SUMMARY

Landscape Site Type: large, intact natural forest landscape (Level-2 site).

Embedded Within: Eastern Rensselaer County Forest (Level-2 forest landscape site).

Included Subsites: -

County Conservation Priority: Tier 1 (highest priority).

Size: 122,217 acres (Model 1; 110,442 acres using simpler Model 4).

(see Priority Conservation Sites for more detailed information)

Site Description:

The Rensselaer Plateau Forest landscape represents the largest of 6 large intact functional landscapes tracked in Rensselaer County, with concentrations of multiple biodiversity features significant at the county to global level. It is classified as a county-important (Tier-1) Level-2 forest landscape for Rensselaer County. This contiguous intact forest is the largest in Rensselaer County at 122,217 acres (Hunt 2017), closely approximates the boundaries of the physiographic Rensselaer Plateau region and the Rensselaer Plateau Forest priority conservation site. This landscape is one of 2 Tier-1 (highest importance) forest landscape sites in the county along with the 35536-acre Northern Taconic Forest (Hunt 2017).

Tier-1 forest landscape sites for Rensselaer County are those over 50,000 acres. They have the highest level of contiguity and lowest degree of dissection and bisection for the county. They are usually in better condition and landscape context (connectivity to other nearby forest landscapes) than other high quality terrestrial landscape sites of lower tiers. They are also usually well correlated with multiple examples of the largest roadless blocks and forest-interior areas within the county. Model-1 landscapes, unlike Model-2 landscapes, include minor forest clearings. Landscapes with this model were formed as the largest collectives of individual contiguous natural land patches in the county: first aggregated, then smoothed, filled internally with secondary patches, then supplemented externally with secondary patches. Level-2 sites represent the largest physiographic areas of contiguous natural land centered around the largest 50 individual contiguous natural land patches.

The large Rensselaer Plateau Forest landscape spans many of the largest roadless blocks in Rensselaer County. It is roughly bounded within NY Route 351, Tamarac Road, Camel Hill Road, NY Route 2, NY Route 66, Taborton Road, Teal Road, and Gardner Hill Road to the W, NY Route 7, Tamarac Road, Tory Hill Road, Spicer Road, Windy Hill Road, and Pine Valley Road to the N, NY Route 22, Dill Brook Road, West Road, Newton Road, and Staples Road to the E, plus Garfield Road, Gentile Road, and Woodward Road to the S. The major road bisections, all in an E-W direction, from N to S, are NY Route 7, NY Route 2, Plank Road, Taborton Road (Sand Lake), and NY Route 43. This landscape is also bisected by many other county and town perimeter roads and dissected by many small interior town and private roads.

This landscape constitutes the largest part of the larger Level-1 forest landscape aggregate, the 177,883-acre Eastern Rensselaer County Forest, which also includes the Northern Taconic and Kinderhook Valley Level-2 forest landscapes. It connects to the former to the E via many small forest corridors across NY Route 22 and to the latter via many large forest corridors across NY Route 66 to the SW and Gentile Road to the S. It also connects to 6 additional moderate to moderately small county-important forest landscapes via county-important corridors in an arc from the west (Burden Lakes Forest landscape) to the northeast (Northeast Rensselaer County Forest landscape), the largest of which include the Tomhannock Forest to the NNW and West Schaghticoke Forest to the NW.

This forest landscape serves as a coarse filter for multiple county-important forested ecosystem complexes, numerous natural forest community examples of county or broader importance, and regionally-important habitat for forest-dependent animals (see other ecological features).

Sources:

Hunt, D.M. 2017. Rensselaer Land Trust County Conservation Plan. Rensselaer County Biodiversity Greenprint Project. important forest landscapes.

Future Improvements:

better integrate information from any summary documents being prepared in conjunction with the Rensselaer Plateau Conservation Plan. seek out and integrate any relevant external summary documents of other organizations for general gaps.

Edition: Draft 1: June 2, 2019.

Important Forest Landscapes. 2. Coopers Pond Forest

SITE DESCRIPTION SUMMARY

Landscape Site Type: relatively large, intact natural forest landscape (Level-2 site).

Site Synonyms: Snyders Corners North Forest Interior.

Embedded Within: -

Included Subsites: Coopers Pond Block (911 acres, overlapping), Snyders Corners North Block (975 acres, overlapping).

County Conservation Priority: Tier 5 (moderately high priority).

Size: 1236 acres (Model 4; simplest model).

Site Description:

The Coopers Pond Forest landscape is a moderately small forest landscape that spans the Snyders Corners North and Coopers Pond (Pine Bowl) Blocks. Typical Tier-5 forest landscapes for Rensselaer County such as this one are sites of moderately small scale (1,000 to 2,000 acre range) that are somewhat dissected and bisected by roads. They may represent a cluster of nearby moderate-sized contiguous forest areas with moderately wide (road corridor) separations. They are typically in at least fair condition/landscape context, and they are sometimes correlated with examples of roadless blocks or forest-interior areas large for individual towns of the county. Model-4 landscapes represent the largest aggregated collectives of individual contiguous natural land patches. The Coopers Pond Forest landscape consists of only a single patch (thus Model 5) and was not aggregated. As a Level-2 site, it represents a small area of contiguous natural land within a much larger physiographic area, the Taconic Foothills region, and is the largest forested landscape in the Town of Poestenkill that is exclusively in that region. It is bounded within NY Route 66 (Averill Park Road in Poestenkill, Main Avenue in North Greenbush) to the NE, Algonquin Beach Road to the SE, Stop 13 Road to the S, and NY Route 150 (West Sand Lake Road) to the SW. It is bisected by Snyders Corners Road (NE-SW direction) and dissected in Poestenkill by Nel Dore Drive plus Pine Bowl Road and in North Greenbush by Macha Lane. It connects to the much larger Tier-1 Rensselaer Plateau Forest landscape via unnamed county-important Tier-5 forest corridors to the east (tentatively named the Weatherwax Road Southeast Forest Corridor) and southeast (tentatively named the Reichards Lake Road Forest Corridor). It also connects to additional moderately small forest landscapes via county-important corridors to the north (Bald Mountain Brunswick Forest landscape), west (Rensselaer Tech Park Forest landscape), southwest (Best Northwest Forest landscape), and SSE (Burden Lakes Forest landscape). Limited field information is available on the effectiveness of this site as a functional, county-important forest landscape.

Sources:

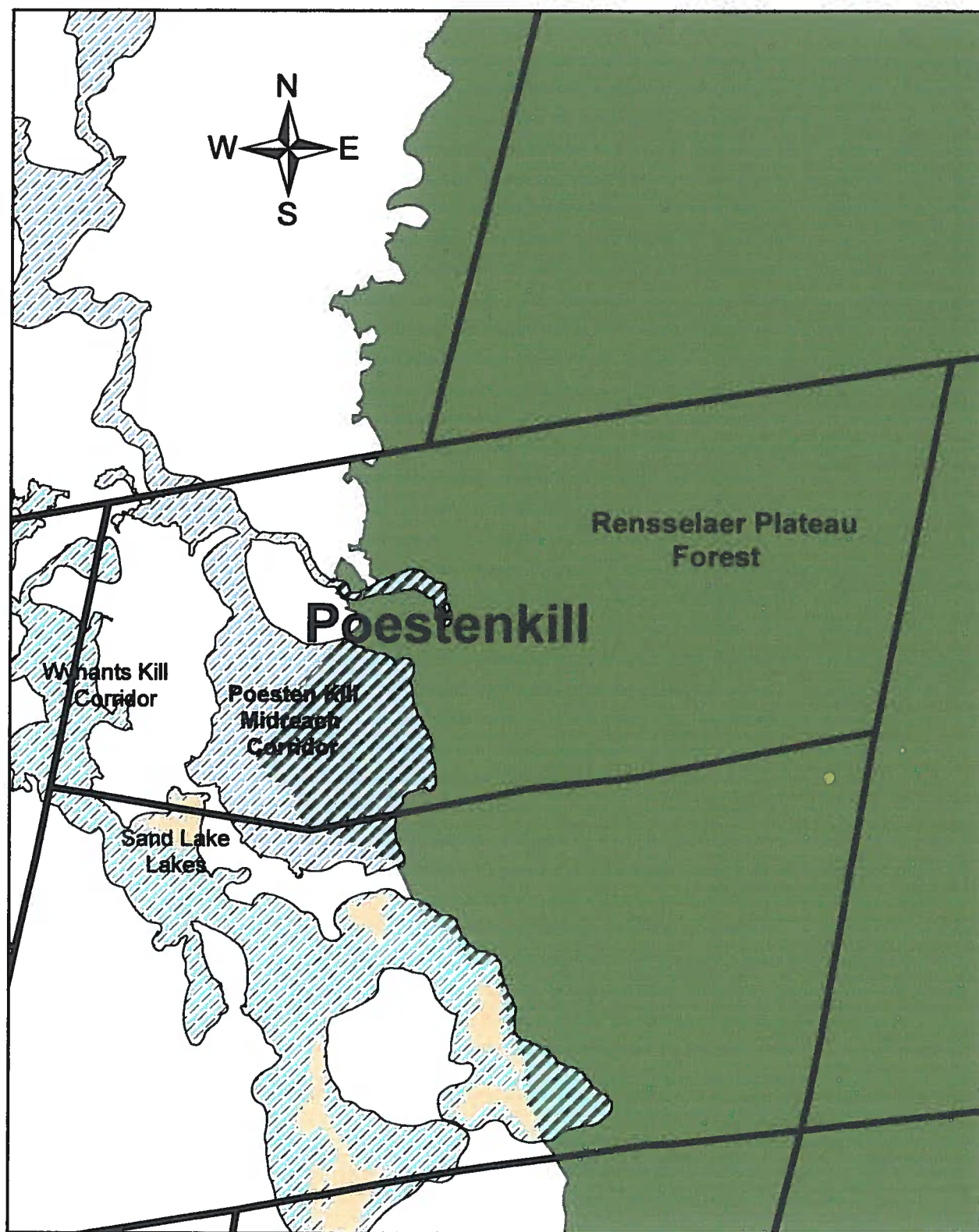
Hunt, D.M. 2017. Rensselaer Land Trust County Conservation Plan. Rensselaer County Biodiversity Greenprint Project. important forest landscapes.

Future Improvements:

collect, compile, and analyze field observation information to better evaluate the site.

Edition: Draft 1: June 2, 2019.

County-Important Priority Conservation Sites



Rensselaer County Importance



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Town of Poestenkill: Priority Conservation Sites
David M. Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
June 2019

1. Introduction.

The goal for this feature, as part of the Town of Poestenkill Natural Resources Inventory, was to provide site descriptions for all **4 Level-2 county-priority conservation sites** in town identified for the 2017 Rensselaer County Conservation Plan (compiled by the Rensselaer Land Trust) (see Map 1). Work focused mostly on consolidation of information into concise site descriptions and review of previously-prepared GIS information. Only **minor refinements were made to GIS information** (beyond the project scope). No changes to site boundaries were made, although minor refinements for the two riparian corridor sites are recommended in the future (see below). No supplementary sites are suggested. Because the site concept is integrated from many smaller ecological features, the set of designated sites is likely very stable, with any additions unlikely in the near future.

2. Feature Concept. (from Hunt January 2017; prepared for Rensselaer Land Trust County Conservation Plan)

Important large- to moderate-scale biodiversity conservation sites throughout Rensselaer County, New York that represent the best chance for the long-term conservation of a combination of multiple biodiversity/ecological features, especially a complete set of native biota (plants and animals) of the county. The collective of these sites is hypothesized to provide the most effective means to conserve the entire suite of native and natural county biodiversity features. This set considers 1) the overall quality of conservation sites [those of the largest size, best condition, and landscape context], 2) the complementarity of different sites representing different groups of ecological features, especially functional terrestrial and aquatic landscapes, 3) the diversity of ecological features across the five physiographic regions and ten HUC-10 watersheds of the county, and 4) the uniqueness/irreplaceability of contained ecological features for the county. Derivation of sites are modelled after and generally follow methods of The Nature Conservancy (ecoregional planning), involving: stratification of sites, the viability of sites, the complementarity of diverse feature types, sufficient replication of similar site types, and the breadth of ecological features (especially terrestrial vs. aquatic landscapes). Sites with the overall highest conservation importance typically contain multiple important ecological features, especially sites with the highest values for the most number of features (intact terrestrial landscapes, important aquatic networks, important ecosystem complexes, exemplary natural communities, rare plant concentration areas, and important animal habitats). Important biodiversity conservation sites are generally of large-scale, representing relatively large/long, intact functional landscapes ("natural landscapes" or "forest landscapes" plus "aquatic networks"), supplemented with smaller areas representing concentrations of unique ecological features ("ecological aggregates") not well represented in the other larger landscape-level features. Level-2 sites are deemed most practical for conservation focus, mostly representing individual stream corridors and physiographically-based forest landscapes.

3. Site Assembly and Prioritization Methods.

(Hunt January 2017; prepared for Rensselaer Land Trust County Conservation Plan; available upon request)

includes: Site Boundary Method Summary, Prioritization Status Determination Method Summary.

4. GIS Information Available

(updated slightly from Hunt January 2017; for Rensselaer Land Trust County Conservation Plan)
(with minor updates catered to Town of Poestenkill in 2019)

Data Tallies:

- 1) Town of Poestenkill: total of 4 Level-2 conservation sites mapped in 2017.
- 2) Rensselaer County/county-level analyses: see Hunt January 2017, for Rensselaer Land Trust County Conservation Plan.

File Name:

PriorityConservationSites_Level2_Poestenkill

(town subset of RensCo_PriorityConservationSites_Level2)

Level-1 sites: see Hunt January 2017, for Rensselaer Land Trust County Conservation Plan.

Important Fields for Users:

- * = values newly populated for Town of Poestenkill Natural Resources Inventory.
- ** = metadata updated for Town of Poestenkill Natural Resources Inventory.

1. Conservation Site Identity Fields.

ConsSitType:

Site Type. 3 values: large intact natural/forest landscape (terrestrial), large important isolated aquatic corridor (mostly spatially separated from the forest landscapes); moderate-scale unique ecological aggregates.

ConsSitName: Placename; assigned mostly by D.Hunt using TNC methodology.

FeatureType*:

Primary Feature Type. 3 values: Level 2 forest landscapes (Tiers 1 to 3), Important aquatic network (RC); Important restricted ecosystem complex (RC).

Feat_Code:

Abbreviated Code for Display combining site type and priority tier; FL = forest landscape (Tiers 1 to 4), AC = aquatic corridor (Tiers 1 to 4), EA = ecological aggregate (Tiers 1 to 3).

Levl_Site: Level-1 Site in which Level-2 site is embedded.

2. Conservation Site Priority Fields.

RCConPrior: Priority Tier within County (Tier 1 to Tier 4).

Tier 1:

sites of highest priority for biodiversity conservation focus in the county; usually with a high concentration of regionally-important features across all or most of the small-scale to landscape-scale ecological features; usually much larger and in better condition/landscape context than other highest quality sites with similar suites of features for the county.

Tier 2:

other sites of high priority for biodiversity conservation focus in the county; usually with a moderately high concentration of regionally-important features across many of the small-scale to landscape-scale ecological features; usually large and in good condition/landscape context.

Tier 3:

other supplementary sites of recommended biodiversity conservation focus that may cover additional diversity to Tier 1 and Tier 2 sites, especially sites with multiple unique and/or irreplaceable features; often sites of moderate scale that may be lacking importance for some of the small-scale to landscape-scale ecological features; usually in at least fair condition/landscape context.

Tier 4:

other sites that may also warrant regional biodiversity conservation focus that may add diversity to Tier 1 and Tier 3 sites, especially sites with additional unique and/or irreplaceable features; often sites that may be lacking importance for many of the small-scale to landscape-scale ecological features; usually in at least fair condition/landscape context.

3. Site Characteristics.

Site_Level*, **: Level of aggregation for site (all explicitly "Level 2" for this datalayer).

Viability*, **:

Long-Term Viability of Conservation Site; 2 values: Yes (viable), Yes? (with enough disturbances that important features may be threatened).

ConsGoal*, **:

General Recommended Conservation Goal for Site; 2 values:

Conserve (sufficient protection of site alone should conserve all or most contained important ecological features)
Conserve/Restore ("restore" implying that site restoration is desirable to restore the conservation value of the site, likely to a higher importance tier, via improved condition and/or more viable examples of contained important ecological features; suggested most for impacted stream corridors and fragmented forest landscapes).

Site_Acres: size of site in acres.

4. Site Geography.

Town*, **:

towns in which site is located; temporarily populated only for Poestenkill value, with "others" added if extending beyond Poestenkill.

EmbedSite(s,2,3,4) **:

smaller embedded subsites within the site; note: previously populated for county plan, but not carefully reviewed for update for Town of Poestenkill.

5. Ecological Interpretation Summary.

(from Hunt January 2017; prepared for Rensselaer Land Trust County Conservation Plan)

This important biodiversity conservation site layer is planned for use in prioritizing regional conservation efforts for Rensselaer County, New York and putting the county into larger contexts such as the Hudson River Estuary, Lower New England Ecoregion, Eastern New York, New York State, and the Northeastern U.S. Forest Landscape, all of which have multiple organizations involved in ongoing conservation planning and prioritization efforts. Sites span upland/terrestrial features such as large intact forest landscapes to aquatic/wetland features such as large riparian corridors plus areas that contain multiple high quality examples of restricted ecosystem complexes including as lake complexes, tidal wetlands, and rocky summit. The county-wide display of the most important biodiversity conservation sites, especially a display showing priority levels, reveals a pattern that reflects large landscape-level sites of the county long recommended as the highest priority conservation: the Rensselaer Plateau, Taconic Mountains, plus the Hudson River and Hoosic River Corridors. Two smaller stream corridors with multiple contained sets of important biodiversity features are suggested as important supplemental aquatic sites. Other important moderate-scale sites, especially with local unusual features, include scattered rich sites of the Taconic Valley, rocky summit complexes and sandplain forests of the Hudson Valley, plus an aggregated area of high quality lakes in the Taconic Foothills. Important biodiversity sites are spread throughout all major physiographic areas of the county and all 16 towns of the county.

6. Site Description Summaries

The specific goal for this feature for the Town of Poestenkill Natural Resource Inventory was to produce a 1-page site description for each of the 4 county-priority conservation sites in town designated for the 2017 Rensselaer County Conservation Plan. Site descriptions are provided using fine print. They are longer for the larger and more complex sites plus sites that had more lengthy historical description documents. Documents were integrated, condensed, and polished from all readily available prior electronic files of the Rensselaer County Biodiversity Greenprint Project (see below). The document format was attempted to be as consistent as possible across all 4 sites, to allow meaningful site comparisons. These documents are intended to be "first iteration" drafts for public use to provide the following:

1. a visual image of the nature of each site, especially beyond just its name.
2. a concise document with consolidated but detailed information on the ecological characteristics, regional importance, and conservation status of each site.
3. a template which can be refined with more detailed information in the future, especially to fill in any information gaps.
4. a pilot model which could be followed for priority conservation sites in other towns of the county.

Because many of these site concepts (boundaries and associated ecological characteristics), as biodiversity conservation sites, were envisioned by the Rensselaer County Biodiversity Greenprint Project, it is thought that the most informative description of each site to date is represented in this product. Future improvements, requiring more time beyond the project scope, could involve:

1. refinement of riparian corridor areas for the 2 riparian sites in town.
2. population of additional GIS fields abbreviated from information in the site descriptions.
3. further review of manual files of the Rensselaer County Biodiversity Greenprint Project.
4. review and integration of documents of other organizations.

Sources (2019 update):

1. Rensselaer County Conservation Plan documents.
(prepared for Rensselaer Land Trust 2017 including GIS datalayer, summary memo, cover memo).
2. Rensselaer County Biodiversity Greenprint Project electronic site files.
(see individual sites for relevant references).
3. Rensselaer Plateau Conservation Plan documents.
(see individual sites for relevant references; only for Rensselaer Plateau Forest).

Priority Conservation Site 1. Rensselaer Plateau Forest

Site Description Summary

Conservation Site Type: large, intact natural forest landscape (Level-2 site).

Embedded Within: Eastern Rensselaer County Forest.

County Conservation Priority: Tier 1 (highest priority).

Size: 123,276 acres.

General Description: (adapted, in part, from Hunt 2006, 2009)

The large Rensselaer Plateau Forest landscape of east-central Rensselaer County, as a priority conservation site, is primarily a terrestrial/upland forest landscape feature. It is an important conservation site for its large contiguous forest size, relatively intact forest landscape, and high diversity of regionally-important examples of moderate- to small-scale natural and native biodiversity features (ecosystems/ecological communities/species). It closely approximates the boundary of the physiographic Rensselaer Plateau and is equivalent to the Rensselaer Plateau Forest site as an important forest landscape unit. A landscape with "contiguous forest" implies a large area with "continuous" or "connected" forest canopy, forming one polygon on a regional-scale map. The polygon can have holes in it (i.e., a forest "displacement"; e.g., where intensive logging has taken place), but cannot be fragmented by a feature bisecting forest canopy such as a wide open road corridor that forms a linear break in forest canopy detectable at the scale of concern. The term "relatively intact forest landscape" is not equivalent to "contiguous forest", thus the areas associated with the application of these terms to the plateau are ~90% correlated. Parts of the contiguous forest that constitutes the Rensselaer Plateau Forest extend off (S & W of) the similar Rensselaer Plateau physiographic region. In contrast, small parts of the plateau, as a physiographic entity, are fragmented from the large contiguous forest area which encompasses ~98% of the plateau. Intact landscapes are generally defined as large areas essentially lacking significant displacements of natural communities and with low density of commonly-used roads. The Rensselaer Plateau Forest landscape serves as habitat for wide-ranging native animals such as black bear, bobcat, fisher, and moose that require large intact forested areas for viable populations. It has high resiliency, large enough, for instance, to absorb the effects of hurricanes. It consists of many relatively large and well connected functional forested landscape units bounded by roads (i.e., "matrix forest blocks"). The plateau also has only few large interior cultural displacements.

Site Importance: (adapted, in part, from Hunt 2006)

The Rensselaer Plateau is an important biodiversity conservation site at the global, ecoregional, state, and county levels. For the most complete "picture" of landscape characteristics of the plateau that depict forest cover, fragmenting features, and forest maturity/small-scale human disturbances, the plateau could be described as:

- 1) a relatively large area of relatively intact and predominantly forested nature.
- 2) an area with a "low level of human disturbances".
- 3) an area averaging moderately mature forests.

Land use and land cover are key features of the plateau that make it a regional priority for conservation. The one landscape integrity term that best highlights the importance of the Rensselaer Plateau Forest (e.g., that of the highest ordinal number for landscape size in New York) is currently suggested to be "contiguous forest", a term with precise meaning, especially if coupled with the scale at which the term is relevant. The plateau is probably not as important as other large intact forest landscapes for its "forest maturity", as it is for the "integrity of its forest cover", thus terms like "contiguous forest", "unfragmented forest", and "unbisected forest" raise the plateau up to its highest ordinal importance, such as for New York State. Still, the Rensselaer Plateau Forest is the largest contiguous forest area entirely within Rensselaer County and among the largest forest landscapes in the Mid-Hudson Region and New York State. Additionally, while not as mature a forest landscape as some NE U.S. forest regions, its maturity level is important at more local scales, at least at the county level.

--Global Importance

The Rensselaer Plateau Forest is a site of known global importance, with a site biodiversity rank of B3, reflecting its high global biodiversity value. It has this status mostly due to A-ranked (excellent) examples of matrix forest types.

--Lower New England Ecoregion Importance

While much smaller and less intact than other large forested landscapes in New York such as the Adirondack or Catskill Mountains (see below), the Rensselaer Plateau Forest is situated in a different Nature Conservancy (TNC) ecoregion from these areas, namely the Lower New England Ecoregion, and thus may serve as a good refugia for a different suite of native plant, animal, and other species. In fact, it apparently constitutes the second largest relatively intact forested landscape in the New York portion of the Lower New England TNC Ecoregion behind the Hudson Highlands and may even contain larger roadless blocks than that area. It is also probably one of the largest relatively intact forested landscapes throughout this ecoregion which spans from New Jersey and southeastern New York through the southern half of New England to southeastern Maine.

--New York State Importance

Applying the landscape characteristics of the Rensselaer Plateau Forest mentioned above relative to New York State, this landscape site could be described as:

- 1) the 5th to 7th largest contiguous forest landscape in New York State.
- 2) a forested landscape with relatively low levels of forest displacements, developed areas, bisecting roads, road density, and human population for New York.
- 3) a forested landscape with many relatively moderate-sized areas of moderately mature and moderately high quality forest stands for New York.

Preliminary statewide GIS analyses of forest and road patterns at 1:3,000,000 scale suggested that the Rensselaer Plateau Forest is one of the largest few intact forest landscapes of New York State and can be loosely called the "7th largest forested landscape in New York", "7th largest contiguous forest", or "7th largest relatively intact forest landscape" in the state, especially if a low density of Class 1-3 roads is combined (Hunt 2006, 2009). These analyses suggested that landscape areas of comparable or larger size are limited to only six places in the state:

the Adirondack Mountains (5,130,000 acres), Catskill Mountains (640,000 acres), Tug Hill (410,000 acres), Neversink and Mongaup River Watersheds (230,000 acres), Hudson Highlands (200,000 acres), and Alleghany State Park (175,000 acres),

thus with the Adirondacks being ~50 times larger, the Catskills ~6 times larger, and Tug Hill ~4 times larger (Hunt 2006) than the Rensselaer Plateau Forest. Similarly, there are only few areas in New York State that contain forested blocks as large as those on the Rensselaer Plateau. Relative to most other regions of New York State the Rensselaer Plateau Forest constitutes an area of "low level of human disturbances". Although "intact forest" is a rather imprecise term, its application here referred to 1) "contiguous forest" polygons with 2) areas of "relatively low density of Class 1 to 3 roads". At closer scales (e.g., 1:150,000) the Rensselaer Plateau Forest is still a contiguous forest and may be even higher in position of state importance, pending review of any relevant GIS analyses. This site is not as important as other of the largest intact landscapes in New York for its "forest maturity", especially compared to the Adirondack Forest.

--Rensselaer County Importance

The Rensselaer Plateau Forest is the one landscape in Rensselaer County most important for preservation of both common natural and native biodiversity and large-scale natural ecological processes. It is among few sites in the county known or suspected to contain 1) intact functional landscapes of relatively moderate to large size, 2) abundant natural communities significant at the global to county level, and/or 3) dense concentrations of county-rare plants and/or animals. The Rensselaer Plateau Forest conservation site represents the largest of 6 large functional (ecologically intact) landscapes of Rensselaer County suggested as "environmental critical areas" for the Rensselaer County Environmental Management Council (Hunt 2000), with concentrations of multiple overlapping biodiversity features significant at the county to global level. More precisely, the Rensselaer Plateau Forest is one of 21 Level-2 county-important conservation sites designated for the recent county conservation plan (Hunt 2017). It is classified as a county-important Tier-1/Level-2 forest landscape for Rensselaer County. Specifically, that forested landscape is considered to be one of the 5 highest priority conservation sites (Tier 1) in the county, the largest Level-2 conservation site in the county, and the only Tier-1 forest landscape of 11 important such sites in the county other than the Northern Taconic Forest. The Rensselaer Plateau Forest, along with the Northern Taconic Forest, are the only contiguous forest landscapes in the county over 50,000 acres. The Rensselaer Plateau Forest is the largest in Rensselaer County at 123,276 acres (Hunt 2017, Model 4).

Geography (catered to the Town of Poestenkill):

The Rensselaer Plateau Forest spans 10 of the 16 municipalities of Rensselaer County including the Town of Poestenkill and the adjacent towns of Brunswick and Grafton to the N, Berlin to the E, and Sand Lake to the S. The Poestenkill portion of the similar physiographic plateau region is 14,245 acres (12% of the plateau and 69% of the town), situated along the central west part of the plateau region.

Physiography (catered to the Town of Poestenkill):

The Rensselaer Plateau Forest conservation site closely approximates the similar ~118,000-acre Rensselaer Plateau physiographic region, a plateau of resistant sandstone (Rensselaer Graywacke) at regionally high elevations of roughly 900 to 2000 feet with regionally cold climate. The Rensselaer Plateau represents a distinct and relatively uniform physiographic entity, lumped with the Lower New England Ecoregion according to the ecoregion classification of The Nature Conservancy, but with strong ecological affinities to the Adirondacks and other portions of the Northern Appalachian Ecoregion. The high elevation and poor drainage conditions help to create somewhat "boreal" flora similar to that of Adirondacks. The physiographic plateau area is about 95% forested and constitutes a very large "relatively intact forest landscape". This landscape is divided physiographically into broad escarpment faces and local topographically-uniform sites, as well as functionally into road-bounded forest blocks. The Rensselaer Plateau Forest encompasses two broad physiographic subdivisions, namely the Central Rensselaer Plateau, at the highest elevations, plus the Rensselaer Plateau Escarpment, both of which are present in the Town of Poestenkill.

Biodiversity Composition (adapted from Hunt 1997):

The Rensselaer Plateau Forest is a site of known global importance, with a site biodiversity rank of B3, reflecting its high global biodiversity value. It has this status due to both an A-ranked (excellent) Hemlock-Northern Hardwood Forest, the dominant forest type on the plateau, plus an abundance of state-important features including a large concentration of AB- & B-ranked (very good to good) natural community examples. Smaller-scale biodiversity features of the Rensselaer Plateau Forest that are generally characteristic of relatively intact forested landscapes of New York, and thus highlight its special role as an intact landscape, include:

- 1) a concentration of high quality examples of natural communities.
- 2) a relative abundance of resident globally- to state-common wide-ranging and area-sensitive mammals and globally- to state-common forest-interior birds, many of which are regionally in decline due to fragmentation of large forested landscapes but suspected to be represented by viable populations within this site.
- 3) a relatively low abundance of non-native, especially invasive, plant and animal species which can displace the native species of a region.

Feature 1 is represented by county-exemplary sites for numerous natural community types; Feature 2 is correlated with a county-important animal habitat (also the "Rensselaer Plateau Forest") that has similar boundaries. Additionally, the Rensselaer Plateau Forest is currently known to contain relatively dense concentrations of globally to county-rare community types and county-rare plants, the latter often associated with rare community types.

--Ecosystem Complexes:

The large, relatively intact Rensselaer Plateau Forest landscape supports abundant scattered examples of five regionally-restricted ecosystem complex types: peatlands, lakes, riparian areas, rocky summit/slopes, and mature forest patches. Other restricted complex types are represented by only few sites in this landscape including boreal flats (the only place where this feature is found in the county) and mineral soil wetland complexes (more common off the plateau). Wetlands occur in local depressions and broader flats. Most are relatively small compared to the vast upland forests of the site. Peatlands are small to moderate sized, generally ranging from 5 to 50 acres. A total of about 100 or so such wetlands are known from the plateau.

--Ecological Communities:

Natural communities of the Rensselaer Plateau Forest are very diverse, following the state community classification of the New York Natural Heritage Program. The natural forest communities of this landscape are thought to be important especially as coarse filters for their component resident wide-ranging native fauna that are absent from the more dissected and heavily-developed landscapes of adjacent lowland areas (e.g., the Taconic Foothills to the west and Taconic Valley to the east). The relatively mature but selectively-logged matrix forest of the plateau is composed of Hemlock-Northern Hardwood Forest and Beech-Maple Mesic Forest, with large patches of Spruce-Northern Hardwood Forest in the Central Plateau. The largest areas of moist, flat topography support upland communities classified as Spruce Flats and Balsam Flats surrounding small patch peatland complexes that typically consist of an inward gradient of the forested mineral soil wetland Spruce-Fir Swamp to the forested peatland Black Spruce-Tamarack Bog to the shrubby peatland Dwarf Shrub Bog to the sedge peatland Inland Poor Fen to the open

water Bog Lake, a classic local example being the Hosford Pond Bog peatland complex. Cranberry Vly, one of the largest peatland complexes on the plateau, has a streamside band of higher pH than other peatlands of the region that is rich enough to classify as Medium Fen, the only one identified on the plateau. More common wetland types, mineral soil wetlands, are present throughout the plateau and represented by numerous small examples including Red Maple-Hardwood Swamp and Hemlock-Hardwood Swamp. Other common wetland types within the site include open canopy riverine and beaver-influenced Shrub Swamp, Shallow Emergent Marsh, and Sedge Meadow such as those along the Quacken Kill and Poesten Kill rivers. Local areas of rich bedrock support Maple-Basswood Rich Mesic Forest, sometimes associated with Calcareous Talus Slope Woodland. The steep escarpment of the plateau, especially the W and N faces, supports an interesting assemblage of dry, rocky, circumneutral Central Appalachian community types. Large patches of Appalachian Oak-Hickory Forest and small patches of Chestnut Oak Forest are typical of steep escarpment areas such as Bunker Hill Grafton, mixed with the matrix forest of the Plateau Escarpment, a Lower New England ecoregional variant of Hemlock-Northern Hardwood Forest that, unlike the Northern Appalachian variant of the Central Plateau, has abundant oaks and black birch. These forests are sometimes associated with open canopy woodlands on the summits and steep slopes of the Plateau Escarpment including Pitch Pine-Oak-Heath Rocky Summit and Red Cedar Rocky Summit (such as at Snake Mountain Poestenkill) plus Acidic Talus Slope Woodland and Calcareous Talus Slope Woodland (such as Slide Mountain Grafton). Abundant aquatic features include numerous headwater streams, mostly Rocky Headwater Stream, Marsh Headwater Stream, and Intermittent Stream, plus nutrient poor lakes, mostly Oligotrophic Dimictic Lake and Oligotrophic Pond. A good diversity of cave types are found on the Plateau Escarpment, with a limited set of characteristic subterranean biota.

Besides high community diversity, the Rensselaer Plateau Forest most importantly represents a concentration of natural communities in very good condition that are of significance at county, bioregional, state, and global levels. Numerous state-significant community examples are known from the site. From analysis of natural communities throughout the plateau, there are many good (B-ranked) and a few excellent (A-ranked) examples of common forest types forming an interlocking mosaic which amounts to a relatively large and relatively little disturbed forested landscape with fairly high ecological integrity and good recoverability. While much of the plateau was reportedly cleared for farming and charcoal production in the mid 1800s, these land uses have been abandoned at large scales long enough for the presettlement mix of forest community types to widely redevelop across the landscape.

--Flora:

The Rensselaer Plateau Forest is generally dominated by globally-common plants characteristic of upland forests. Among these are numerous "northern" species that are disjunct from the Adirondack region and regionally uncommon in Rensselaer County. Most are concentrated in the Spruce-Fir Zone of the Central Plateau. These qualities make the plateau forest, along with the Berkshire Plateau of Massachusetts, possibly unique within the Lower New England ecoregion. The open canopy rocky summit communities of the Plateau Escarpment support an especially diverse assemblage of lichen species and several species of herbs and mosses not found elsewhere in the county. Areas with rich bedrock such as Maple-Basswood Rich Mesic Forest and Calcareous Talus Slope Woodland support diverse spring wildflowers. Bryophytes are abundant in both peatland complexes, which contain several species of peat mosses (*Sphagnum*), and Hemlock-Hardwood Swamp, which typically has a diverse array of genera (*Bazzania*, *Thuidium*, *Dicranum*, *Polytrichum*, *Mnium*). The Rensselaer Plateau Forest landscape contains relatively dense concentrations of county-rare plants in local areas with restricted ecosystem complex types and rare community types. Characteristic plants of Medium Fen, for instance, include the county-rare herbs slender sedge (*Carex lasiocarpa*) and bog buckbean (*Menyanthes trifolia*). A relatively low abundance of exotic flora, especially invasive species, throughout the site reflects its high ecological integrity, with most found along roadsides and in disturbed cultural areas such as mowed lawns and cleared land.

--Fauna:

Like plants, the Rensselaer Plateau Forest landscape is noted for having globally-common, more northern, animals of upland forests disjunct from the Adirondacks. The ecological integrity of this site is reflected by the relative abundance of native large mammal species requiring large intact forest landscape for territorial habitat such as fisher, black bear, porcupine, bobcat, coyote, and moose, as well as numerous forest-interior bird species. Several of these animals represent county-rare or vulnerable species.

Site Condition: (modified from Hunt 2006).

--Landscape Integrity of the Plateau.

Much of the Rensselaer Plateau was reportedly cleared for farming and charcoal production in the mid 1800s. However, because it represents some of the least favorable lands in the county for agriculture, large-scale farming was abandoned long enough ago to allow widespread redevelopment of the pre-settlement forest landscape. Poor soil for farming has thus translated to a landscape that is more intact than the surrounding lowlands and has a greater percentage of natural communities. The plateau has been predominantly forested since about the 1950s. Currently, the plateau represents a large natural landscape with relatively intact condition and only minor forest clearings. It contains many relatively large areas unbroken by bisecting roads and has only few large interior human displacements. It is dominated by forests, especially working, mostly selectively-logged, forests of climax forest types with a relatively mature age for the broader Hudson Valley region. From a biodiversity standpoint, perhaps foremost among several ecological features of the Rensselaer Plateau Forest site which makes it important at a county to global level is included this role as a relatively intact landscape. The site can be classified as and is probably best characterized in a short and simple phrase by a "relatively intact forested landscape". Although "intact forest" is a rather imprecise term, its application here refers to a combination of a) contiguous and relatively unbroken forest areas, displaced only by few large interior man-made forest clearings and b) relatively large "blocks" of forested lands unbroken by bisecting roads and with a "relatively low density of large public roads". While there are numerous human disturbances of varying intensity, density, and distribution across the plateau, the plateau constitutes an area of "low level of human disturbances". The ecological integrity of the region is reflected by a relatively low abundance of exotic flora, especially invasive species, and the abundance of mammal species requiring large territories such as fisher, black bear, porcupine, bobcat, coyote and moose, as well as viable populations of numerous forest-interior bird species. However, land use and land cover can vary dramatically across the plateau, from parcel to parcel and from landowner to landowner, thus there is a lot of local variability in landscape integrity throughout the region. Also, because of the potentially very short-term dynamics and low stability of many "ecologically intact areas" across the plateau that are collectively dependent upon the land uses of thousands of parcels, it can be considered as an "intact but vulnerable landscape". This ecological integrity has been threatened from persistent economic pressure from mining companies for large-scale rock extraction for road construction, capitalizing on the resistant nature of the bedrock. Rocky summit areas such as those along the Grafton/Brunswick town line have been dramatically ecologically compromised by these activities and other scattered areas have been proposed for hard rock extraction.

--Regional Connectivity & Corridors

In Rensselaer County the trend of increased functional isolation of landscape blocks has proceeded much more slowly on the Rensselaer Plateau than in the surrounding lowlands. Ecological interchange between most of the large forest/matrix blocks of the Rensselaer Plateau is undoubtedly still very functional. Forest blocks over 1,000 acres are well connected throughout the plateau. Some of the most advanced stages of isolation among these blocks is apparently associated with New York Route 2.

Priority Conservation Sites. 1. Rensselaer Plateau Forest

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This road and the forest displacement corridor associated with it apparently nearly forms a barrier between the natural landscapes to the north and south. Remaining existing functional natural corridors crossing New York Route 2 appear to have been reduced to few in number and a very limited width (Hunt 1996).

Landscape Context:

The intact forests of the Rensselaer Plateau are essentially functionally isolated from any substantive forest areas to the west by large displacements in the lowlands surrounding New York Routes 7, 351, 150, and 20. Although much of the Rensselaer Plateau Forest is abruptly bordered by cleared land or fragmented forest patches, it is connected, however, to other relatively large natural landscapes in the county of various proximity and via multiple forest corridors. The Northern Taconic Forest, Central Nassau Hills, and Kinderhook Valley Forests, other county-important Level-2 forest landscape sites, occur in close proximity to the E and S, forming the broader Eastern Rensselaer County Forest (a Level-1 priority conservation site for the county). Multiple county-important forest corridors link the Rensselaer Plateau Forest in a northeast to west direction to smaller county-important forest landscapes such as the East Hoosick Hills, West Schaghticoke Forest, and Tomhannock Forest.

Conservation Status:

The Rensselaer Plateau Forest, along with the Northern Taconic Forest, the two largest forest landscapes in Rensselaer County, have long been included among the few highest conservation priorities in the county. This site has been a priority conservation site for regional conservation organizations such as The Nature Conservancy (a global conservation organization that has had the plateau as a priority site for New York and the Lower New England Ecoregion for its intact landscape and high quality examples of common natural communities), the New York State Department of Environmental Conservation (that has the plateau as a priority site on the state Open Space Plan for its unfragmented nature), Audubon New York (that has the plateau as an Important Bird Area for its "great abundance and diversity of forest breeders"), the Rensselaer-Taconic Land Conservancy (a county-level organization that has had the plateau as one of two priority areas for Rensselaer County), the Friends of Rensselaer Forest/Rensselaer Forest Trust (a former local organization focused exclusively on the plateau), and, most recently, the Rensselaer Plateau Alliance (focused exclusively on this site, especially via their regional conservation plan). Preservation of some or all of the special landscape integrity and biodiversity features of the Rensselaer Plateau are the focus of these conservation organizations. These groups highlight the region as a "forested" area, thus the use of the word "forest" is preferable in describing the plateau over terms such as "natural area" or "open space area", which can include open canopy natural communities, successional areas, and agricultural areas. Following standard approaches of The Nature Conservancy and NatureServe, which focus on a balance of globally- to state-rare species and habitats with high ecological integrity, the Rensselaer Plateau qualifies as a "globally- to regionally-important landscape-scale conservation site" (Hunt, 2000).

The region has long been a mix of mostly private land with scattered public managed areas (state parks, state forests, state wildlife management area, county park). Private preserves have been increasing in recent times. The oldest preserve may be Barberville Falls Preserve (The Nature Conservancy). The Rensselaer Plateau Alliance has been instrumental in securing easements that can sustain connectivity throughout the central forest core of the plateau, establishing community forests, and expanding public managed areas. The Rensselaer Land Trust has established one preserve (Ingalls Preserve) and continues to secure easements, especially in more peripheral plateau areas. As of 2019, numerous efforts are ongoing that focus on conservation within this landscape. The Rensselaer Plateau Alliance is likely the best source of the current status of conservation on the plateau.

Sources:

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- Hunt, David M. 2018. Rensselaer Plateau, an Ecological Overview. Ecological Intuition & Medicine, Rensselaer County Biodiversity Greenprint Project. December.

Future Sources/Improvements:

Additional relevant information might be found in other sections of the Rensselaer Plateau Ecological Features Documentation Series (completed [physiography] or draft) and various summary documents prepared for the Rensselaer Plateau Alliance and/or Rensselaer Land Trust, including conservation plan summaries for the Rensselaer Plateau and Rensselaer County, respectively. These information might be used to further refine the summary presented here. seek out and integrate summary documents of other organizations, especially for any obvious general information gaps; reconcile with eventual final version of the landscape and/or introductory sections of the Rensselaer Plateau Ecological Features Documentation Series (Hunt 2013).

Edition: Draft 7, June 12, 2019.

consolidated from various prior partial and complete versions of the site concept of varying levels of detail.

previous drafts: Draft 1 = September 1997; Draft 2 = January 2000; Draft 3 = March 2006; Draft 4 = March 21, 2012; Draft 5 = June 2, 2013; Draft 6 = December 2019.

Priority Conservation Site 2. Poesten Kill Midreach Corridor

Site Description Summary

Conservation Site Type:

large, important isolated aquatic corridor; isolated from any surrounding intact natural (forest) landscape.

Embedded Within: Taconic Foothills Stream Corridors.

Included Sites:

Poesten Kill Gorge, Poesten Kill Valley Troy, Poesten Kill Brunswick, Poesten Kill West Brunswick, Poesten Kill Eagle Mills, Poesten Kill Bott Lane, Poesten Kill Creekside Village, Poesten Kill Mouth, Mount Ida Pond, Newfoundland Creek Headwaters, Newfoundland Creek, Vosburgh Pond Outlet Marshes, Sweet Milk Creek, Middle Sweet Milk Creek.

County Conservation Priority: Tier 3 (moderately high priority).

Size: 7064 acres, ~27.9 miles of stream.

General Description:

Summary.

The Poesten Kill Midreach Corridor, an aquatic-based conservation priority site, is one of the largest aquatic landscape-level sites in the county known to have high biodiversity conservation value. This long river corridor occupies the core part of the lower Poesten Kill Watershed (HUC 10 unit) within the larger Middle Hudson drainage (HUC 8 unit).

General Site Importance.

This Level-2 conservation site is designated as a Tier-3 (moderately high priority) conservation area for the county, of 4 importance tiers. It was identified as one of 21 Level-2 county-important conservation sites for the 2017 Rensselaer County Conservation Plan. Specifically, this site is considered to be a county conservation priority as one of 6 "large important isolated aquatic corridors" countywide, with "isolated" implying not embedded within a large intact forested landscape. Only two Tier-1 Level-2 aquatic corridor sites are designated for the county, the Lower Hoosic River and Hoosic River Midreach Corridors, both outside the Taconic Foothills region of the county. Although of lower priority, the Poesten Kill Midreach Corridor represents one in a set of a few isolated aquatic corridors important especially for the Taconic Foothills region of the county. At the broadest level of site aggregation, the site is part of the Level-1 "Taconic Foothills Stream Corridors", also designated as a large important isolated aquatic corridor site, representing the collective of the Poesten Kill Midreach plus Wynants Kill Corridors and totalling 15,020 acres. That site is one of only 6 Level-1 sites and one of only 3 Level-1 aquatic corridors designated as important for the county. The Taconic Foothills Stream Corridors site is also assigned an importance of Tier 3 among 3 priority tiers, meaning a site of moderately high county priority.

Geography:

The broader Poesten Kill Corridor represents the entire stretch of the Poesten Kill plus its surrounding riparian communities and buffer from its source in the flats of Berlin and Grafton, to its mouth at the confluence with the Hudson River in the City of Troy. About half of its extent is within this conservation site, its midreach section. The Poesten Kill Midreach Corridor represents the midreach portion of the Poesten Kill plus its associated riparian buffer and two of its most intact bordering subcatchments. It is downstream of other regionally-important river corridors associated with the Poesten Kill above Barberville Falls (which includes Poesten Kill Headwaters in the Towns of Berlin and Poestenkill). The Poesten Kill Midreach originates at Barberville Falls in the Town of Poestenkill on the lower escarpment of the Rensselaer Plateau, where the Poesten Kill transforms from a Rocky Headwater Stream to a Confined River. From this point, it then flows NW downstream through the NW part of the Town of Poestenkill, then through the SW part of the Town of Brunswick, then into the S part of the City of Troy, where it finally empties directly into the Hudson River (in the City of Troy).

Subsites:

The Poesten Kill Midreach Corridor encompasses 3 aquatic networks of high importance for Rensselaer County including the central "Poesten Kill Midreach Network", of highest (Tier-1) county importance. Regionally-important aquatic networks are defined as stream systems with high ecological integrity plus associated lands most essential to preserving their high water quality, native stream biota, and intact stream geomorphology. Broad areas within the relatively intact subcatchments of two named tributaries associated with the Poesten Kill Midreach, Newfoundland Creek and Sweet Milk Creek, are also part of the site concept. This large site also includes even smaller embedded sites that have been described in previous ecological documents such as Poesten Kill Route 2 and Poesten Kill Valley Troy (see the Poesten Kill Aquatic Network description for more detail). It surrounds both the entire midreach section of the Poesten Kill (from Barberville Falls downstream to the Hudson River) and two of its largest tributaries, especially Sweet Milk Creek and Newfoundland Creek. Thus, it includes the lower slopes of the Rensselaer Plateau Escarpment surrounding the Poesten Kill (Town of Poestenkill, including smaller, well-known sites such as Barberville Gorge), Sweet Milk Creek Headwaters (on Bald Mountain), and the Poesten Kill Gorge.

The Poesten Kill Midreach Network, the core part of this site, is a midreach, non-tidal riparian network that has a medium-sized centralized stream that passes through acidic to circumneutral reaches that are mostly confined, with only small unconfined sections. The Poesten Kill Midreach Network, as fully delineated in my 2017 GIS layers for the county conservation plan of the Rensselaer Land Trust, represents one of 46 Tier-1 aquatic networks (of highest importance) for the county. The 657-acre/27.8 mile-long network stretches along the midreach section of the Poesten Kill, where it is mostly a Confined River, from Barberville Falls (Town of Poestenkill) downstream to the Hudson River (City of Troy). It is one of 4 Tier-1 (highest priority) midreach networks in the county, along with the Hoosic River Midreach, Kinderhook Creek Midreach, and Lower Hoosic River Midreach networks. The site concept includes key forested buffer areas and small intact subcatchments along the river. The Poesten Kill Midreach has been subdivided into two shorter, relatively morphologically homogeneous stream reaches: the Middle Poesten Kill and the Lower Poesten Kill (see Aquatic Networks), as well as smaller local sites. Two other separate associated networks among the larger relatively intact headwater networks of the county that flow into the Poesten Kill Midreach Network (those associated with Sweet Milk Creek and Newfoundland Creek) are included in the priority conservation site concept, both being part of the larger Poesten Kill Watershed and flowing into the Poesten Kill Midreach.

The embedded Newfoundland Creek Network represents a Tier-3 headwater network for Rensselaer County among 3 county importance tiers. It is classified as "Class C" water quality, with at least 3 segments designated as "C(TS)" water quality, indicating waters able to support viable trout populations and serve as trout-spawning areas.

Priority Conservation Sites. 2. Poesten Kill Midreach Corridor

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Biodiversity Composition:

The Poesten Kill Midreach Corridor contains a high overall level of ecological diversity including multiple county-important examples of three restricted ecosystem complex types, riparian (river-influenced) and basin wetland complexes, as well as rocky gorges bordering the Poesten Kill. Riparian complexes within the site contain floodplains while mineral soil wetland complexes contain bordering wetlands more typical of basin settings. Important riparian complexes at Poesten Kill Barberville, Poesten Kill West Brunswick, Poesten Kill Valley Troy, and Poesten Kill Gorge support multiple river-influenced riparian communities. Important mineral soil wetland complexes are found along headwater tributaries at Newfoundland Creek Headwaters, Vosburgh Swamp, and Middle Sweet Milk Creek Wetlands. Important rocky calcareous gorges (a variant of rocky slope/summit complex) with unusual open rocky community types occur at both Poesten Kill West Brunswick and Poesten Kill Gorge. Lastly, the upper extents of the site drain from two county-important rocky summit/slope complexes at Bald Mountain Brunswick and Snake Hill Poestenkill.

The Poesten Kill Midreach Corridor site includes stream reaches plus associated wetlands and adjacent steep slopes as local components used to finely delineate regionally-important aquatic networks. The site includes two of only 3 moderate-sized circumneutral flats in the county that contain a county-exemplary community occurrence (Poesten Kill Valley Troy and Poesten Kill West Brunswick). It also includes one of the 5 largest basin wetlands (over 200 acres) in the county (Newfoundland Creek Headwaters).

The site contains a good diversity of natural aquatic and riparian communities, some with state to county importance. Of suggested functional conservation sites in Rensselaer County, it is among few currently known to contain relatively dense concentrations of county-rare plants and/or globally to county-rare community types. The dominant stream type throughout the site is a Confined River, one of the largest rivers in the county interior. The site also includes small Unconfined River sections. Typically associated with the river are relatively intact adjacent riparian communities and a relatively intact but rather narrow buffer of rich upland forests. Associated riparian (riverside) communities lining the stream include Floodplain Forest, Riverside Sand/Gravel Bar, Cobble Shore, and Shoreline Outcrop, all relatively rare in the county and most represented as narrow strips within the stream channel or along the banks of the stream. These communities support a high diversity of native plant species, some county rare, that are adapted to the natural disturbance patterns of flooding and scouring and thus not found in typical upland forested communities of the county. The toeslopes and lowslopes of the valley bordering the stream are often covered with rich forest types (mostly Maple-Basswood Rich Mesic Forest). These forests support a high diversity of calciphilic native plant species, many of which are spring ephemerals and some of which are also county rare. Most riverside wetlands within the site are relatively small (e.g., Mount Ida Pond). Lakes are mostly limited to small examples of Oxbow Lake (at Poesten Kill Valley Troy).

Numerous county-exemplary communities are known from the Poesten Kill Midreach Corridor. Subsites with corresponding number of exemplary riparian communities occurrences along the Poesten Kill within this site are: Poesten Kill Gorge (4), Poesten Kill West Brunswick (2), Poesten Kill Valley Troy (2), Poesten Kill Midreach (1), Barberville Falls (1), and Middle Sweet Milk Creek Woods (1). These community types include Confined River, Cobble Shore, Shoreline Outcrop, Riverside Sand/Gravel Bar, Oxbow Lake, Floodplain Forest, Shale Cliff & Talus Community, Shale Talus Slope Woodland, and Calcareous Cliff Community. Exemplary aquatic/wetland community occurrences along headwater tributaries are known from Vosburgh Swamp (Deep Emergent Marsh) and Vosburgh Pond (Eutrophic Pond). Lastly, exemplary rocky summit/slope upland community occurrences on the slopes and subcatchments surrounding the Poesten Kill are known from Bald Mountain Brunswick (Appalachian Oak-Hickory Forest, Appalachian Oak-Pine Forest, Chestnut Oak Forest, Pitch Pine-Oak-Heath Rocky Summit, Rocky Summit Grassland, Red Maple-Hardwood Swamp) and Snake Hill Poestenkill (Appalachian Oak-Hickory Forest).

The Poesten Kill, as a stream, is mostly a confined moderate- to moderately-large size midreach stream throughout this site, corresponding most to a Confined River community type estimated to be state significant. The Poesten Kill Midreach Corridor contains county-exemplary sites for Confined River and two rocky shoreline communities, Shale Cliff & Talus Community and Shoreline Outcrop. The Confined River is one of 4 hypothesized co-exemplary sites in the county for the community, estimated as a good (B-ranked), 10 mile-long example. It is the second longest example in the county behind the Hoosic River, but it is probably less impacted: originating in the forested landscape of the Rensselaer Plateau and having much fewer large impoundments. The Poesten Kill, as a Confined River, likely serves as a good coarse conservation filter for common native species of fish, aquatic macroinvertebrates, and freshwater algae of the county. The exemplary rocky shoreline communities are known from the Poesten Kill Gorge and Poesten Kill West Brunswick subsites. Other community types with near and potential county-exemplary occurrences within this site include Cobble Shore, Riverside Sand/Gravel Bar, Oxbow Lake, Shale Talus Slope Woodland, and Floodplain Forest. The Floodplain Forest near the Route 2 crossing in West Brunswick, estimated as a good to fair example (BC- to C-ranked) of at least 20 acres, was previously tracked as county co-exemplary (Hunt 2012), however, more rigorous analyses have identified much larger examples in the county that warrant that designation such as in the Hoosic River Midreach site. Floodplain Forest patches may be scattered along the course of the Poesten Kill within this site. The site also contains 10 rare plant concentration areas, many corresponding to ecosystem complexes, and 5 important animal habitats, which include multiple stream segments with trout designations plus Vosburgh Swamp and Snake Hill Poestenkill. Some wide-ranging and area-sensitive mammals have been observed to use this corridor.

Site Condition:

The Poesten Kill Midreach Corridor is in relatively good condition, with relatively high ecological integrity, along many sections of its length, especially near Poesten Kill West Brunswick, Poesten Kill Eagle Mills, and Poesten Kill Gorge. It apparently contains only a low abundance of invasive plants, with no Japanese knotweed known yet, despite the presence of this plant upstream in the Upper Poesten Kill Corridor site. There is generally little trash accumulation, with one local dump area in the Poesten Kill West Brunswick Slope subsite situated far enough from the stream channel to minimize stream impacts. Only few areas of altered stream morphology are known, with the most pronounced impacts apparently near the NY Route 351 crossing (with stabilized rip rap embankments) and the channelized banks throughout the lowest mile of so of the site in the City of Troy. Pollution sources are unknown including any impacts from adjacent areas in northern Poestenkill and southeastern Brunswick, where agricultural land use is most concentrated. While some natural buffer is evident throughout much of these areas, narrow buffer widths in many spots seem to provide little protection from any pollution threats.

Landscape Context:

The Poesten Kill Midreach Corridor is situated mostly within the Taconic Foothills physiographic region, one of 5 major regions mapped for the county, although it originates near the base of the Rensselaer Plateau region in the east and extends to the Hudson River Valley region in the west. Within the Taconic Foothills region, it is centrally located in the large Western Rensselaer County Taconic Foothills, a Level-3 physiographic subdivision that spans much of the west central part of the county. At a finer scale, much of the low rolling hills through which the Poesten Kill Midreach flows have been casually referred to as the "Brunswick Lowlands". Although the upstream end of the Poesten Kill Midreach occurs at the base of the large, relatively intact Rensselaer Plateau Forest landscape, most of the site is not within a county-important natural (forested) landscape. Instead, it is contained within a fragmented natural landscape associated with the urban setting surrounding the City of Troy in the Hudson River Valley and the suburban setting characteristic of the Taconic Foothills region. Smaller county-important forest corridors cross the site near the confluence of Sweet Milk Creek, on the slopes of Bald Mountain Brunswick, and at the upper extent of the site within the Newfoundland Creek Headwaters network. Much of the four smaller regionally-important aquatic networks draining into the Poesten Kill Midreach site, the Poesten Kill Headwaters, Quacken Kill, Bernie Pond Outlet, and Bonesteel Creek Networks within the larger Poesten Kill Watershed, are embedded within the large, relatively intact Rensselaer Plateau forest landscape, seemingly providing high water quality to the central stream of this site.

Conservation Status:

The Poesten Kill Midreach Corridor was previously highlighted as an important site and stream network for the Town of Brunswick, as part of their comprehensive planning documents (Hunt 2012). At a regional level, it was identified in the Rensselaer County Conservation Plan (2017) as a locally-important aquatic network site and recommended as a conservation priority for its relatively large size, relatively good condition, high ecological diversity, and known relatively intact sections. It has often and long been emphasized for conservation at a county level, at least by anglers. The Poesten Kill Corridor has reportedly also been the focus of local conservationists, who have recommended it as an addition to the state Open Space Plan as far back as at least the early 2000s for an E-W hiking trail along the entire course of the Poesten from Dyken Pond Center to its mouth at the Hudson River. It is of most regional importance as an aquatic network for the Taconic Foothills region, an area of mostly fragmented natural landscapes. The existing status of intact riparian corridor sections seems to have arisen via a combination of intentionally preserved lands and independent short-term "protection" on numerous private tracts, avoiding development throughout much of its length, both along the stream shore and in the immediate stream buffer. Although effective long-term protection as a landscape-level site will likely prove challenging, because of the numerous private landowners throughout the stream course and because the native aquatic biota and water quality of the central stream of the site can be widely impacted from any major disturbances on small private tracts, existing preserved sections and others under consideration for conservation or of interest to conservation organizations give promise that the ecological integrity of the site may be maintained. Protected sections (permanently owned or managed for conservation) as of 2019 may be limited to Barberville Falls and Poesten Kill Gorge. Privately-protected areas include lands associated with the Troy Country Club, Poesten Kill Bott Lane, and Mount Ida Pond. Other areas under consideration for conservation include Poesten Kill Valley Troy (Taylor parcels). Areas threatened in recent times from subdivision include Poesten Kill Creekside Village (Troy), Poesten Kill Route 2 Floodplain (Brunswick), and Poesten Kill West Brunswick Slope (Brunswick). Areas that are highly recommended for initial or increased conservation (for their integrity and diversity) include Poesten Kill Eagle Mills Gorge, Poesten Kill West Brunswick (especially floodplain and gorge areas), Poesten Kill Creek Road, Poesten Kill-Quacken Kill Confluence, Poesten Kill Bott Lane, Mount Ida Pond, and Poestenkill Center Floodplain. The most effective long-term preservation of intact riparian corridors often involves coordination of multiple relatively large adjacent tracts over long reaches of a stream. Recent efforts have seemingly begun to piece together conservation in portions of this network near Poesten Kill Valley Troy in the City of Troy. Management practices, especially of adjacent agricultural areas, are as equally important to the ecological integrity of the central stream (e.g., "best management practices" to minimize pollution from fertilizers, pesticides, and soil erosion [sedimentation]).

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Future Sources/Improvements:

- better integrate information from smaller included sites. seek out and integrate any relevant external documents of other organizations for general gaps.

Edition: Draft 3, June 24, 2019. (Draft 1 = February 25, 2006; Draft 2 = March 21, 2012).

Priority Conservation Sites. 3. Wynants Kill Corridor

Site Description Summary

Conservation Site Type:

large, important isolated aquatic corridor; isolated implying a site largely separated from any surrounding intact natural (forest) landscape.

Embedded Within: Taconic Foothills Stream Corridors.

Included Sites:

Burden Lakes Forest, Burden Pond Troy, Coopers Pond, Coopers Pond Forest, Sand Lake Lakes, Wynants Kill Snyders Corners.

County Conservation Priority: Tier 4 (moderate priority).

Size: 4164 acres, with -17.6 miles of stream.

General Description:

The Wynants Kill Corridor is an aquatic-based conservation priority site that corresponds to an aquatic network of moderate importance for Rensselaer County, the Wynants Kill Network. Regionally-important aquatic networks are defined as stream systems/waterways with high ecological integrity plus the most essential associated lands needed to preserve their high water quality, native stream biota, and intact stream geomorphology. Stream reaches plus associated wetlands and adjacent steep slopes are typical local components of regionally-important aquatic network boundaries. The Wynants Kill Corridor occupies the core part of the Wynants Kill Watershed (HUC 10 unit) within the larger Middle Hudson drainage (HUC 8 unit). It is a headwater to midreach, non-tidal riparian network. The Wynants Kill originates in the Town of Sand Lake near Crooked Lake, then it flows NW through the SW part of the Town of Poestenkill, then through the NE part of the Town of North Greenbush, then into the S part of the City of Troy, where it finally empties directly into the Hudson River. The corridor contains the base of several tributaries, only one of which is named in the National Hydrography Dataset (Horse Heaven Brook). The site contains multiple county-important examples of restricted ecosystem complexes: multiple lakes (see the Sand Lake Lakes site), wetland complexes (at Wynants Kill Snyders Corners and Moules Lake), plus an aggregate of pond, rocky gorge, and riparian wetlands (at Burden Pond Troy). It contains the only small calcareous riparian ecosystem target in the county (the portion of the corridor surrounding Burden Pond Troy).

Biodiversity Composition:

The Wynants Kill is mostly a confined moderate-size stream throughout this site, corresponding most to a Rocky Headwater Stream community type. It contains a rich diversity of aquatic, wetland, and riparian community types, especially in association with multiple county-important examples of restricted ecosystem complexes. Multiple lake types within this site include Mesotrophic and Eutrophic Dimictic Lakes (see the Sand Lake Lakes site) and Eutrophic Pond (at Burden Pond Troy). River-influenced wetland communities are known from Wynants Kill Snyders Corners and Burden Pond Troy including some high quality natural calcareous wetlands at the latter site. Peatland communities are known from the peatland complex at Moules Lake. Lastly, open riparian upland communities are known from the rocky calcareous gorge at Burden Pond Troy.

Site Condition:

Relatively intact stream reaches are known from the portion of this site in the Town of Sand Lake upstream and downstream of Eastern Turnpike Road for about a mile and along the Staalsen Preserve in the City of Troy much further downstream. More disturbed portions of the corridor occur near industrial uses in the West Sand Lake area.

Landscape Context:

The site overlaps with some county-important forest corridors, where there are relatively uncut forests mostly in the local vicinities of the stream corridor. The Horse Heaven Brook Network, a headwater tributary of the Wynants Kill to the east of the Wynants Kill, was identified as part of an important aquatic network for the Rensselaer Plateau in the Wynants Kill Watershed but is distinguished as a separate conservation site embedded within the much larger Rensselaer Plateau Forest. While much of the landscape surrounding the Wynants Kill Corridor is essentially entirely suburban land use, there is probably enough buffer around the Wynants Kill along much of its length throughout this site to constitute a "functional riparian corridor".

Conservation Status:

The Wynants Kill Corridor was previously documented as an important site and stream network for the Town of Sand Lake (Hunt 2016). At a regional level, the Rensselaer County Conservation Plan identified it as a locally important aquatic network site recommended for supplementary conservation priority, being smaller and more disturbed than similar river corridors in the county such as the nearby Poesten Kill Midreach Corridor. It is of most regional importance as an aquatic network of the Taconic Foothills region, an area of mostly fragmented natural landscapes. The existing status of intact riparian corridor sections within the Wynants Kill Corridor seems to have arisen via independent short-term "protection" on numerous private tracts, avoiding development, throughout much of its length, along the shore of the Wynants Kill and its immediate buffer. Any long-term site-level protection will likely prove challenging because of the numerous private landowners throughout the stream course. The native aquatic biota and water quality of the central stream of the site (Wynants Kill) can be widely impacted from any major disturbances on small private tracts. The most effective long-term preservation of intact riparian corridors such as this site often involves conservation coordination of multiple adjacent relatively large tracts over long reaches of a stream. Recent efforts have seemingly begun to piece together conservation in portions of this network near Burden Pond in the City of Troy and near Averill Park in the Town of Sand Lake.

Sources:

Hunt, David M. 2016. Wynants Kill Averill Park. Town of Sand Lake Property. Rapid Biodiversity Importance and Management Implication Assessment. Rensselaer County Biodiversity Greenprint Project. Draft 2: May 8.
Hunt, David M. 2017. Rensselaer Land Trust County Conservation Plan. Rensselaer County Biodiversity Greenprint Project. priority conservation sites, aquatic networks, ecosystem complexes, exemplary natural communities.

Future Sources/Improvements:

better integrate information from smaller included sites. seek out and integrate any relevant external documents of other organizations for general gaps.

Edition: Draft 1, June 2, 2019.

Priority Conservation Sites. 4. Sand Lake Lakes Site Description Summary

Conservation Site Type: moderate-sized unique ecosystem aggregate.

Embedded Within: Taconic Foothills Stream Corridors; Wynants Kill Corridor.

Included Sites: Burden Lakes (First, Second, Third), Crystal Lake, Crooked Lake, Glass Lake, Reicharts Lake.

County Conservation Priority: Tier 3 (moderately high priority).

Size: 369 acres.

General Description:

The Sand Lake Lakes site is an aquatic-based conservation priority site that represents a core area of abundant lakes within the Taconic Foothills, encircling the central part of the Town of Sand Lake. The site contains an associated cluster of 7 relatively large natural lakes, all within the Wynants Kill drainage between Crooked Lake and Burden Lakes plus Reicharts Lake. It also includes associated adjacent lake-influenced habitats and natural buffer that most closely influences the condition of the lakes. All lakes are connected by the Wynants Kill and some of its tributaries. The dominant lake community types throughout the site are Mesotrophic Dimictic Lake and Eutrophic Dimictic Lake. The site contains some of the largest natural lakes in the county including the largest, Burden Lakes. These relatively intact large natural lakes constitute a restricted ecosystem complex type for the county and all 7 lakes correspond to county-important examples of lake complexes. The position of these lakes in a lowland setting for the county, in a region without many large relatively intact forest landscapes, makes this assemblage of lakes an important biodiversity conservation priority for the county that is supplementary to the largest landscapes of intact forest in the county.

Biodiversity Composition:

The Sand Lake Lakes site contains 7 natural lakes, all representing important ecosystem complexes for the county. The three lake types within this site are Mesotrophic Dimictic Lake, Eutrophic Dimictic Lake, and Eutrophic Pond. These lakes apparently represent Lower New England community variants, with acidic to circumneutral conditions. They are among the largest natural lakes in Rensselaer County. Associated with the lakes are mostly narrow strips of lakeshore communities and small bordering wetlands including Inland Non-Calcareous Lakeshore. At least one lake has a bordering peatland complex. Some of these lakeshore communities are relatively rare in the county. Forest types within the forested buffers of these lakes have not been well studied. The lake communities support a high diversity of native aquatic plant and animal species, some county rare (such as Robbin's pondweed), that are adapted to permanently inundated settings. Most of the lake biota are not found in typical upland communities of the county and most are not found even in wetlands. These lakes likely serve as a good coarse conservation filter for common native species of fish, aquatic macroinvertebrates, and freshwater algae of the county.

Site Condition:

Some of these lakes are in very good condition and have good water transparency. The lakeshore communities are generally moderately intact. While some of the shoreline buffer is intact, residential shoreline development is abundant, compromising the condition of these lakes and associated shoreline communities. Most of these lakes, if not all, contain invasive aquatic species, especially Eurasian milfoil. The herbicide SONAR has been used in at least Crystal Lake, with varying impacts on native plants. Motorboats are suspected to be used in at least some of these lakes.

Landscape Context:

The landscape surrounding these lakes is in fair condition, mostly in a suburban setting with surrounding residences and small-scale commercial and industrial uses. The broad landscape, the Taconic Foothills, represents a region mostly without large forest landscapes. However, part of the water source of these lakes originates in the large intact forested landscape of the Rensselaer Plateau. All lakes that form this site are embedded within the large important aquatic site, the Wynants Kill Corridor.

Conservation Status:

The recent designation of these lakes as a priority biodiversity/ecological conservation site in the Rensselaer County Conservation Plan is thought to have introduced this site as a "new" focus for regional conservation organizations. Lake associations invested in these lakes have probably played an important role in the conservation of the larger site, but they may focus more on recreational use, water quality, and aquatic vegetation control than the overall ecological integrity of lakes, such as the continued presence of rare native aquatic species like Robbin's pondweed or preserving ecologically sufficient lake buffer.

Sources:

D.M.Hunt, Rensselaer County Biodiversity Greenprint Project. 2017. Rensselaer Land Trust County Conservation Plan: priority conservation sites, ecosystem complexes, exemplary natural communities.

Future Sources/Improvements:

better integrate information from smaller included sites. integrate any relevant information from the RCBGP/D.Hunt Crystal Lake report. seek out and integrate any relevant external documents of other organizations for general gaps, especially for generalized site management and lake use patterns.

Edition: Draft 1, June 2, 2019.

