Appendix H

Endangered Species / Wetland / Historic Preservation Documentation

Ashokan Rail Trail Project

6 NYCRR PART 617.7
STATE ENVIRONMENTAL QUALITY REVIEW ACT
NEGATIVE DECLARATION
NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

This Notice and Negative Declaration is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the New York State Environmental Conservation Law ("SEQRA".)

Pursuant to Resolution No. 421 of November 14, 2017, the Ulster County Legislature, as Lead Agency and Project Sponsor, has determined that the proposed action described below will not have a significant effect on the environment and a Draft Environmental Impact Statement will not be prepared.

SEQRA: Type I Action: 12/15/2015 **Status:** EAF Part 3

PROJECT SPONSOR: Ulster County

NAME OF ACTION: In The Matter of the Ulster County Legislature Approval of the Construction of the Ashokan Rail Trail consisting of 11.5 mile pedestrian and bicycle trail along the north shore of the Ashokan Reservoir from Basin Road in the Town of Hurley to NYS Route 28A in the Town of Olive on the Ashokan Trail Easement along the former Ulster and Delaware Railroad right-of-way.

CONDITIONED NEGATIVE DECLARATION: No

PROJECT SUMMARY:

Ulster County (the "County") is proposing the construction of an approximately 11.5-mile pedestrian and bicycle trail that will run along the north shore of the Ashokan Reservoir from Basin Road in the Town of Hurley to NYS Route 28A in the Town of Olive on the abandoned Ulster & Delaware Railroad Corridor (the "Ashokan Rail Trail"), which has been owned by the County since 1979. The Ashokan Rail Trail project (the "Project") is being developed in cooperation with and with funding support from the New York City Department of Environmental Projection ("DEP"). The environmental review for the Project includes three public trailheads to be constructed by DEP.

The Project will be implemented in two phases. The first phase will include the removal and off-site disposal of railroad rail, wooden ties, metal hardware and the felling and disposal of dead and stressed trees. The second phase includes the repurposing of the existing ballast for the trail base, the addition of a stone layer top surface, the replacement of a large failed culvert and a destroyed railroad bridge, maintenance to existing drainage culverts, and development of three public trailheads, which will be constructed by DEP but are included in this SEQR review.

The Project will have a significant positive impact for residents of Ulster County and visitors by providing economic development for Route 28 businesses, expanding non-motorized recreational opportunities, improving public health and quality of life, and further developing Ulster County's rail trail network into a premiere tourism destination.

The Project has been designed to mitigate any potential environmental impacts and will also provide environmental benefits. These benefits include the removal and proper disposal of thousands (35,000+) of creosote-treated railroad ties, repairs and stabilization of unmaintained culverts and drainage ditches, stream daylighting of the Butternut Creek, and embankment erosion reductions and stabilization. Additionally, through interpretive panels and exhibits, trail users will be educated on the importance of the New York City Watershed and the Ashokan Reservoir, the history and significance of the Catskill Park, and the importance of responsible trail use to protect drinking water quality.

The Project design has been developed, from the beginning, with extensive coordination and involvement with DEP. The engineering designs developed by the County's engineering consultant firm, Barton & Loguidice, D.P.C. ("B&L"), were prepared and revised with the significant and frequent input from DEP staff. Throughout the extensive design revisions, the County and B&L have gone to great lengths to reduce and minimize the footprint of the Project, to mitigate environmental impacts, and provide positive environmental benefits where feasible, such as daylighting the Butternut Creek. To ensure sensitive environmental resources would not be adversely impacted and to determine where avoidance and mitigation could be employed, the B&L performed detailed studies with cooperation, assistance and full coordination with DEP. These studies are listed below, and the avoidance and impact minimization are summarized in the sections below and in the detailed studies attached.

HISTORY OF THE PROJECT:

December 15, 2015 – The Ulster County Legislature, pursuant to Resolution No. 480, declared its intent to act as Lead Agency in the matter of constructing the Ashokan Rail Trail Project, determining the action to be Type 1 under SEQRA. The Legislature also created Capital Project No. 459 to authorize and fund necessary engineering studies and environmental reviews.

August 31, 2016 - Ulster County, pursuant to the State Environmental Quality Review Act and 6 NYCRR 617.6(b)(3)(i), circulated by way of letters its Notice of Intent to Establish Lead Agency along with Part 1 of the completed Full Environmental Assessment Form to all Involved and Interested agencies (refer to list below) for the construction of the Ashokan Rail Trail, an 11.5 mile pedestrian and bicycle trail from Basin Road in the Town of Hurley to Route 28A in the Town of Olive. The following were identified as Involved and Interested Agencies that received the Notice:

- New York State Department of Environmental Conservation ("NYSDEC")
- New York State Office of Parks and Historic Preservation ("NYS OPRHP")
- United States Fish and Wildlife Service ("USFW")
- United States Army Corps of Engineers ("ACOE")
- New York City Department of Environmental Protection ("DEP")

- Town of Olive
- Town of Hurley
- New York State Department of Transportation ("NYSDOT")

September 20, 2016- As no objections were received from the Involved and Involved Agencies, the Ulster County Legislature became Lead Agency for the Ashokan Rail Trail Project.

August 15, 2017 – The Ulster County Legislature, pursuant to Resolution No. 327, determined and resolved to lawfully segment the execution of the "Ashokan Trail Easement" with the City of New York from the Ashokan Rail Trail Project. The Legislature declared approval of the Ashokan Trail Easement as an Unlisted Action and determined the action would not have an adverse impact on the environment. Further, the Legislature authorized the issuance of a negative declaration for the execution of the Ashokan Trail Easement as provided in 6 NYCRR Part 617.7.

REASONS SUPPORTING THE DETERMINATION:

Methodology

In making this Determination of Non-Significance, the Ulster County Legislature, as Lead Agency and its advisors first examined Part 1 of the Full Environmental Assessment Form ("EAF") and the supplemental data and documentation as contained in the various Reports completed for the project by the Lead Agency's engineering consultants. This work was undertaken over the course of nearly two years (2016-2017) by said Lead Agency's consultants, and a copy of the Full EAF, Parts 1 and 2 are annexed hereto and made a part hereof.

Detailed studies were completed to identify potential impacts, and these studies are included as attachments to this narrative. These studies and analyses include the following:

- Wetland Delineation Report (May 2017), which includes:
  - Wetland Study and Delineation, Mapping
  - Threatened and Endangered Species Habitat Assessment and Coordination Letters
- Traffic Impact Study (March 2017)
- No Adverse Impact Letter from NYS OPRHP (October 2016)
- Environmental Soil Sampling Program, Conclusions and Test Results (May 2017)
- Resolution No. 480- Establishing Ashokan Rail Trail Capital Project (12/15/2015)
- Resolution No. 327- Ashokan Trail Easement Authorization (08/15/2017)
- Ashokan Rail Trail Easement Only - SEQR Full Environmental Assessment Form
- Lead Agency Letters - Notice of Intent to Establish Lead Agency for Ashokan Rail Trail Construction (August 31, 2016)
- Engineering Assessment of Alternatives

<u>Alternative Analysis</u>

The County considered several alternatives including: rail with trail, alternative trail locations, and construction of the trail leaving existing rail and ties in place. Rail with trail was

rejected due to the constraints over long stretches in the Ulster and Delaware ("U&D") Railroad Corridor to accommodate both facilities, the requirement from New York City as the underlying land owner to allow either rail or trail but not both, and the adopted policy of the Ulster County Legislature to provide for trail only in this section of the U&D Corridor. It is also important to note that use of the corridor by an operating railroad has not occurred for more than forty (40) years. Alternative trail locations were confined by DEP requirements to the area of the railroad easement/trail easement. Additionally, the cost and environmental impacts associated with deviation off of the existing railroad bed is prohibitive and fails to meet the County's objective to create a safe and highly scenic trail experience that is fully accessible to persons with disabilities. A short deviation (approximately 800 linear feet) from the existing rail bed is proposed as part of the Project to avoid existing wetlands that have formed within this section as a result of the prolonged lack of maintenance of the drainage facilities. Construction of the trail on top of the existing steel rail and ties was rejected for several reasons, including the following: difficulty associated with trail and bridge construction with the rail in place: on-going maintenance needs: increased disturbance necessary to accommodate the fill needed to cover rail and ties; uneven consolidation of the trail surface as wooden ties further decay; frost heaves from trapped moisture; drainage and erosion issues; the condition of the underlying rail bed with over 95 percent of the existing ties being decayed; narrowed trail width; and the requirement from DEP that, for water quality purposes, the existing creosote-treated wooden ties be removed.

Evaluation of Impacts of the Proposed Action

Under the circumstances of the particular related actions as hereinafter evaluated, and the extensive environmental analysis of the Project, the Lead Agency finds that the facts and information available to it support a determination that all probable and relevant adverse environmental effects have been identified and that they will not be significant, and therefore, an Environmental Impact Statement is not necessary.

The environmental analysis of the reasonably related long-term, short-term, direct, indirect and cumulative impacts of these related and simultaneous actions started with an analysis of the existing conditions of the Project site. The review then analyzed the environmental impacts of the proposed changes and actions, while comparing those impacts with the impacts on existing land use to determine if the proposed action may have a significant adverse environmental impact.

No other related or subsequent actions are included in any long-range plans for the Project site, nor likely to be undertaken, nor dependent on the actions which are now under consideration. A listing of all of the Involved and Interested Agencies for the Project is provided at the end of this Negative Declaration.

The Lead Agency's examination of the specific environmental impacts addresses those areas required under Part 617.7(c) and all of the areas included under Part 2 of the Full Environmental Assessment Form (EAF) as they relate to the proposed actions and changes and their magnitude. In addition, the Lead Agency further examined those potential adverse changes for those questions answered "Yes" on Part 2 of the EAF (the numbers below correspond to all numbered questions on Part 2 of the Full Environmental Assessment Form answered as "Yes") as follows:

1. Impact on Land

The Ashokan Rail Trail ("ART") will be constructed in the same location and on the same footprint as the existing single-tracked railroad bed with only one exception where the Trail will be re-routed from the existing railroad bed for approximately 800 ft. to avoid B&L Delineated Wetland "O". The steel rails, wooden ties and other metal track hardware will be removed and disposed of from the Project corridor (with the exception of a short double-tracked area- or "siding"- to be adapted and re-used for historic interpretation). It is noted by the Lead Agency that this section to be left in place lies outside of the drainage area to the Ashokan Reservoir and as such will not impact water quality. Following the removal of the track materials and rough grading, the ART will be constructed on the remaining ballast with additional stone added (typically 10" thick) and spread and leveled to provide additional base and a top course for the ART. The use of this stone and other grading necessary for the trail will enable the construction of the trail to remain within +/- 12 inches of the current trail profile with the exception of the replacement of the Bridge at Boiceville discussed later.

The Project includes the development of three public trailheads to be designed and constructed by DEP. Land disturbance for the proposed trailheads will be limited to: 0.50-acres for the Woodstock Dike Trailhead in West Hurley; 1.32-acres at the Ashokan Station/ Jones Cove Trailhead in Shokan; and 0.75-acres at the Boiceville Trailhead near Route 28A in Boiceville. The Woodstock Dike and Boiceville Trailheads will be unpaved. The Ashokan Station is proposed to be paved. All trailheads are designed to incorporate stormwater run-off infiltration to avoid any increase in stormwater run-off or velocities.

The construction of both the Butternut Creek Bridge and the Boiceville Bridge will take place close to bedrock and in areas where the water table is less than 3 feet. Construction means and methods approved by the DEP and NYSDEC will be utilized to avoid adverse impacts associated with these conditions. Details and materials will also be approved by both DEC and NYSDEC. No blasting is proposed or anticipated. The Boiceville Bridge will be raised approximately seven (7) feet and extended sixty (60) feet in length to allow the passage of the fifty (50) year storm with two (2) feet of additional clearance (freeboard) which will help reduce velocities, erosion, and scour on the land during marked storm events.

Several cracked concrete culverts will be repaired using minimally invasive techniques and ten (10) new shallow culverts will be installed just below the surface of the ART to convey runoff to the existing swales and eventually to stone aprons designed to reduce energy, velocity, eliminate erosion, and dissipate runoff into a sheet flow condition also reducing impacts on the land.

When originally constructed, sections of the rail, ties, and ballast were installed on embankment material (fill) to provide a near level grade and to traverse, or span, the surrounding undulating terrain. During construction of the ART, the trail surface will typically be within 12 inches (in height) from the original surface with its centerline within three (3) feet from either side of the railroad track centerline. Vegetated slopes along the Project corridor will be left in

place to maintain their current stability, reduce risk of erosion, and maintain existing buffers from wetland and other sensitive areas.

The bridge construction includes areas where minor sections of fill will be required and will utilize slopes greater than fifteen percent (15%) to minimize the disturbance area "footprint." These thirty-three percent (33%) to fifty percent (50%) slopes are standard engineering practice in bridge construction and will be stabilized to inhibit erosion and sediment transportation. Small sections of fill are also necessary to repair washouts which will also be stabilized to inhibit erosion. Stormwater will be conveyed through existing vegetated drainage swales where it will be directed to sheet flow and infiltration locations or into existing streams. Check dams will be utilized as necessary to prevent sediment laden water from flowing into existing ditches, swales, wetlands, streams and other watercourses.

The Project is estimated to take approximately eighteen (18) months to complete. This time frame accounts for careful attention to sensitive areas as part of the construction management plan and limitations in site access and movement of materials, particularly during the winter months, that may impede the typical speed of construction. Construction will occur during day time hours. The remoteness of the corridor from developed areas with very limited homes nearby and only in one isolated area (Reservoir Road) ensures that the Project will not result in negative impacts to the land uses in the Route 28 corridor or the surrounding communities.

Additionally, construction sequencing and acceptable work periods will be tailored to suit the ecological needs of the ART corridor including avoiding construction near any potential bald eagle nests during the breeding season, refraining from tree clearing activities during the active Indiana and northern long-eared bat season, prohibiting entry into trout streams during spawning periods, and avoiding wetland and stream impacts to the greatest extent possible with a project impact on less than ½ acre of wetlands.

Based upon the factors noted above, the Project plans, and the supporting studies, the Lead Agency finds that there will be no substantial adverse change in existing impacts to the land as a result of Project.

3. Impacts on Surface Water and Groundwater

Construction of the Project will result in disturbance to a NYSDEC mapped wetland (AS-20) as well as very minor disturbance to unmapped federally jurisdictional wetlands. A wetland delineation was performed by B&L, and the Wetland Delineation Report was prepared. This effort was supplemented by DEP staff, who worked with B&L to form a consensus on additional wetland locations and boundaries. Each wetland, stream, swale or other water course was mapped and analyzed. To avoid and mitigate impacts to the maximum extent possible the centerline of the trail was shifted along the corridor where possible. These horizontal and vertical shifts of the ART were designed at twenty-five (25) ft. intervals along the entire Project corridor to minimize disturbance to land, avoid impacts to water courses, and to reduce the need for transport of materials both in and out of the Project corridor. In order to further reduce impacts to land and water, the trail shoulders were reduced from five (5) ft. in width on each side

of the trail (originally proposed based on AASHTO guidelines for multi-use trail design) to zero (0) ft. in width in most locations. A maximum width shoulder of 3 ft. is being utilized in areas where feasible and where impacts to sensitive areas will not occur. The proposed trail width was reduced from twelve (12) feet to ten (10) feet in areas that are immediately adjacent to water courses, wetlands, and sensitive areas identified by B&L and/or DEP. The resulting disturbed areas fall within the General Permit issued by the ACOE for wetland disturbance and within NYSDEC guidelines.

Appropriate erosion and sediment control measures will be utilized during and post construction to stabilize any disturbed areas. A Stormwater Pollution Prevention Plan ("SWPPP") has been developed in consultation with DEP, which highlights these measures, provides the details and "tools" to install them properly, and includes means to enforce compliance by construction contractors, if necessary. Best Management Practices as outlined in the Project SWPPP and the NYSDEC Stormwater Management Design Manual (Blue Book) is incorporated into the design of the trail to be used by the contractor during construction to minimize and prevent erosion and sedimentation of existing watercourses. Post-construction drainage patterns and characteristics will generally remain the same as the pre-construction conditions with a few minor exceptions.

To further minimize impacts to wetlands approximately 800 ft. of trail was re-routed from the existing railroad centerline to the north of B&L Delineated Wetland "O" to completely avoid impacts to an unmapped federally-jurisdictional wetland. Other portions of the ART were shifted and narrowed to minimize impacts to existing mapped and unmapped streams and wetlands. Review the NYSDEC and the United States Army Corps of Engineers (USACE) is ongoing, and permits have been submitted and will be obtained prior to commencement of construction activities. Any additional required permit requirements including wetland improvements will be incorporated into the final construction drawings.

In order to ensure the stability and future safety of the ART, multiple existing culverts will require repair. Repairs will be limited to minor concrete crack and spalling repairs and the filling of scour pits at the outlet of the existing culverts. Work performed in a flowing stream, will utilize temporary dewatering and rerouting of the stream so as to perform the work in the dry. This will limit the amount of sediment potentially disturbed during culvert repairs. Several cracked concrete culverts will be repaired using minimally invasive techniques and ten (10) new shallow culverts will be installed just below the surface of the trail to convey runoff in areas with existing water to the existing swales and eventually to stone aprons designed to reduce energy and velocity and dissipate runoff into a sheet flow condition.

The large concrete Butternut Creek Culvert, where the wing walls have collapsed and the supported railroad embankment is heavily eroded, will be removed and replaced with a prefabricated steel truss bridge structure that "daylights" the Creek, restores the natural flow of the Butternut Creek - a Class A,A(t) waterbody, and improves passage for fish and other wildlife. The new Butternut Creek Bridge will be founded on short foundations (abutments) high above the Creek, and all concrete materials from the failed culvert, including the concrete bottom of the former culvert, will be removed. This restoration will include stabilization and protection of the remaining high-fill railroad bed embankment.

In addition to the removal of the failed Butternut Creek Culvert, the Project also includes the replacement of the destroyed former Boiceville Trestle and removal of elements that remain in the stream. This bridge carried the railroad over the Esopus Creek at Boiceville. The bridge was destroyed during storm disaster events in 2011. The Project includes a new pedestrian bridge capable of supporting emergency vehicles at this location with a raised profile approximately seven (7) feet above the former Trestle's elevation and extending the former bridge's length by sixty (60) feet so that the new bridge structure is installed above the 50 year flood zone with two (2) feet of additional clearance. The new bridge replaces the former three-pier structure with one of two-piers limiting work in the stream and reducing in stream obstruction. The new abutments are designed with extensive scour protection. During the reconstruction of this bridge, coffer dams will be employed to protect the Esopus Creek from disturbance of bottom sediments. Turbidity curtains and other Best Management Practices will be utilized to eliminate impacts to the waterbody. Each practice will require written approval by the project team and DEP prior to installation. The project will also remove the remains and debris from the former structure from the Esopus Creek.

The Project will remove all of the deteriorated ties in the corridor which will be appropriately disposed of. The removal of these ties from close proximity to the Reservoir is an example of best management practices as required by DEP.

The project does not propose the use of groundwater in any fashion as part of its construction or operation. Drainage improvements will not redirect water flow to the extent that recharge areas are affected. Finally, no herbicides are permitted as part of the maintenance of the trail as noted in the operations plan for the project and by the County's local law that prohibits their use on County property.

Based upon the above, the Project plans, and supporting studies, the Lead Agency finds that there is no substantial adverse change in existing ground or surface water quantity or quality as a result of project.

5. Impact on Flooding

Portions of the ART are located within a one-hundred (100) year floodplain. However, where this occurs no major changes will be made that relate to trail construction with the exceptions of the new bridge at Boiceville and Butternut Creek. The proposed Boiceville Bridge has been raised approximately seven (7) ft. higher than the former bridge, which collapsed during a major flood event in 2011. The new bridge will be designed to fully pass the fifty (50) year storm below the structure with two (2) feet of additional clearance (freeboard). The bridge will also pass the 100 year storm event without being overtopped. The failed Butternut Creek Culvert will be removed and replaced with a prefabricated steel truss bridge which will "daylight" the Creek and significantly increase the hydraulic capacity of this system.

Most of the trail itself lies outside of the 100 year floodplain, and those areas where the trail lies within the floodplain have been designed to ensure that "no rise" occurs and that the trail itself is resistant to the impacts of flooding.

Based upon the above, the Project plans, and supporting studies, the Lead Agency finds that there no substantial adverse change associated with flooding as a result of the Project.

7. Impact on Plants and Animals

The U.S. Fish and Wildlife Service ("USFWS") New York Field Office's website was reviewed to determine whether any federally listed endangered, threatened, or candidate species are known to inhabit the proposed Project area. The USFWS Information, Planning and Conservation (IPaC) System reported three federally protected species that could potentially inhabit the Project corridor: the Indiana bat (*Myotis sodalis* – Endangered), the northern long-eared bat (*Myotis septentrionalis* – Threatened), and the bog turtle (*Clemmys muhlenbergii* – Threatened).

Additionally, the New York Natural Heritage Program ("NHP") was queried for information regarding the reported presence of any endangered species, threatened species, species of special concern, or significant natural communities within or adjacent to the Project area. A response was received from the NHP on July 26, 2016, which indicated three records of rare or state-listed animals or plants and significant natural communities at the site or in its immediate vicinity. The bald eagle (*Haliaeetus leucocephalus*- Threatened) was identified to have nested within four hundred (400) feet of the Project corridor. An Indiana bat maternity colony was identified within two-hundred, fifty (250) feet of the Project corridor. Additionally, a high quality occurrence of an uncommon community type, a bluestone vernal pool, was identified 0.5 miles east of the corridor.

Indiana and Northern Long-eared Bats

In accordance with the 2016 Range-wide Indiana Bat Summer Survey Guidelines (this document applies to both Indiana bat and northern long-eared bats), most trees greater than 3" diameter at breast height ("DBH") are considered potential habitat for the northern long-eared bats, and greater than 4" DBH for the Indiana bat. The dominant tree species observed within the Project corridor include: red maple (*Acer rubrum*), striped maple (*Acer pensylvanicum*), shagbark hickory (*Carya ovata*), silver maple (*Acer saccharinum*), northern red oak (*Quercus rubra*), eastern white pine (*Pinus strobus*), and American beech (*Fagus grandifolia*). Woody vegetation, including shrubs less than 3" intermixed with larger DBH trees (most of which are dead and dying ash trees), are proposed for clearing throughout the linear length of trail. The section titled, "Tree Clearing Activities," provides details regarding the trees to be cut. In accordance with the aforementioned USFWS resources, trees greater than 3" DBH requiring removal are to be cut only between November 1st and March 31st during the conservation cutting window timelines.

The proposed Project is not likely to adversely affect the northern long-eared or Indiana bats, or their suitable habitats, due to the selective clearing to be conducted along a linear corridor and the availability of large tracts of forestland adjacent to the proposed corridor that will remain untouched. Tree clearing activities will not occur during the active Indiana and northern long-eared bat season.

Bog Turtle

The bog turtle, the smallest of the emydid turtles, spends much of the time buried in the mud and therefore has a reputation for being secretive. While they prefer fens, highly acidic wetlands and areas of soft, deep mud are considered suitable habitat. Several wetland complexes are adjacent to, but not within, the proposed areas of disturbance for the Project. Two wetland complexes will be slightly impacted as a result of the Project. Field delineated Wetlands K and L, identified as correspondent to NYSDEC Mapped wetland AS-20, were emergent in nature but did not contain the deep mucky soils required by this species or microtopographic relief for basking. Additionally, a large patch of common reed (*Phragmites australis*) was noted as dominant which due to plant density prohibits basking. Wetland O, which will be avoided by this Project, was also emergent but shaded over by the upland tree canopy, lacking the necessary sunlight and microtopographic relief for basking. Additionally, the soils were restricted at twelve (12) inches with the presence of ballast. No impacts are expected to other wetlands delineated within the corridor.

Bald Eagle

Bald eagles prefer habitat along large bodies of water and shoreline area. The Project corridor is located along and within close proximity to the Ashokan Reservoir and Esopus Creek. A confirmed bald eagle nest with young was reported by the USGS Breeding Bird Atlas ("BBA") as well as the DEP and the NHP. However, during coordination with the NYSDEC, the nest that was originally reported to be within regulation distance of the Project was not successful and is no longer active. Two other territories are active within .5 mile of the Project. It is understood that impacts may occur to this species as a result of loud construction noises during the nesting season. To minimize potential impacts and the necessity for a BGEPA permit, any construction activities within six-hundred, sixty (660) feet of a nest will be scheduled during the non-breeding season from mid-September to December. In addition, loud noises such as back up alarms will be kept to a minimum through the use of white noise emitting back alarms instead of the traditional beeping alarms.

Additionally, NYSDEC and DEP have ongoing coordination to improve bald eagle habitat along the Ashokan Reservoir. As such, NYSDEC recommends that no tree removal occur within two hundred (200) feet of the shoreline, no white pines be removed within three hundred (300) feet of the shoreline, and no white pines larger than twenty-five (25) inches are removed at any location within a project site. (Please the Threatened and Endangered Species Habitat Assessment) For this Project, less than twenty (20) white pine trees within the DBH range of four (4) inches to fourteen (14) inches will be cut along the entire corridor for trail construction purposes and all lie within close proximity to the centerline of the trail and pose an immediate threat to the safety of the proposed ART.

Tree Clearing Activities

In August of 2017, representatives from the County and B&L delineated, marked in the field and GIS mapped trees that needed to be removed for the construction of the ART as well as "hazard trees," dying or dead trees that could pose a threat if they were to fall onto the trail. In

total, approximately 2,300 trees were identified along the 11.5-mile Project corridor to be removed to allow for the ART construction and/or protect the safety of its users. Based on the data collected during the field marking, more than two-thousand, one-hundred (2,100) of the total two-thousand, three-hundred (2,300) trees delineated to be cut were categorized as dead, downed or stressed (with the large majority white ash tree showing evidence of infection by emerald ash borers.) Less than two-hundred (200) trees delineated for removal are healthy, and the majority of these are smaller diameter trees that have grown up into the culverts, railroad bed edges, and drainage ditches over the past years when little or no maintenance was conducted along this corridor. These specific tree counts do not include several areas totaling approximately 1.9 acres that need to be cleared to construct the new Butternut Creek Bridge, install the new Boiceville Bridge over the Esopus Creek, and prepare for the re-routed trail planned to avoid Wetland O. These areas have been delineated on the plans and timed to be cut so as to avoid impacts to nesting species of concern.

The proposed tree clearing is limited to hazard trees and trees that require removal to construct the trail and/or major bridge structures. No tree clearing for viewshed enhancement has been proposed. The Project plans provide specific requirements to ensure that tree and brush coverage along sloped areas of the railroad embankment remain undisturbed.

The Lead Agency notes that no endangered species were located in the areas proposed for disturbance by the construction of the Project. In addition, the width of the trail and the placement of the trailhead areas are such that the movement of any resident migratory fish or wildlife species will not be impacted. The daylighting of the Butternut Creek is likely to improve connections for some species.

Based upon the above, the Project plans, and supporting studies, the Lead Agency finds that the will not be any removal or destruction of large quantities of vegetation or fauna not substantial interference with the movement of fish or wildlife species nor will there be any significant impacts to habitat or other natural resources as a result of the Project.

10. Impact on Historic and Archaeological Resources

The proposed Project corridor is located along the former Ulster & Delaware ("U&D") Railroad Corridor and partially within a segment of the U&D Corridor eligible for the National Register, which runs from Shokan to Phoenicia. During the preliminary design phase of the Project, a State Historic Preservation Office ("SHPO") Cultural Resource Information System ("CRIS") query was submitted as part of SEQR coordination. A letter was received on October 3, 2016 stating that the proposed Project will have No Adverse Impact upon the historic Ulster and Delaware Railroad corridor providing a Preservation Plan be developed, historic interpretation be utilized along the trail, and preliminary plans be submitted to SHPO for review of these features. The Project as designed will meet all of SHPO's requirements and includes not only a recreational experience, but an educational and cultural resource as well. At a minimum, the Project will include a preserved section of rail with improvements that will be used for interpretive purposes. In addition, improvements versus replacement are planned for all the major culverts and drainage structures with the exception of Butternut Cove. Other applications that will be further developed include:

- Interpretive panels that tell the story of the former communities displaced by construction of the Ashokan Reservoir
- Interpretive panels that describe the importance of the Ashokan Reservoir and New York City Watershed and the history of its construction
- Identification of historic elements along the reservoir, such as the still remaining original bridge abutments and former train stations
- Panels educating visitors on the history of the Catskill Park
- Signage and educational materials regarding wildlife

The proposed alignment of the trail follows the existing railbed and previously disturbed areas. As such, no impacts to archeological resources are anticipated. The areas adjoining the Project are in lands largely owned by DEP and the Project site is eligible to be utilized for railroad purposes. In addition, access to the Ashokan Reservoir for fishing that includes boating is currently available by DEP Access Permit only. The lands associated with the Project including the proposed trailheads are removed from residential neighborhoods and will not be an impact to residents or businesses.

Based upon the above, the Project plans, and supporting studies, the Lead Agency finds that there no impairment of the character or quality of important historical, archaeological, architectural or aesthetic resources or of existing community or neighborhood character as a result of the Project.

13. Impact on Transportation

A Traffic Impact Study ("TIS") was conducted and completed for the Project along NYS Route 28 and in the locations of the proposed DEP trailheads at the Woodstock Dike in West Hurley, Shokan Station/ Jones Cove in Shokan, and at Route 28A in Boiceville. The TIS assessed the impacts anticipated to nearby roads and intersections from anticipated visitors to the ART. It was determined that impacts to study intersections were negligible, and that traffic generated by the Project did not require mitigation.

The trailheads associated with the Project will provide parking limited to approximately one-hundred, fifty parking spaces distributed along the 11.5-mile corridor, only one of which will be paved. The Project will not degrade pedestrian and bicycle accommodations on the NYS Rout 28 Corridor, and it is anticipated to improve and expand such accommodations off the Corridor. The Lead Agency finds that the Project is likely to result minor alterations of the traffic in the NYS Route 28 corridor. However, it notes that the corridor is not congested in the area of the Project and that peak traffic periods expected as a result of the construction of trail and trailheads do not coincide with peak AM and PM traffic periods during the week. Level of service estimates for the trailhead areas is within acceptable parameters and no signalization is warranted.

Based upon the above, the Project plans, and supporting studies, the Lead Agency finds that there no substantial adverse impact on transportation as a result of the Project.

16. Impact on Human Health

Active and former railroad corridors are often associated with uncharacterized spills and accumulation of potentially hazardous materials. Soil borings within the Project corridor completed by the DEP indicated presence of PAHs and levels of copper and zinc above Eastern USA background concentration ranges. Additional soil sampling by B&L throughout the corridor was performed at representative locations to further evaluate the presence of hazardous materials (See Environmental Soil Sampling Program Results). Results of the completed field investigation revealed no parameter concentration exceedances in the analyzed surface soil samples when compared to the NYSDEC Part 375 SCOs for Restricted-Residential Use.

The Project includes removal of approximately thirty-five thousand (35,000) wooden ties treated with creosote, which will be removed from the corridor and properly disposed of off-site and out of the New York City Watershed. Clean materials will be imported to the Project site for the trail surface, effectively creating a "cap" of the underlying materials throughout the Corridor. Four (4) inches of clean crushed stone surface course will be imported to cover the ballast at a width of twelve (12) feet, and three (3) inches of clean imported topsoil will lay adjacent to the trail and will cover all soils disturbed during construction of the Project.

In addition to the soil boring work, B&L conducted a review of spill records within or adjacent to the Project site. Twenty spills were identified during record review within or adjacent to the Project corridor, all of which have been closed by the NYSDEC. These reported spills are no longer active and have either met State cleanup standards or have received additional corrective action. Several spills did not meet cleanup standards, but these are not a concern for this Project due to limited contamination occurring. One of the spills that did not meet cleanup standards and was of a significant quantity was Spill Number 0801824 located at a former Mobil station (located at 1460 NYS Route 28 in West Hurley) in which 2,856 tons of soil and 5,312 gallons of water were removed from the site and monitoring wells were installed. This site is 700 feet north of the proposed trail on the north side of NYS Route 28. Shallow subsurface soil samples taken within the Project corridor and downgradient from the former Mobile station were tested in April and May 2017. Results of this testing indicated that the parameter concentrations reported were below the applicable NYSDEC Part 375 SCOs for Restricted-Residential Use.

Based upon the above, the Project plans, and supporting studies the Lead Agency finds that the Project will not create a hazard to human health. Rather, as a new public recreational corridor, the Project is expected to result in positive impacts to public health, allowing residents of all ages and abilities to walk, run, bicycle, and/or cross-country ski on a fully-accessible, multi-use trail that is buffered and separated from vehicular traffic.

Examination of Additional Environmental Impacts as Required under Part 617.7 (c)

In addition to the specific questions provided for in the EAF Part 2, the Lead Agency also examined the Project as provided for under Part 617.7(c) as noted below:

A. Encouraging or Attracting a Large Number of People to a Place or Places for more than a Few Days, Compared to Who Would Come to Such a Place Absent the Action:

The Project covers a corridor that is approximately 11.5 mile long and includes three trailheads adequately spaced along the corridor to allow convenient access along its length. The length of the corridor and the facilities provided are designed to handle larger numbers of people than currently utilize the site. The design includes appropriately sized parking areas to accommodate those that will utilize the facility, and the traffic analysis indicates that the both regional and local roadways including intersections have sufficient capacity to accept this increase in traffic without significant impacts or improvements. The Project will be open to public use from sunrise to sunset only, eliminating concerns about overnight stays and the additional impacts that this would bring.

Based upon the foregoing, increasing numbers of people that will be attracted to the site can be accommodated so as not to cause any significant adverse environmental impacts.

B. The Creation of a Material Demand for Other Actions that would Result in One of the Above Consequences

The construction of Project and related appurtenances over the 11.5 mile route will not create any material demand for other actions which would result in one of the previously discussed consequences. The site characteristics and mitigative engineering methodology employed allow the Project to be constructed without adverse environmental effect. In addition, the Lead Agency working with local police and fire services has completed a Cooperative Security Agreement that speaks directly to the safety and emergency management plans for the Project. The Agreement illustrates that, by working cooperatively, that the material demand for essential services, fire protection or emergency response can be accommodated with the existing availability of personnel and equipment.

The Project will not cause any material increase in population or directly affect additional development which would have an adverse effect upon the environmental criteria set forth above and studied herein.

C. Changes in Two or More Elements of the Environment, No One of Which has a Significant Impact on the Environment, But when Considered Together Result in a Substantial Adverse Impact on the Environment

Based upon the information contained in this Negative Declaration of Environmental Significance and the record before the Lead Agency, there will be no changes in two or more elements of the environment which, when considered together would result in a substantial adverse impact on the environment.

D. Two or More Related Actions Undertaken, Funded or Approved by an Agency, None of Which has or Would Have a Significant Impact on the Environment, but When Considered Cumulatively Would Meet One or More of the Criteria of Part 617.7(c)

None of the probable impacts on the environment that are associated with or which result from incremental or increased impacts of this action, when such impacts are added to other related past, present or reasonably foreseeable future actions, will be significant. The Lead Agency has reviewed and analyzed the Project plans, the Environmental Assessment Forms,

Engineering and Environmental Studies, all related Addenda, the Administrative Record and the physical changes to the environment which will take place simultaneously or sequentially and has determined that their combined and/or cumulative effects will not be significant.

In regard to any subsequent actions that may possibly arise as the result of the proposed ART Project, the Lead Agency has addressed all identified and relevant long-term, short-term and cumulative impacts and effects of the proposed activities and actions, as well as any related actions, as now submitted, and the County of Ulster, has no identifiable long-range or overall plans for any subsequent development, changes in use or other activities relating to the ART Project.

Approval of the Action contemplated by the current Project now before the Ulster County Legislature does not commit the Lead Agency to any particular course of action with respect to future development of the ART and associated trailheads beyond what is analyzed herein. Any future physical expansion of the ART, beyond that which is approved, will require independent and separate environmental review pursuant to SEQRA, unless the same shall be lawfully determined to be designated as a Type II Action or an Exempt Action in accordance with 6 NYCRR Part 617 et. seq.

Due to the continued environmental and other administrative review requirements of any subsequent development activities in the area of the Project on a case by case exercise of discretion by reviewing agencies and officials, it is not necessary nor reasonable to require at this time a hypothetical "worst case" analysis of all speculative environmental effects or potential environmentally threatening uses which could be anticipated at some time in the future.

The Lead Agency is satisfied that any possible environmental effects of any future development associated with the ART within the Towns of Hurley and Olive and the New York City Watershed, or any change in use of the ART infrastructure appurtenances is capable of being adequately addressed through subsequent discretionary, administrative and environmental review.

In making this Determination of Non-Significance, the Lead Agency has not balanced any potential benefits of the proposed action against potential harm.

CONCLUSION:

Based on the information currently available to the Lead Agency and the above analysis and evaluation of all the relevant and probable environmental impacts related to the activities and actions herein proposed, the Ulster County Legislature, as Lead Agency and Project Sponsor, determines that there will be no significant adverse environmental impacts as a result of the Ashokan Rail Trail Project, and no Environmental Impact Statement will be required. Therefore, this Determination of Non-Significance and Negative Declaration under SEQRA is hereby approved, adopted, and issued by the Lead Agency. (See also; Lead Agency Resolution annexed hereto and made a part hereof as Exhibit "A.")

CONTACT PERSON:

Kenneth J. Ronk, Jr., Chairman
Ulster County Legislature
244 Fair Street, PO Box 1800
Kingston, New York 12402
(845) 340-3900

FILINGS:

Pursuant to 6 NYCRR Part 617.12 (b) a copy of this Negative Declaration is being filed with the following:

NYSDEC Environmental Notice Bulletin
http://www.dec.ny.gov/enb/enb.html

Mr. Paul Rush, P.E., Deputy Commissioner
Bureau of Water Supply
New York City Department of Environmental Protection
Bureau of Water Supply
59-17 Junction Blvd.
Flushing, New York 11373

Mr. Todd Westhuis, P.E., Regional Director
New York State Department of Transportation – Region 8
4 Burnett Boulevard
Poughkeepsie, New York 12603

Ms. Kelly Turturro, Regional Director
New York State Department of Environmental Conservation- Region 3
21 South Putt Corners Road
New Paltz, New York 12561

Historic Preservation Field Services Bureau
New York State Office of Parks, Recreation & Historic Preservation
Peebles Island, PO Box 189
Waterford, New York 12188-0189

Town Clerk
Town of Olive
PO Box 96
West Shokan, New York 12494

Town Clerk
Town of Hurley
10 Wamsley Place, PO Box 569
Hurley, New York 12443

Town Clerk
Town of Woodstock
47 Comeau Drive
Woodstock, New York 12498

United States Fish and Wildlife Service
New York Field Office
3817 Luker Road
Cortland, New York 13045

United States Army Corps of Engineers
New York Regulatory Branch
Western Permit Section Counties
26 Federal Plaza, Room 1937
New York, New York 10278-0090

DATED: 11/20/17, 2017

KENNETH J. RONK, Jr., Chairman
Ulster County Legislature

CERTIFICATION

The undersigned hereby certifies that the annexed SEQRA Resolution and Negative Declaration with Notice of Determination of Non-Significance, Being In The Matter of the Ulster County Legislature Approval of the Construction of the Ashokan Rail Trail and dated the 11/17, 2017, has been duly filed this day in the Legislative Offices of the Ulster County Legislature located at 244 Fair Street, Kingston, New York 12401.

DATED: 11/20, 2017

Victoria A. Fabella, CLERK
Ulster County Legislature

ATTACHMENT A
ULSTER COUNTY LEGISLATURE
RESOLUTION NO. 421
NOVEMBER 14, 2017

Resolution No. 421 November 14, 2017

Adopting and Issuing A Negative Declaration Under 6 NYCRR Part 617 State Environmental Quality Review Act (SEQRA) By The Ulster County Legislature For The Construction Of The Ashokan Rail Trail– Capital Project No. 459- Department Of Planning

Referred to: The Economic Development, Tourism, Housing, Planning and Transit Committee (Chairman Maloney and Legislators Berky, Delaune, Lapp, Litts, Maio and Rodriguez), and The Public Works and Capital Projects Committee (Chairman Fabiano and Legislators Greene, Litts, Loughran, and Maloney)

Deputy Chairman of the Economic Development, Tourism, Housing, Planning, and Transit Committee, Hector Rodriguez, offers the following:

WHEREAS, this resolution has been submitted by the County Executive on behalf of the Department of Planning; and

WHEREAS, pursuant to Resolution No. 480 passed on December 15, 2015, the Ulster County Legislature established Capital Project No. 459 to provide for design and engineering work for the Ashokan Rail Trail and approved funding for professional engineering services; and

WHEREAS, pursuant to Resolution No. 480 passed on December 15, 2015, the Ulster County Legislature declared its intent to act as Lead Agency for the Ashokan Rail Trail Project (the "Project") as provided for in 6 NYCRR Part 617.6(b)(3) of the Regulations pertaining to Article 8 of the Environmental Conservation Law of New York State ("SEQRA") and determined that the Project was a Type I Action that required a coordinated review; and

WHEREAS, Ulster County circulated the necessary notifications on August 31, 2016 and receiving no objections became Lead Agency 30 days after this date; and

WHEREAS, pursuant to Resolution No. 327 passed on August 15, 2017, the Ulster County Legislature authorized the execution of the Ashokan Trail Easement with the City of New York, determining that approval of the Ashokan Trail Easement was a discrete unlisted action separate and apart from any trail construction and issued a negative declaration as provided under 6NYCRR Part 617.7; and

WHEREAS, Ulster County has examined the proposed action consisting of the construction of the Ashokan Rail Trail along the Ashokan Trail Easement, including removing rail, ties and other track materials and developing three trailhead areas, to create a public recreational trail and prepared the Environmental Record as now on file with the Clerk of the Legislature; and

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WHEREAS, as part of the Project approval process, the County has completed an expanded Environmental Evaluation of Impacts and Negative Declaration that includes an analysis of impacts to historic and archeological sites, wetlands and water bodies, threatened or endangered species, traffic, cumulative growth, and other environmental considerations as required under 6 NYCRR Part 617 of the Regulations of Article 8 of the Environmental Conservation Law of New York State ("SEQRA"); and

WHEREAS, pursuant to the Regulations, the County Legislature has considered the significance of the potential environmental impacts of the Project by (a) using the criteria specified in Section 617.7 of the Regulations, and (b) examining the EAF for the Project, including the facts and conclusions in Parts 1, 2 and 3 of the EAF, together with other available supporting information, to identify the relevant areas of environmental concern, and (c) thoroughly analyzing the areas of relevant environmental concern; and

WHEREAS, such evaluation of impacts and negative declaration has been filed with the Clerk of the Legislature and made available to members of the Legislature; and

WHEREAS, Ulster County has addressed all SEQRA issues as identified, considered and examined by the Involved and Interested Agencies and members of the public in conducting the environmental review and in so doing, hereby determines that the Project will not have a significant adverse environmental impact, will not require the preparation of a Draft Environmental Impact Statement with respect to the Project, and has made a determination of non-significance under SEQRA ("Negative Declaration"), a copy of which is annexed to this Resolution and made a part hereof; now, therefore, be it

RESOLVED, that pursuant to 6 NYCRR Part 617 et seq. of the Regulations of Article 8 of the Environmental Conservation Law of New York State (SEQRA), the Ulster County Legislature hereby adopts and issues the Negative Declaration under SEQRA for the Ashokan Rail Trail Project upon the vote thereupon and the signature of the Ulster County Legislature Chairman herewith; and, be it further

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Adopting and Issuing A Negative Declaration Under 6 NYCRR Part 617 State Environmental Quality Review Act (SEQRA) By The Ulster County Legislature For The Construction Of The Ashokan Rail Trail– Capital Project No. 459- Department Of Planning

RESOLVED, that Clerk of the Legislature shall file this Resolution and accompanying Negative Declaration with the Involved and Interested Agencies as enumerated in the Negative Declaration and publish the Resolution and Negative Declaration in the Environmental Notice Bulletin; and, be it further

RESOLVED, that the adoption of the Negative Declaration shall constitute the SEQRA Decision of approval for the construction of the Ashokan Rail Trail Project as therein defined to convert the U&D Railroad Corridor from Basin Road in West Hurley to Route 28A in Boiceville to a recreational trail only and all of the actions associated with such project, including the removal of railroad track and ties and the development of trailheads, together with all plans and documents associated therewith,

and move its adoption.

ADOPTED BY THE FOLLOWING VOTE:

AYES: 14 NOES: 7
(Noes: Legislators Donaldson, Fabiano, Greene, Lapp, J. Parete, R. Parete, and Wawro)
(Absent: Legislators Berky and Loughran)

No Action Taken in Committee: Public Works and Capital Projects on November 1, 2017

Passed Committee: Economic Development, Tourism, Housing, Planning and Transit on November 9, 2017

Passed Committee: Public Works and Capital Projects on November 14, 2017

FINANCIAL IMPACT:
NONE

Resolution No. 421 November 14, 2017

Adopting and Issuing A Negative Declaration Under 6 NYCRR Part 617 State Environmental Quality Review Act (SEQRA) By The Ulster County Legislature For The Construction Of The Ashokan Rail Trail– Capital Project No. 459- Department Of Planning

Legislator Greene motioned, seconded by Legislator Donaldson, to amend the sixth WHEREAS and third RESOLVED to add additional language as indicated in bold font:

WHEREAS, Ulster County has examined the proposed action consisting of the construction of the Ashokan Rail Trail along the Ashokan Trail Easement, including removing rail, ties and other track materials **(with the exception of all rail, ties and other track materials between Basin Road and MP 11.1, which shall not be removed)** and developing three trailhead areas, to create a public recreational trail and prepared the Environmental Record as now on file with the Clerk of the Legislature; and

RESOLVED, that the adoption of the Negative Declaration shall constitute the SEQRA Decision of approval for the construction of the Ashokan Rail Trail Project as therein defined to convert the U&D Railroad Corridor from Basin Road in West Hurley to Route 28A in Boiceville to a recreational trail only and all of the actions associated with such project, including the removal of railroad track and ties **(with the exception of all rail, ties and other track materials between Basin Road and MP 11.1, which shall not be removed)** and the development of trailheads, together with all plans and documents associated therewith,

MOTIONED DEFEATED BY THE FOLLOWING VOTE:

AYES: 7 NOES: 14
(Ayes: Legislators Donaldson, Fabiano, Greene, Lapp, J. Parete, R. Parete, and Wawro)
(Absent: Legislators Berky and Loughran)

Resolution No. 421 November 14, 2017

Adopting and Issuing A Negative Declaration Under 6 NYCRR Part 617 State Environmental Quality Review Act (SEQRA) By The Ulster County Legislature For The Construction Of The Ashokan Rail Trail– Capital Project No. 459- Department Of Planning

STATE OF NEW YORK
ss:
COUNTY OF ULSTER

I, the undersigned Clerk of the Legislature of the County of Ulster, hereby certify that the foregoing resolution is the original resolution adopted by the Ulster County Legislature on the 14th Day of November in the year Two Thousand and Seventeen, and said resolution shall remain on file in the office of said clerk.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of the County of Ulster this 16th Day of November in the year Two Thousand and Seventeen.

Victoria A. Fabella, Clerk
Ulster County Legislature

Submitted to the County Executive this
16th Day of November, 2017.

Victoria A. Fabella, Clerk
Ulster County Legislature

Approved by the County Executive this
17th Day of November, 2017.

Michael P. Hein, County Executive

Ashokan Rail Trail Project

6 NYCRR PART 617.7
STATE ENVIRONMENTAL QUALITY REVIEW ACT
NEGATIVE DECLARATION
NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

SUPPORTING DOCUMENTATION:

- Ashokan Rail Trail- Full Environmental Assessment Form: Parts 1, 2 and 3
- Wetland Delineation Report (May 2017), which includes:
    - Wetland Study and Delineation, Mapping
    - Threatened and Endangered Species Habitat Assessment and Coordination Letters
- Traffic Impact Study (March 2017)
- No Adverse Impact Letter from NYS OPRHP (October 2016)
- Environmental Soil Sampling Program, Conclusions and Test Results (May 2017)
- Resolution No. 480- Establishing Ashokan Rail Trail Capital Project (December 15, 2015)
- Lead Agency Letters - Notice of Intent to Establish Lead Agency for Ashokan Rail Trail Construction (August 31, 2016)
- Resolution No. 327- Ashokan Trail Easement Authorization (August 15, 2017)
- Ashokan Trail Easement - SEQR Full Environmental Assessment Form: Parts 1, 2 and 3 and Determination/ Negative Declaration
- Engineering Assessments of Burying Track and Tie: Richard C. Semenick, P.E. (HDR) and Thomas C. Baird, P.E. (Barton & Loguidice)

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: Ashokan Rail Trail		
Project Location (describe, and attach a general location map): Towns of Hurley and Olive, Ulster County		
Brief Description of Proposed Action (include purpose or need): Ulster County is proposing construction of an 11.5-mile pedestrian and bicycle trail from Basin Road in the Town of Hurley to Route 28A in the Town of Olive, as shown on the enclosed Project area map. The Project will establish a non-motorized recreational trail on the County-owned Ulster & Delaware Railroad corridor along the northern shore of the Ashokan Reservoir. The Project includes repurposing of the existing railroad bed and ballast, removal of rail ties and tracks, construction of multiple trailheads, reconstruction of a failed major culvert, repair to existing drainage structures, and replacement of the bridge structure over the Esopus Creek near Boiceville, which was destroyed during Hurricane Irene in 2011. The Project goals are to improve recreational opportunities, enhance quality of life, and boost economic development and tourism in Ulster County while also protecting the quality of the Ashokan Reservoir water supply.		
Name of Applicant/Sponsor: Ulster County, C/O Mr. Michael Hein, County Executive	Telephone: (845) 340-3800 E-Mail: exec@co.ulster.ny.us	
Address: 244 Fair Street, PO Box 1800		
City/PO: Kingston	State: NY	Zip Code: 12402
Project Contact (if not same as sponsor; give name and title/role): Mr. Christopher White, Ulster County Planning Dept., Deputy Director/Project Manager	Telephone: (845) 340-3338 E-Mail: cwhi@co.ulster.ny.us	
Address: 244 Fair Street, PO Box 1800		
City/PO: Kingston	State: NY	Zip Code: 12402
Property Owner (if not same as sponsor): New York City Department of Environmental Protection (County owns railroad easement)	Telephone: (845) 340-7218 E-Mail: CLaing@dep.nyc.gov	
Address: 71 Smith Avenue		
City/PO: Kingston	State: NY	Zip Code: 12401

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)		
Government Entity	**If Yes: Identify Agency and Approval(s) Required**	**Application Date (Actual or projected)**
a. City Council, Town Board, or Village Board of Trustees ☐Yes☑No		
b. City, Town or Village Planning Board or Commission ☐Yes☑No		
c. City Council, Town or Village Zoning Board of Appeals ☐Yes☑No		
d. Other local agencies ☐Yes☑No		
e. County agencies ☑Yes☐No	Ulster County Legislature (SEQRA/ Funding)	
f. Regional agencies ☑Yes☐No	NYCDEP (SWPPP - Design Approval)	
g. State agencies ☑Yes☐No	NYSDEC (Wetland, Habitat, Endangered Species, Protect Water), NYSHPO (Arch & Historic)	
h. Federal agencies ☑Yes☐No	US Army Corps of Engineers (Wetland jurisdiction)	

i. Coastal Resources.
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes☐No

If Yes, identify the plan(s):

New York City Watershed Boundary - subject to NYC Watershed Rules and Regulations

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☑Yes☐No

If Yes, identify the plan(s):

Ulster County Open Space Plan

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Conservation Residential and very low density residential

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Onteora Central School District, Kingston City Schools

b. What police or other public protection forces serve the project site?
Olive Police Department, Ulster County Sheriff, NYS Police, NYC DEP Police

c. Which fire protection and emergency medical services serve the project site?
Olive Fire Department, Olive First Aid, Inc., Hurley Fire Department

d. What parks serve the project site?
None

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Recreational

b. a. Total acreage of the site of the proposed action? 56 acres
b. Total acreage to be physically disturbed? 42 acres ← Calculated by length (11.5 miles) multiplied by 30 feet average width
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 56 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 2
- Anticipated commencement date of phase 1 (including demolition) 7 month 2017 year
- Anticipated completion date of final phase 11 month 2018 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:
Phasing of the project relates to constraints on access to the site and the difficulty of construction during winter months primarily due to access

f. Does the project include new residential uses? ☐Yes ☑No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify: _____
iii. If other than water, identify the type of impounded/contained liquids and their source. _____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): _____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐Yes ☑No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
If Yes:
i. What is the purpose of the excavation or dredging? _____
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. _____
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No
If yes, describe. _____
v. What is the total area to be dredged or excavated? _____ acres
vi. What is the maximum area to be worked at any one time? _____ acres
vii. What would be the maximum depth of excavation or dredging? _____ feet
viii. Will the excavation require blasting? ☐Yes ☐No
ix. Summarize site reclamation goals and plan: _____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☑Yes ☐No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): NYSDEC Freshwater Wetland AS- 19 and AS-20 as well as H-171-P 848-12, H-171-P 848-11, H-171-P 848-10, H-171-P 848-9 and unmapped stream resources

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
Wetland AS-20 and 1 unmapped wetland would have a minor linear impact as well as some adjacent area impacts. Culvert repair and proposed bridge work will require entry into waterways and temporary bank impacts. Note: The proposed trail alignment follows the existing built railroad corridor

iii. Will proposed action cause or result in disturbance to bottom sediments? ☑ Yes ☐ No
If Yes, describe: Major culvert repair and/or bridge reconstruction may cause temporary disturbance

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☑ No
If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance:
The wetland will be restored to pre-construction conditions and losses mitigated. Enhancement and restoration will occur.

c. Will the proposed action use, or create a new demand for water? ☐ Yes ☑ No
If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐ Yes ☐ No
If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No
- Do existing lines serve the project site? ☐ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☐ No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☐ No
If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐ Yes ☑ No
If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐ Yes ☑ No
If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

500 Square feet or 0.01 acres (impervious surface)

2.4M Square feet or 56 acres (parcel size)

ii. Describe types of new point sources. the occasional swale will collect runoff in isolated locations and parking lots where it will be directed to sheet flow and infiltration locations

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

on-site infiltration practices

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☑Yes ☐No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

Heavy equipment during construction phase only

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

N/A

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

N/A

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐Morning ☐Evening ☐Weekend ☐Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7am-5pm
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: Dawn to Dusk
- Saturday: Dawn to Dusk
- Sunday: Dawn to Dusk
- Holidays: Dawn to Dusk

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Heavy equipment usage during hours of construction, M-F 7am-5pm.

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☑ Yes ☐ No

Describe: Some limited tree removal will be required to achieve appropriate trail width. However, the entire area is forested and will still have substantial natural barriers.

n.. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☑ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☑ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): Drinking Water Supply; Recreational- Fishing and Hunting

ii. If mix of uses, generally describe:

Open space/ forested area with linear railroad corridor adjoining a NYC DEP reservoir and running parallel to State Route 28

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0	0	0
• Forested	37	37	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	2	2	0
• Wetlands (freshwater or tidal)	1	0.5+	<0.5
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Rail Corridor ballast area	16	16	0

c. Is the project site presently used by members of the community for public recreation? ☑ Yes ☐ No

i. If Yes: explain: Hunting and Fishing - Requires NYCDEP Access Permit

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

DD's Daycare- 36 Bonnie Brae Lane, Shokan

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☑ Yes ☐ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

Note: Former railroad corridor. There is potential for coal ash and slag and uncharacterized fill on site. Testing will be completed to determine the extent, if any, is on site. It is not expected to a hazard. Existing railroad ties will removed from the corridor and disposed of properly

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☑ Yes ☐ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☑ Yes – Spills Incidents database — Provide DEC ID number(s): Multiple, Hazardous Waste Report TBD

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

v. Is the project site subject to an institutional control limiting property uses? ☐Yes ☑No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐Yes ☐No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 6.5 feet

b. Are there bedrock outcroppings on the project site? ☑Yes ☐No
If Yes, what proportion of the site is comprised of bedrock outcroppings? 10 %

c. Predominant soil type(s) present on project site:

Oquaga-Arnot-Rock outcrop	29 %
Tunkhannock gravelly loam	17 %
Lackawanna and Swartswood	6 %

d. What is the average depth to the water table on the project site? Average: 6.5 feet

e. Drainage status of project site soils:
☑ Well Drained: 82 % of site
☑ Moderately Well Drained: 10.4 % of site
☑ Poorly Drained 7.6 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 30 % of site
☑ 10-15%: 40 % of site
☑ 15% or greater: 30 % of site

Note: Trail Gradient <= 5 %

g. Are there any unique geologic features on the project site? ☐Yes ☑No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑Yes ☐No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑Yes ☐No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑Yes ☐No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name 862: 555, 549, 551, 543, 523 Classification A(TS), A(T), AA(T), C(TS)
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal and State Approximate Size 100+
- Wetland No. (if regulated by DEC) AS-19. AS-20

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☑Yes ☐No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____
Ashokan Reservoir, Esopus Creek - Metals (silt/sediment),

i. Is the project site in a designated Floodway? ☐Yes ☑No

j. Is the project site in the 100 year Floodplain? ☑Yes ☐No

k. Is the project site in the 500 year Floodplain? ☑Yes ☐No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑Yes ☐No
If Yes:

i. Name of aquifer: Principal Aquifer

m. Identify the predominant wildlife species that occupy or use the project site:
white tailed deer | turkey | black bear
eastern chipmunk | eastern gray squirrel | coyote

n. Does the project site contain a designated significant natural community? ☑ Yes ☐ No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation): Vernal pool
ii. Source(s) of description or evaluation: Site Investigations, NYC DEP
iii. Extent of community/habitat:
- Currently: .75 acres
- Following completion of project as proposed: .75 acres
- Gain or loss (indicate + or -): 0 acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐ No

Indiana bat (endangered), Northern long-eared bat (threatened), bog turtle (threatened), bald eagle (NYS threatened),

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☑ Yes ☐ No

Sharp-shinned hawk, osprey, red-shouldered hawk, American bittern, whip-poor-will, common nighthawk

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☑ Yes ☐ No
If yes, give a brief description of how the proposed action may affect that use:
Access to designated fishing and hunting areas will be improved and marked with signage to ensure only continued use by special permit.

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No
If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No
i. If Yes: acreage(s) on project site?
ii. Source(s) of soil rating(s):

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No
If Yes:
i. CEA name:
ii. Basis for designation:
iii. Designating agency and date:

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: NYS Route 28 Scenic Byway, Ashokan Reservoir

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Rt. 28 Scenic byway - Ashokan Reservoir overlooks and trail

iii. Distance between project and resource: <0.5 miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

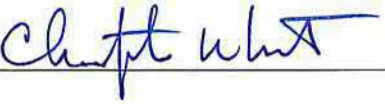
Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name County of Ulster Date August 31, 2016

Signature  Title Deputy Director of Planning/ Project Manager

PRINT FORM

Agency Use Only [If applicable]

Project :

Date :

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☐ NO ☑ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☑	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☑	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g)

☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h)

☐ NO ☑ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☑	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☑	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☑	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☑	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☑	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☑	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☑	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☑	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☑	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☑	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☑	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)

☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2)

☐ NO ☑ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☑	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☑	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☑	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☑	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☑	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☑	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. ☑ NO ☐ YES
(See Part 1. D.2.f., D,2,h, D.2.g)
If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☐ NO ☑ YES
If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☑	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☑	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☑	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☑	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☑	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☑	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☑	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☑	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☑	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	**No, or small impact may occur**	**Moderate to large impact may occur**
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	☐ ☐	☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	☐ ☐	☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☐ NO ☑ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on or has been nominated by the NYS Board of Historic Preservation for inclusion on the State or National Register of Historic Places.	E3e	☑	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☑	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☑	☐

d. Other impacts: _____ _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____ _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____ _____		☐	☐

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☐ NO ☑ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☑	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☑	☐
c. The proposed action will degrade existing transit access.	D2j	☑	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☑	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☑	☐
f. Other impacts: _____ _____		☑	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____		☐	☐

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☐ NO ☑ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☑	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☑	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☑	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☑	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☑	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☑	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☑	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☑	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☑	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☑	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☑	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☑	☐
m. Other impacts: _____ _____		☐	☐

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

Agency Use Only [IfApplicable]

Project :

Date :

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Ulster County Legislature as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.d).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Ashokan Rail Trail

Name of Lead Agency: Ulster County Legislature

Name of Responsible Officer in Lead Agency: Kenneth J. Ronk, Jr.

Title of Responsible Officer: Ulster County Legislature Chairman

Signature of Responsible Officer in Lead Agency: Date: 11-17-17

Signature of Preparer (if different from Responsible Officer) Date: 10-25-2017

For Further Information:

Contact Person: Mr. Dennis Doyle, Director Ulster County Planning Department

Address: 244 Fair Street, PO Box 1800, Kingston NY 12401

Telephone Number: 845 340-3338

E-mail: ddoy@co.ulster.ny.us

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

Barton & Loguidice, D.P.C.

Memo To: Project File **Date:** September 22, 2017

From: Thomas Baird, P.E. and Corinne I. Steinmuller, Environmental Scientist II **Project No.:** 369.007.001

Subject: Threatened and Endangered Species Habitat Assessment
Ashokan Rail Trail

Project Area and Description

Barton & Loguidice, D.P.C. (B&L), has been retained by Ulster County to provide preliminary and final design services for the proposed Ashokan recreational trail located along the County-owned 11.5 mile abandoned railroad corridor on the northern shore of the Ashokan Reservoir spanning from Milepost K10 (Basin Road in West Hurley) to Milepost K21.5 (Route 28A overpass in Boiceville).

The project includes repurposing of the existing ballast, removal of rail, rail hardware, and deteriorated creosote rail ties, construction of two pedestrian bridges, and maintenance to existing culvert structures. The location of the project area is shown on the enclosed Figures 1 and 2, aerial and topographic mapping respectively. The project corridor can also be found on the USGS 7 ½-minute Kingston West, Ashokan, West Shokan, Bearsville, and Phoenicia quadrangles between 42° 0'20.87"N, 74°16'16.63"W and 41°59'5.60"N, 74° 5'13.93"W (NAD 83).

Areas adjacent to the project corridor consist of residential and commercial property to the north associated with NYS Route 28. To the south of the corridor, the Ashokan Reservoir serves as a drinking water source for New York City and is recreationally limited to fishing and non-motorized boat usage. The railway itself travels through mature mid-successional forest and will cross the Esopus Creek on a new bridge on the western end of the proposed trail.

Federally Protected Species

The U.S. Fish and Wildlife Service (USFWS) New York Field Office's website was reviewed to determine whether any federally listed endangered, threatened, or candidate species are known to inhabit the proposed project area. The USFWS' Information for Planning and Consulation (IPaC) System reported three federally protected species that could potentially inhabit the project corridor: the Indiana bat (*Myotis sodalis* – Endangered), the northern long-eared bat (*Myotis septentrionalis* – Threatened), and the bog turtle (*Clemmys muhlenbergii* – Threatened). A printout of the IPaC results is included as Attachment A.

Critical Habitat

A review of designated critical habitat areas within New York State was completed. No such areas exist within or adjacent to the project area.

New York State Protected Species

The Natural Heritage Program (NHP) was contacted for information regarding the reported presence of any endangered species, threatened species, species of special concern, or significant natural communities within or adjacent to the project corridor. A response was received from the NHP on July 26, 2016, which indicated three records of rare or state-listed animals or plants and significant natural communities at the site or in its immediate vicinity. The bald eagle (*Haliaeetus leucocephalus*- Threatened) was identified to have nested within 400 feet of the project corridor. An Indiana bat maternity colony was identified within 250 feet of the project corridor. Additionally, a high quality occurrence of an uncommon community type, a bluestone vernal pool, was identified .5 miles east of the corridor. The NHP's response letter is included for review as Attachment B.

Availability of Suitable Habitat

A habitat assessment of the project corridor was completed by staff of B&L's Ecology Group on June 28-29 and July 7, 2016. Proposed access road sites were assessed on May 17, 2017. The main objective of this habitat assessment was to identify the presence of any state or federally protected species within or adjacent to the project corridor, or the presence of suitable habitat for any of the reported species.

Northern long-eared and Indiana bats

These bat species select roosting trees based on the tree's location, position within the landscape, bark characteristics, and ability to provide cavities or crevices. Suitable roosting and foraging habitat for the bats includes mixed age stands of trees greater than 3" diameter at breast height (DBH), with foraging habitat containing areas of open water. These habitat requirements were observed within and adjacent to the proposed project corridor. In accordance with the 2016 Range-wide Indiana Bat Summer Survey Guidelines (this document applies to both Indiana bat and northern long-eared bats), most trees greater than 3" DBH are considered potential habitat for the northern long-eared bats, and greater than 4" DBH for the Indiana bat. The dominant tree species observed within the project corridor include: red maple (*Acer rubrum*), striped maple (*Acer pensylvanicum*), shagbark hickory (*Carya ovata*), silver maple (*Acer saccharinum*), northern red oak (*Quercus rubra*), eastern white pine (*Pinus strobus*), and American beech (*Fagus grandifolia*). Approximately 9.2 acres of woody vegetation, including shrubs <3" intermixed with larger DBH trees, are proposed for clearing. In accordance with the aforementioned USFWS resources, trees greater than 3" DBH requiring removal are to be cut between October 1st and March 31st during the conservation cutting window timelines. Project photographs showing the characteristics of the Ashokan Rail Trail project corridor are included as Attachment C.

Bald Eagle Review

The bald eagle was removed from the federal Endangered Species list in 2007, but is still afforded federal protection under the Bald and Golden Eagle Protection Act (BGEPA) and state protection under the Environmental Conservation Law. Accordingly, the project areas were assessed to determine whether potential impacts to this species may occur. During coordination with the NHP, breeding bald eagles were reported within 400 feet of the project corridor. A review of the 2000-2005 New York State Breeding Bird Atlas Survey (BBA) was also completed. Historical sightings of bald eagles were reported for the project corridor. A pair holding territory were reported for block 5664B, a singing male present in block 5664A, and nest with young in 5564B. Results of this record review are included as Attachment D. See Discussion and Effect Determination for further information.

Breeding Bird Atlas

During the review of Survey Blocks 5764A, 5664B, 5665D, 5664A, and 5564B of the 2000-2005 BBA, one NYS Threatened species and six NYS Species of Special Concern were identified as being observed near the project corridor. Table 1, below, lists bird species identified by the BBA Survey Blocks mentioned above to potentially inhabit the project corridor. Results of the Breeding Bird Atlas query are included as Attachment D.

NYSDEC Nature Explorer

Review of the NYSDEC Nature Explorer query resulted in restricted species. It is presumed these species are those reported by the NYNHP. Results of the Nature Explorer query are included as Attachment E.

Table 1: 2000-2005 New York State Breeding Bird Atlas Results- Ashokan Rail Trail

Species Name	Survey Block	Behavior Code*	NYS Legal Status	Suitable Habitat	Suitable Habitat Within proposed areas of disturbance?
Osprey (*Pandeon haliaetus*)	5764A, 5664B	X1	Special Concern	Fish dependent; located near Adirondack lakes, rivers, and wetlands. Nest at the top of dead trees or artificial nesting platforms. While these characteristics are abundant surrounding these project areas, only limited impacts are expected to these habitats due to noise during construction.	Yes
Bald eagle (*Haliaeetus leucocephalus*)	5664B, 5664A, 5564B	T2, S2, NY	Threatened	Bald eagles require large, undisturbed open-water areas such as rivers or lakes. Nests are typically built along the edge of these large waterbodies, in conifer or deciduous trees with large branches and open crowns. Observed within 400' of proposed disturbed area.	Yes
Red-shouldered hawk (*Buteo lineatus)*	5764A, 5664B, 5665D, 5564B	T2, D2, FY, X1	Special Concern	Forest birds that prefer an open sub-canopy for hunting. Can be found in suburban areas with mixed forest and housing.	Yes
American bittern (*Botaurus lentiginosus)*	5664B	P2	Special Concern	Shallow, freshwater marshes. Tend to stay hidden among dense vegetation. Freshwater wetland / marshes avoided by re-alignment of trail	No
Sharp-shinned hawk (*Accipiter striatus)*	5664B, 5564B	T2, X1	Special Concern	Birds of the forest and forest edge and are not found in areas where trees are scarce, except during migration. During the breeding season this hawk can be found in dense protected, forested stands which often contain conifers.	Yes
Whip-poor-will (*Caprimulgus vociferos*)	5664B, 5664A	D2, S2	Special Concern	Forests with open understory. Found in both deciduous and deciduous pine mix. Nest on forest floor and are strictly nocturnal.	No
Common nighthawk (*Chordeiles minor*)	5664B	X1	Special Concern	Nest on bare soil and/or rock in forest clearings, but have also been known to nest on gravel rooftops.	No

* X1= Species observed in possible nesting habitat, but no other indication of breeding noted; singing male(s) present (or breeding calls heard) in breeding season. T2= Pair apparently holding territory. In addition to territorial singing, chasing of other individuals of same species often marks a territory. S2= Singing male present (or breeding calls heard). NY= Nest with young. FY= Adults with food for young. D2= Courtship and display, agitated behavior or anxiety calls suggesting probable presence of nearby nest or young.

Discussion and Effect Determinations

Based on the site observations documented during the habitat assessment for the proposed Ashokan Rail Trail, potential effects to suitable habitats for the state or federal protected species listed for the project corridor are anticipated as discussed below.

Indiana and northern long-eared bats

Suitable bat roosting habitat was identified adjacent to the project corridor. Tree removal will be required in certain overgrown sections of trail, to remove dead and stressed Ash trees, and several areas where trees inhibit drainage or pose a threat to trail users. Tree removal required as part of this project will be completed during the Time of Year Conservation Cutting Window: October 1st to March 31st. To assist with USFWS' coordination, Phase 1 Summer Habitat Assessment forms are included in Attachment F. By adhering to the Conservation Cutting Window timelines as a protective measure, the proposed project is recommended to have a determination of May Affect, Not Likely to Adversely Affect the Indiana or northern long-eared bats. Additional Best Management Practices (BMPs) will be utilized during the duration of the project to limit impacts to freshwater resources adjacent to the project areas.

Bog turtle

The bog turtle, the smallest of the emydid turtles, spends much of the time buried in the mud and therefore has a reputation for being secretive. While they prefer fens, highly acidic wetlands and areas of soft, deep mud are considered suitable habitat. Several wetland complexes are adjacent to, but not within, the proposed areas of disturbance for the project. Two wetland complexes will be directly impacted as a result of the project. Field delineated Wetlands K and L, identified as correspondent to NYSDEC Mapped wetland AS-20, were emergent in nature but did not contain the deep mucky soils required by this species or microtopographic relief for basking. Additionally, a large patch of common reed (*Phragmites australis*) was noted as dominant which due to plant density prohibits basking. The other field delineated wetland to be impacted, identified as Wetland O, was also emergent but shaded over by the upland tree canopy, lacking the necessary sunlight and microtopographic relief for basking. Additionally, the soils were restricted at 12 inches with the presence of ballast. No impacts are expected to other wetlands delineated within the corridor. Therefore, a determination of No Effect is recommended for this threatened species.

Bald Eagle

Bald eagles prefer habitat along large bodies of water and shoreline area. The project corridor is located within close proximity to the Ashokan Reservoir. Additionally, a confirmed nest with young was reported by the BBA as well as the New York City Department of Environmental Protection and the NYNHP. It is understood that impacts may occur to this species as a result of construction noises during the nesting season. Therefore, a determination of May Affect, Not Likely to Adversely Affect is recommended for this threatened species. To avoid impact and

necessity for a BGEPA permit, it is recommended that construction that will occur within sight or 660 feet of a nest occur during the non-breeding season, from mid-September to December.

Breeding Bird Atlas Species

As described in Table 1, suitable habitat was identified for all species identified by the BBA within the corridor except for the whip poor will and common nighthawk. Both species rely on an open understory and/or clearings for nesting habitat. The corridor was largely grown up with a shrubby understory and a determination of No Effect is recommended for these species due to lack of suitable habitat.

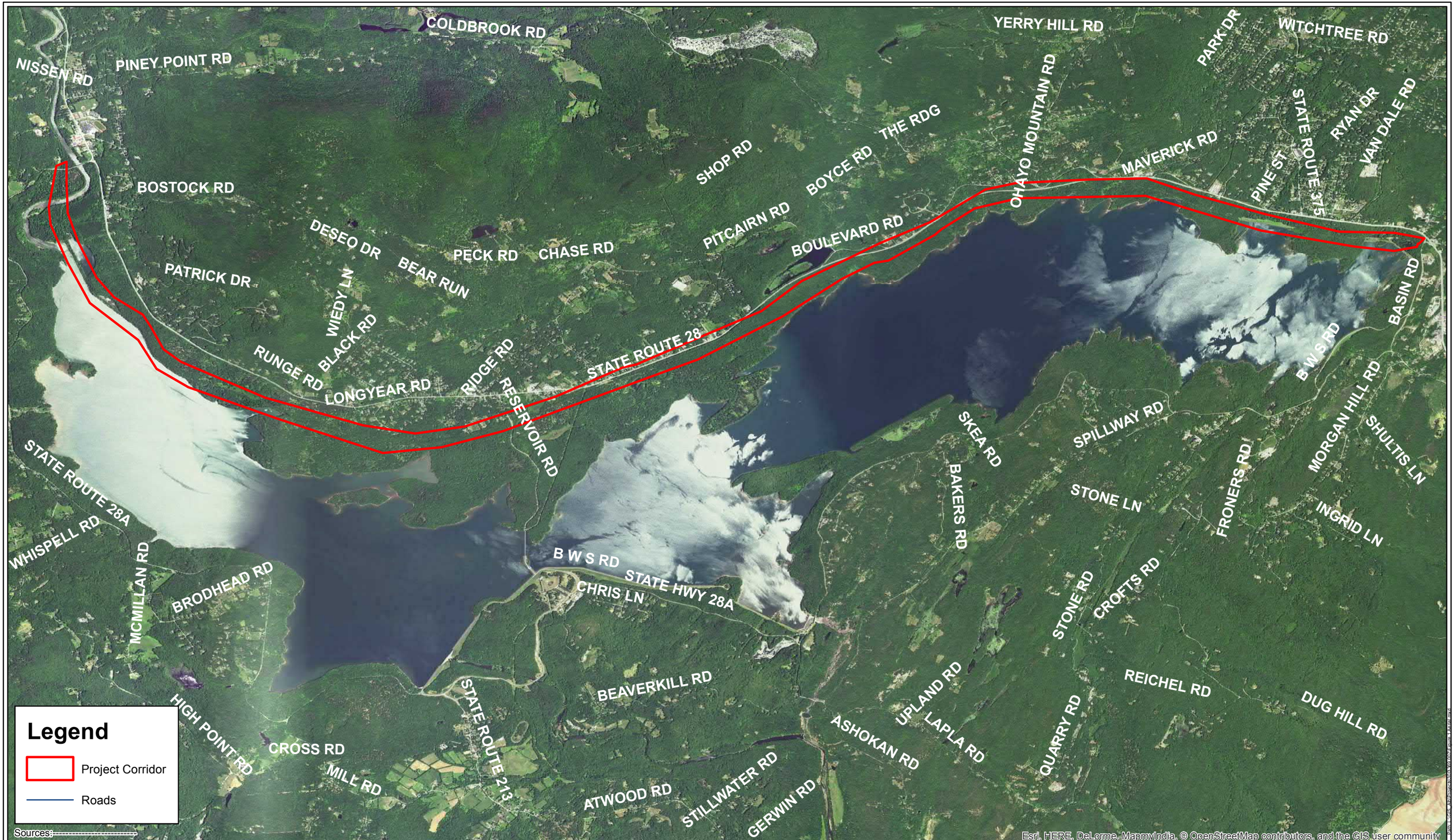
The remaining species may be impacted by construction noise and disturbance. However, this will be temporary in nature and will not affect the habitat quality long term. A May Affect, Not Likely to Adversely Affect determination is recommended for these species.

In addition, no observations of other protected species, unique plant assemblages, or significant natural communities were noted within or adjacent to the project limits. A Species Conclusion Table is included as Attachment G to summarize the results and determinations of this assessment.

CIS/
Attachments

Figure 1

Aerial Project Corridor Map



Barton & Loguidice, D.P.C.
Engineers • Environmental Scientists • Planners • Landscape Architects

N W E S

1 inch = 4,250 feet

Ulster County

Ashokan Rail Trail Aerial Imagery

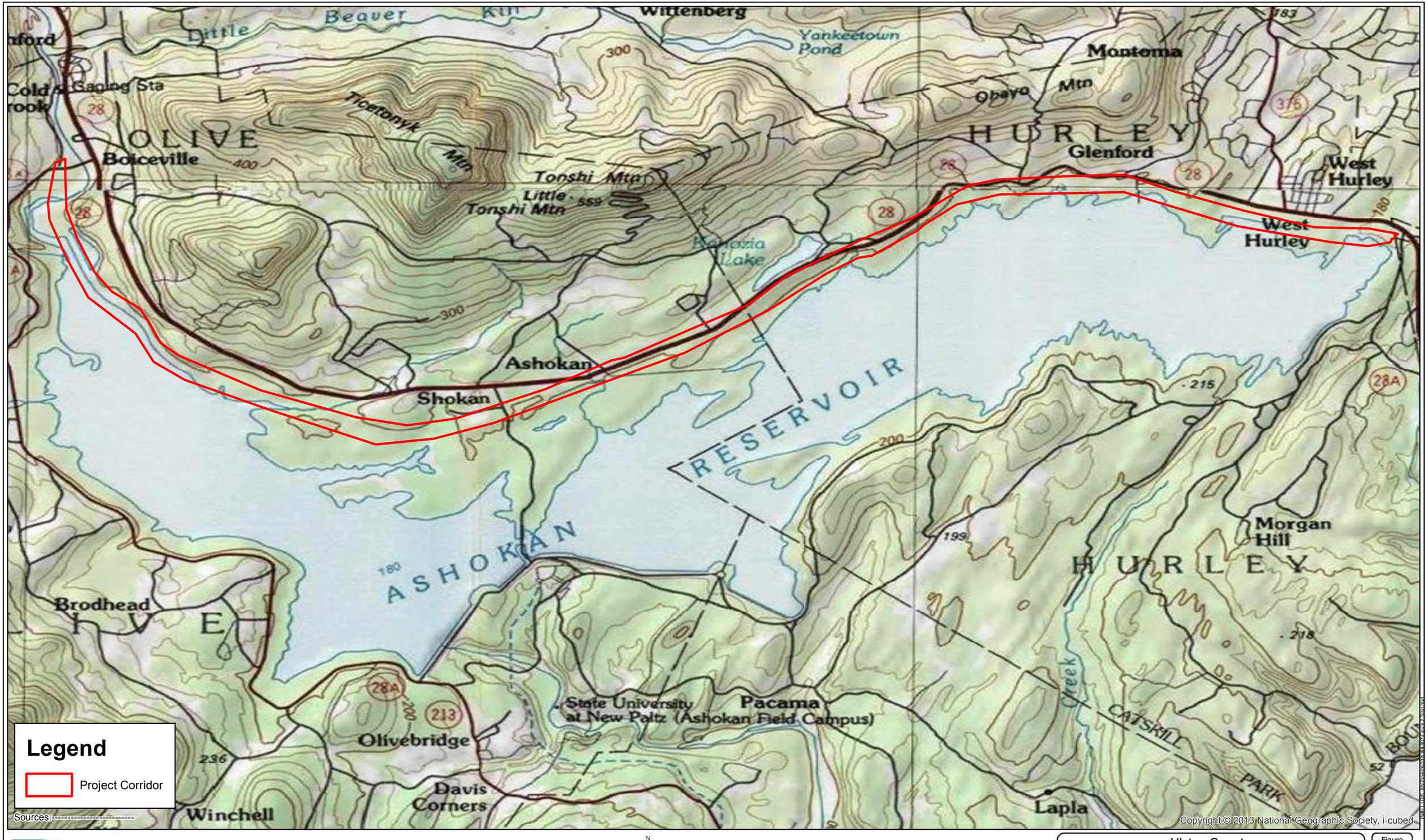
Ulster County 6/16/2016 New York

Figure -

Project No. 000.000

Figure 2

Topographic Project Corridor Map



Barton & Loguidice, D.P.C.
Engineers • Environmental Scientists • Planners • Landscape Architects

1 inch = 4,250 feet

Ulster County

Ashokan Rail Trail Topographic Imagery

Ulster County 6/16/2016 New York

Figure 2

Project No. 369.007

Attachment A

U.S. Fish and Wildlife Service
Information for Planning and Consultation (IPaC)
System Results

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9349
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo/es/section7.htm

In Reply Refer To: April 25, 2017
Consultation Code: 05E1NY00-2016-SLI-1925
Event Code: 05E1NY00-2017-E-05302
Project Name: Ashokan Rail Trail

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (

http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9349
(607) 753-9334

Project Summary

Consultation Code: 05E1NY00-2016-SLI-1925

Event Code: 05E1NY00-2017-E-05302

Project Name: Ashokan Rail Trail

Project Type: TRANSPORTATION

Project Description: Barton & Loguidice, D.P.C. (B&L) has been retained by Ulster County for engineering design services for the proposed Ashokan Rail Trail. The proposed action includes the creation of an 11.5 mile recreational trail corridor on a former rail line north of the Ashokan Reservoir. The project includes repurposing the existing ballast, removal of rail ties, creation of trailheads, and maintenance to existing culvert structures.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/41.983830714078586N74.26007196592603W

Counties: Ulster, NY

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Indiana Bat *(Myotis sodalis)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *(Myotis septentrionalis)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Reptiles

NAME	STATUS
Bog Turtle *(Clemmys muhlenbergii)* Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6962	Threatened

Critical habitats

There are no critical habitats within your project area.

Attachment B

Natural Heritage Program (NHP) Response

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

July 26, 2016

Corinne I. Steinmuller
Barton & Loguidice, D.P.C.
10 Airline Drive, Suite 200
Albany, NY 12205

Re: Ashokan Rail Trail (File: 369.007.001)
Town/City: Hurley, Olive. County: Ulster.

Dear Corinne Steinmuller:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur, or may occur, on your site or in the immediate vicinity of your site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Andrea Chaloux

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program

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The following state-listed animals have been documented at your project site, or in its vicinity.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about any permit considerations for your project, please contact the Permits staff at the NYSDEC Region 3 Office at dep.r3@dec.ny.gov, (845) 256-3054. For information about potential impacts of your project on these species, and how to avoid, minimize, or mitigate any impacts, contact the Region 3 Wildlife staff at Wildlife.R3@dec.ny.gov, (845) 256-3098.

The following species have been documented at your project site, or within 1 mile of the project site. Individual animals may travel 1 mile from documented locations.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Birds				
Bald Eagle	*Haliaeetus leucocephalus*	Threatened		1715, 14038, 10989
Breeding -- Breeding Bald Eagles are using an area through which the project site is proposed, and several Bald Eagle nests have been documented near the proposed project site, including one nest within 400 feet of the proposed project site.				

The following species have been documented within 250 feet of the project site. Individual animals may travel 2.5 miles from documented locations.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Mammals				
Indiana Bat	*Myotis sodalis*	Endangered	Endangered	11652
Maternity colony				

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.

The following rare plants, rare animals, and significant natural communities have been documented in the vicinity of your project site.

We recommend that potential onsite and offsite impacts of the proposed project on these species or communities be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process, such as reviews conducted under SEQR. Field surveys of the project site may be necessary to determine the status of a species at the site, particularly for sites that are currently undeveloped and may still contain suitable habitat. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The following significant natural communities are considered significant from a statewide perspective by the NY Natural Heritage Program. They are either occurrences of a community type that is rare in the state, or a high-quality example of a more common community type. By meeting specific, documented criteria, the NY Natural Heritage Program considers these community occurrences to have high ecological and conservation value.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Wetland/Aquatic Communities			
Vernal Pool			High-quality Occurrence of Uncommon Community Type

Bluestone, 0.5 mi east of the project site: This is a moderate-size vernal pool complex in good condtion within a large natural landscape in very good condition. 13052

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

Information about many of the natural community types in New York, including identification, dominant and characteristic vegetation, distribution, conservation, and management, is available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org. For descriptions of all community types, go to www.dec.ny.gov/animals/97703.html for Ecological Communities of New York State.

Attachment C

Project Corridor Photographs

Photo 1. Typical forested section adjacent to corridor.

Photo 2. Corridor looking west.

Photo 3. Corridor looking south.

Photo 4. Ashokan Reservoir, looking south.

Photo 5. Bank of Reservoir immediately south of corridor.

Photo 6. Corridor looking north to causeway.

Photo 7. Various tracks in mud at causeway; toe of slope from corridor.

Photo 8. View downslope looking north of corridor.

Photo 9. View looking west at proposed Espopus crossing. “Boiceville Trestle” destroyed by Tropical Storms Irene and Lee.

Photo 10. Wetland resource north of corridor, just east of Espopus crossing. Outside of ROW/proposed work.

Photo 11. Looking southeast from corridor at Reservoir.

Photo 12. Wetland K/L (NYSDEC AS-20), to be impacted.

Photo 13. Wetland K/L to be impacted. Corridor continues straight through (see people). Note large Phragmites patch on right hand side.

Photo 14. Wetland O, to be impacted. Note heavy canopy.

Photo 15. Corridor on western side of Espopus, looking east.

Photo 16. Patch of knotweed on western bank of Esopus at crossing.

Photo 17. Existing access road, to receive a layer of stone dust.

Photo 18. Existing access road, to receive a layer of stone dust.

Photo 19. Potential access site, looking toward NYS Route 28.

Photo 20. Potential access site, looking toward rail.

Photo 21. Former access road to be improved.

Photo 22. Former access road to be improved.

Photo 23. Potential business access site (Hotel Dylan).

Photo 24. Potential business access site (Hotel Dylan).

Photo 25. Potential business access site (Hotel Dylan).

Attachment D

2000-2005 New York State Breeding Bird Atlas Survey Results

List of Species Breeding in Atlas Block 5764A				
Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Canada Goose	*Branta canadensis*	FL	6/30/2003	Game Species
Wood Duck	*Aix sponsa*	FL	7/12/2003	Game Species
Mallard	*Anas platyrhynchos*	FL	6/17/2004	Game Species
Ruffed Grouse	*Bonasa umbellus*	X1	7/12/2003	Game Species
Wild Turkey	*Meleagris gallopavo*	FL	8/9/2002	Game Species
Great Blue Heron	*Ardea herodias*	NY	7/7/2002	Protected
Green Heron	*Butorides virescens*	NY	6/17/2004	Protected
Turkey Vulture	*Cathartes aura*	NY	6/30/2004	Protected
Osprey	*Pandion haliaetus*	X1	//2004	Protected-Special Concern
Red-shouldered Hawk	*Buteo lineatus*	X1	7/5/2002	Protected-Special Concern
Broad-winged Hawk	*Buteo platypterus*	X1	6/30/2003	Protected
Red-tailed Hawk	*Buteo jamaicensis*	FL	6/17/2004	Protected
Killdeer	*Charadrius vociferus*	NE	6/3/2003	Protected
Spotted Sandpiper	*Actitis macularius*	X1	6/30/2003	Protected
American Woodcock	*Scolopax minor*	D2	4/28/2003	Game Species
Mourning Dove	*Zenaida macroura*	FL	6/30/2003	Protected
Yellow-billed Cuckoo	*Coccyzus americanus*	S2	//2004	Protected
Black-billed Cuckoo	*Coccyzus erythropthalmus*	T2	8/15/2003	Protected
Great Horned Owl	*Bubo virginianus*	X1	6/26/2003	Protected
Chimney Swift	*Chaetura pelagica*	P2	6/30/2003	Protected
Ruby-throated Hummingbird	*Archilochus colubris*	P2	6/17/2004	Protected
Belted Kingfisher	*Megaceryle alcyon*	P2	7/5/2002	Protected
Red-bellied Woodpecker	*Melanerpes carolinus*	FL	6/17/2004	Protected
Downy Woodpecker	*Picoides pubescens*	B2	6/17/2004	Protected

Hairy Woodpecker	*Picoides villosus*	X1	7/5/2002	Protected
Northern Flicker	*Colaptes auratus*	FY	7/3/2002	Protected
Pileated Woodpecker	*Dryocopus pileatus*	B2	4/28/2003	Protected
Eastern Wood-Pewee	*Contopus virens*	D2	8/9/2002	Protected
Acadian Flycatcher	*Empidonax virescens*	P2	6/3/2003	Protected
Alder Flycatcher	*Empidonax alnorum*	X1	8/9/2002	Protected
Willow Flycatcher	*Empidonax traillii*	X1	8/15/2003	Protected
Least Flycatcher	*Empidonax minimus*	ON	6/30/2003	Protected
Eastern Phoebe	*Sayornis phoebe*	D2	8/9/2002	Protected
Great Crested Flycatcher	*Myiarchus crinitus*	D2	6/17/2004	Protected
Eastern Kingbird	*Tyrannus tyrannus*	FY	6/30/2003	Protected
Yellow-throated Vireo	*Vireo flavifrons*	S2	//2004	Protected
Blue-headed Vireo	*Vireo solitarius*	X1	7/5/2002	Protected
Warbling Vireo	*Vireo gilvus*	T2	6/30/2003	Protected
Red-eyed Vireo	*Vireo olivaceus*	T2	6/3/2003	Protected
Blue Jay	*Cyanocitta cristata*	FL	7/8/2003	Protected
American Crow	*Corvus brachyrhynchos*	FL	7/12/2003	Game Species
Tree Swallow	*Tachycineta bicolor*	P2	6/17/2004	Protected
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	FL	7/12/2003	Protected
Bank Swallow	*Riparia riparia*	NY	7/12/2003	Protected
Black-capped Chickadee	*Poecile atricapillus*	FY	7/12/2003	Protected
Tufted Titmouse	*Baeolophus bicolor*	FY	6/3/2003	Protected
White-breasted Nuthatch	*Sitta carolinensis*	S2	7/7/2002	Protected
Carolina Wren	*Thryothorus ludovicianus*	S2	6/17/2004	Protected
House Wren	*Troglodytes aedon*	NY	6/17/2004	Protected
Winter Wren	*Troglodytes troglodytes*	X1	6/26/2003	Protected

Blue-gray Gnatcatcher	*Polioptila caerulea*	FL	8/15/2003	Protected
Hermit Thrush	*Catharus guttatus*	X1	7/12/2003	Protected
Wood Thrush	*Hylocichla mustelina*	D2	7/3/2002	Protected
American Robin	*Turdus migratorius*	FY	6/26/2003	Protected
Gray Catbird	*Dumetella carolinensis*	FY	7/3/2002	Protected
Northern Mockingbird	*Mimus polyglottos*	B2	6/17/2004	Protected
Brown Thrasher	*Toxostoma rufum*	X1	7/12/2003	Protected
European Starling	*Sturnus vulgaris*	FL	6/17/2004	Unprotected
Cedar Waxwing	*Bombycilla cedrorum*	FL	7/3/2002	Protected
Yellow Warbler	*Dendroica petechia*	T2	6/17/2004	Protected
Black-throated Green Warbler	*Dendroica virens*	S2	6/26/2003	Protected
Pine Warbler	*Dendroica pinus*	S2	//2004	Protected
Prairie Warbler	*Dendroica discolor*	FL	7/8/2003	Protected
Black-and-white Warbler	*Mniotilta varia*	S2	7/7/2002	Protected
American Redstart	*Setophaga ruticilla*	P2	6/3/2003	Protected
Worm-eating Warbler	*Helmitheros vermivorum*	FL	7/5/2002	Protected
Ovenbird	*Seiurus aurocapilla*	FL	6/26/2003	Protected
Louisiana Waterthrush	*Seiurus motacilla*	X1	6/3/2003	Protected
Common Yellowthroat	*Geothlypis trichas*	FY	7/3/2002	Protected
Eastern Towhee	*Pipilo erythrophthalmus*	FL	8/15/2003	Protected
Chipping Sparrow	*Spizella passerina*	FY	7/12/2003	Protected
Clay-colored Sparrow	*Spizella pallida*	FL	7/12/2003	Protected
Song Sparrow	*Melospiza melodia*	FY	6/17/2004	Protected
Scarlet Tanager	*Piranga olivacea*	T2	7/8/2003	Protected
Northern Cardinal	*Cardinalis cardinalis*	FL	7/12/2003	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	T2	7/3/2002	Protected

Indigo Bunting	*Passerina cyanea*	FY	7/12/2003	Protected
Red-winged Blackbird	*Agelaius phoeniceus*	FL	7/12/2003	Protected
Common Grackle	*Quiscalus quiscula*	FL	6/17/2004	Protected
Brown-headed Cowbird	*Molothrus ater*	D2	6/26/2003	Protected
Baltimore Oriole	*Icterus galbula*	FL	7/5/2002	Protected
Purple Finch	*Carpodacus purpureus*	X1	6/30/2003	Protected
House Finch	*Carpodacus mexicanus*	FL	7/12/2003	Protected
American Goldfinch	*Spinus tristis*	ON	7/31/2003	Protected
House Sparrow	*Passer domesticus*	ON	7/8/2003	Unprotected

Current Date: 6/22/2016

List of Species Breeding in Atlas Block 5664B

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Canada Goose	*Branta canadensis*	FL	6/20/2002	Game Species
Wood Duck	*Aix sponsa*	FL	//2003	Game Species
American Black Duck	*Anas rubripes*	X1	6/20/2002	Game Species
Mallard	*Anas platyrhynchos*	FL	7/10/2002	Game Species
Common Merganser	*Mergus merganser*	P2	//2003	Game Species
Ruffed Grouse	*Bonasa umbellus*	FL	6/10/2002	Game Species
Wild Turkey	*Meleagris gallopavo*	FL	7/22/2002	Game Species
American Bittern	*Botaurus lentiginosus*	P2	8/15/2003	Protected-Special Concern
Great Blue Heron	*Ardea herodias*	T2	5/15/2004	Protected
Green Heron	*Butorides virescens*	S2	//2003	Protected
Turkey Vulture	*Cathartes aura*	X1	6/10/2002	Protected
Osprey	*Pandion haliaetus*	X1	6/7/2003	Protected-Special Concern
Bald Eagle	*Haliaeetus*	T2	7/21/2003	Threatened

	leucocephalus			
Sharp-shinned Hawk	*Accipiter striatus*	T2	7/16/2003	Protected-Special Concern
Red-shouldered Hawk	*Buteo lineatus*	D2	3/24/2002	Protected-Special Concern
Broad-winged Hawk	*Buteo platypterus*	P2	4/11/2002	Protected
Red-tailed Hawk	*Buteo jamaicensis*	D2	5/15/2003	Protected
American Kestrel	*Falco sparverius*	X1	5/31/2003	Protected
Virginia Rail	*Rallus limicola*	FL	7/13/2003	Game Species
Killdeer	*Charadrius vociferus*	T2	4/27/2002	Protected
Spotted Sandpiper	*Actitis macularius*	S2	//2003	Protected
American Woodcock	*Scolopax minor*	D2	3/17/2003	Game Species
Mourning Dove	*Zenaida macroura*	B2	4/26/2004	Protected
Yellow-billed Cuckoo	*Coccyzus americanus*	S2	6/10/2002	Protected
Eastern Screech-Owl	*Megascops asio*	X1	4/2/2003	Protected
Great Horned Owl	*Bubo virginianus*	S2	1/20/2002	Protected
Barred Owl	*Strix varia*	FL	8/9/2004	Protected
Common Nighthawk	*Chordeiles minor*	X1	5/23/2003	Protected-Special Concern
Whip-poor-will	*Caprimulgus vociferus*	D2	5/4/2002	Protected-Special Concern
Chimney Swift	*Chaetura pelagica*	B2	5/24/2003	Protected
Ruby-throated Hummingbird	*Archilochus colubris*	ON	//2002	Protected
Belted Kingfisher	*Megaceryle alcyon*	P2	//2002	Protected
Red-bellied Woodpecker	*Melanerpes carolinus*	B2	4/27/2002	Protected
Yellow-bellied Sapsucker	*Sphyrapicus varius*	X1	6/8/2001	Protected
Downy Woodpecker	*Picoides pubescens*	P2	//2003	Protected
Hairy Woodpecker	*Picoides villosus*	ON	4/26/2004	Protected
Northern Flicker	*Colaptes auratus*	T2	5/10/2003	Protected
Pileated Woodpecker	*Dryocopus pileatus*	N2	4/29/2002	Protected

Eastern Wood-Pewee	*Contopus virens*	T2	5/24/2003	Protected
Least Flycatcher	*Empidonax minimus*	X1	6/20/2002	Protected
Eastern Phoebe	*Sayornis phoebe*	NY	6/10/2002	Protected
Great Crested Flycatcher	*Myiarchus crinitus*	P2	5/1/2002	Protected
Eastern Kingbird	*Tyrannus tyrannus*	P2	6/10/2002	Protected
Yellow-throated Vireo	*Vireo flavifrons*	X1	6/8/2001	Protected
Blue-headed Vireo	*Vireo solitarius*	X1	6/8/2001	Protected
Warbling Vireo	*Vireo gilvus*	X1	//2003	Protected
Red-eyed Vireo	*Vireo olivaceus*	S2	//2003	Protected
Blue Jay	*Cyanocitta cristata*	FL	6/30/2004	Protected
American Crow	*Corvus brachyrhynchos*	N2	4/29/2002	Game Species
Fish Crow	*Corvus ossifragus*	X1	//2003	Protected
Common Raven	*Corvus corax*	FL	6/20/2002	Protected
Tree Swallow	*Tachycineta bicolor*	NE	6/10/2002	Protected
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	X1	//2003	Protected
Cliff Swallow	*Petrochelidon pyrrhonota*	X1	//2003	Protected
Barn Swallow	*Hirundo rustica*	P2	6/10/2002	Protected
Black-capped Chickadee	*Poecile atricapillus*	ON	//2002	Protected
Tufted Titmouse	*Baeolophus bicolor*	T2	3/24/2002	Protected
Red-breasted Nuthatch	*Sitta canadensis*	P2	5/15/2003	Protected
White-breasted Nuthatch	*Sitta carolinensis*	P2	4/26/2004	Protected
Brown Creeper	*Certhia americana*	B2	5/1/2002	Protected
Carolina Wren	*Thryothorus ludovicianus*	ON	7/27/2004	Protected
House Wren	*Troglodytes aedon*	ON	//2002	Protected
Winter Wren	*Troglodytes troglodytes*	S2	5/1/2002	Protected

Blue-gray Gnatcatcher	*Polioptila caerulea*	FY	7/20/2002	Protected
Eastern Bluebird	*Sialia sialis*	FL	7/9/2004	Protected
Veery	*Catharus fuscescens*	S2	//2002	Protected
Hermit Thrush	*Catharus guttatus*	S2	4/29/2002	Protected
Wood Thrush	*Hylocichla mustelina*	T2	5/1/2002	Protected
American Robin	*Turdus migratorius*	FY	6/10/2002	Protected
Gray Catbird	*Dumetella carolinensis*	ON	//2002	Protected
Northern Mockingbird	*Mimus polyglottos*	T2	4/29/2002	Protected
European Starling	*Sturnus vulgaris*	NY	5/15/2003	Unprotected
Cedar Waxwing	*Bombycilla cedrorum*	S2	//2003	Protected
Yellow-rumped Warbler	*Dendroica coronata*	X1	6/8/2001	Protected
Pine Warbler	*Dendroica pinus*	T2	7/28/2001	Protected
Black-and-white Warbler	*Mniotilta varia*	X1	6/8/2001	Protected
American Redstart	*Setophaga ruticilla*	T2	5/1/2002	Protected
Worm-eating Warbler	*Helmitheros vermivorum*	P2	6/10/2002	Protected
Ovenbird	*Seiurus aurocapilla*	B2	5/15/2004	Protected
Louisiana Waterthrush	*Seiurus motacilla*	X1	//2003	Protected
Kentucky Warbler	*Oporornis formosus*	B2	7/12/2003	Protected
Common Yellowthroat	*Geothlypis trichas*	ON	6/10/2002	Protected
Canada Warbler	*Wilsonia canadensis*	X1	6/8/2001	Protected
Eastern Towhee	*Pipilo erythrophthalmus*	T2	7/10/2002	Protected
Chipping Sparrow	*Spizella passerina*	FY	6/10/2002	Protected
Field Sparrow	*Spizella pusilla*	ON	6/10/2002	Protected
Song Sparrow	*Melospiza melodia*	S2	3/24/2002	Protected
White-throated Sparrow	*Zonotrichia albicollis*	X1	//2003	Protected
Scarlet Tanager	*Piranga olivacea*	ON	7/10/2002	Protected

Northern Cardinal	*Cardinalis cardinalis*	B2	5/30/2003	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	T2	6/19/2004	Protected
Indigo Bunting	*Passerina cyanea*	D2	7/14/2002	Protected
Red-winged Blackbird	*Agelaius phoeniceus*	ON	5/15/2004	Protected
Common Grackle	*Quiscalus quiscula*	X1	5/25/2003	Protected
Brown-headed Cowbird	*Molothrus ater*	D2	5/1/2002	Protected
Orchard Oriole	*Icterus spurius*	T2	5/27/2004	Protected
Baltimore Oriole	*Icterus galbula*	FS	6/10/2002	Protected
Purple Finch	*Carpodacus purpureus*	S2	4/29/2002	Protected
House Finch	*Carpodacus mexicanus*	D2	6/16/2003	Protected
American Goldfinch	*Spinus tristis*	FL	6/22/2003	Protected
House Sparrow	*Passer domesticus*	ON	5/24/2003	Unprotected

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List of Species Breeding in Atlas Block 5665D

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Canada Goose	*Branta canadensis*	FL	6/3/2001	Game Species
Mallard	*Anas platyrhynchos*	FL	6/5/2001	Game Species
Wild Turkey	*Meleagris gallopavo*	FL	7/19/2001	Game Species
Great Blue Heron	*Ardea herodias*	FY	6/13/2001	Protected
Red-shouldered Hawk	*Buteo lineatus*	FY	7/3/2001	Protected-Special Concern
Red-tailed Hawk	*Buteo jamaicensis*	N2	7/15/2001	Protected
American Kestrel	*Falco sparverius*	X1	6/25/2001	Protected
Rock Pigeon	*Columba livia*	ON	7/2/2001	Unprotected
Mourning Dove	*Zenaida macroura*	P2	7/19/2001	Protected
Eastern Screech-	*Megascops asio*	X1	5/20/2001	Protected

Owl				
Great Horned Owl	*Bubo virginianus*	S2	5/30/2001	Protected
Barred Owl	*Strix varia*	X1	5/20/2001	Protected
Chimney Swift	*Chaetura pelagica*	FL	6/25/2001	Protected
Ruby-throated Hummingbird	*Archilochus colubris*	FY	7/22/2001	Protected
Red-bellied Woodpecker	*Melanerpes carolinus*	FY	7/22/2001	Protected
Yellow-bellied Sapsucker	*Sphyrapicus varius*	FY	6/5/2001	Protected
Downy Woodpecker	*Picoides pubescens*	FL	6/12/2001	Protected
Hairy Woodpecker	*Picoides villosus*	FL	7/20/2001	Protected
Northern Flicker	*Colaptes auratus*	N2	6/25/2001	Protected
Pileated Woodpecker	*Dryocopus pileatus*	S2	7/2/2001	Protected
Eastern Wood-Pewee	*Contopus virens*	X1	6/25/2001	Protected
Eastern Phoebe	*Sayornis phoebe*	NE	7/3/2001	Protected
Great Crested Flycatcher	*Myiarchus crinitus*	NY	7/3/2001	Protected
Eastern Kingbird	*Tyrannus tyrannus*	S2	6/25/2001	Protected
Red-eyed Vireo	*Vireo olivaceus*	FL	7/15/2001	Protected
Blue Jay	*Cyanocitta cristata*	FY	7/15/2001	Protected
American Crow	*Corvus brachyrhynchos*	FL	7/28/2001	Game Species
Tree Swallow	*Tachycineta bicolor*	FY	6/5/2001	Protected
Cliff Swallow	*Petrochelidon pyrrhonota*	FY	7/2/2001	Protected
Barn Swallow	*Hirundo rustica*	FL	7/2/2001	Protected
Black-capped Chickadee	*Poecile atricapillus*	FY	7/20/2001	Protected
Tufted Titmouse	*Baeolophus bicolor*	NY	6/5/2001	Protected
Red-breasted Nuthatch	*Sitta canadensis*	ON	6/21/2001	Protected

White-breasted Nuthatch	*Sitta carolinensis*	FY	6/25/2001	Protected
Carolina Wren	*Thryothorus ludovicianus*	FY	6/21/2001	Protected
House Wren	*Troglodytes aedon*	NE	6/18/2001	Protected
Eastern Bluebird	*Sialia sialis*	FL	6/5/2001	Protected
Veery	*Catharus fuscescens*	X1	6/25/2001	Protected
Wood Thrush	*Hylocichla mustelina*	NY	6/25/2001	Protected
American Robin	*Turdus migratorius*	FL	5/30/2001	Protected
Gray Catbird	*Dumetella carolinensis*	ON	6/16/2001	Protected
Northern Mockingbird	*Mimus polyglottos*	S2	5/30/2001	Protected
Brown Thrasher	*Toxostoma rufum*	FL	7/19/2001	Protected
European Starling	*Sturnus vulgaris*	FL	6/10/2001	Unprotected
Yellow Warbler	*Dendroica petechia*	N2	6/25/2001	Protected
American Redstart	*Setophaga ruticilla*	S2	6/28/2001	Protected
Ovenbird	*Seiurus aurocapilla*	S2	6/25/2001	Protected
Common Yellowthroat	*Geothlypis trichas*	FY	6/25/2001	Protected
Eastern Towhee	*Pipilo erythrophthalmus*	S2	6/28/2001	Protected
Chipping Sparrow	*Spizella passerina*	NE	7/15/2001	Protected
Field Sparrow	*Spizella pusilla*	FY	6/28/2001	Protected
Song Sparrow	*Melospiza melodia*	ON	6/28/2001	Protected
Dark-eyed Junco	*Junco hyemalis*	NE	6/28/2001	Protected
Scarlet Tanager	*Piranga olivacea*	S2	6/28/2001	Protected
Northern Cardinal	*Cardinalis cardinalis*	FL	7/19/2001	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	P2	7/22/2001	Protected
Red-winged Blackbird	*Agelaius phoeniceus*	FY	7/19/2001	Protected
Common Grackle	*Quiscalus quiscula*	FL	7/15/2001	Protected
Brown-headed	*Molothrus ater*	FL	7/15/2001	Protected

Cowbird				
Baltimore Oriole	*Icterus galbula*	S2	6/15/2001	Protected
Purple Finch	*Carpodacus purpureus*	X1	6/5/2001	Protected
House Finch	*Carpodacus mexicanus*	FY	7/19/2001	Protected
American Goldfinch	*Spinus tristis*	FY	8/25/2001	Protected
House Sparrow	*Passer domesticus*	ON	7/19/2001	Unprotected

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List of Species Breeding in Atlas Block 5664A

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Canada Goose	*Branta canadensis*	FL	6/2/2000	Game Species
Wood Duck	*Aix sponsa*	FL	6/2/2000	Game Species
American Black Duck	*Anas rubripes*	X1	//2002	Game Species
Mallard	*Anas platyrhynchos*	FL	6/2/2000	Game Species
Common Merganser	*Mergus merganser*	FL	6/2/2000	Game Species
Wild Turkey	*Meleagris gallopavo*	X1	6/2/2000	Game Species
Great Blue Heron	*Ardea herodias*	X1	6/2/2000	Protected
Green Heron	*Butorides virescens*	FL	6/2/2000	Protected
Bald Eagle	*Haliaeetus leucocephalus*	S2	//2002	Threatened
Spotted Sandpiper	*Actitis macularius*	X1	//2002	Protected
Mourning Dove	*Zenaida macroura*	S2	//2002	Protected
Barred Owl	*Strix varia*	X1	//2004	Protected
Whip-poor-will	*Caprimulgus vociferus*	S2	//2004	Protected-Special Concern
Chimney Swift	*Chaetura pelagica*	X1	//2004	Protected
Ruby-throated Hummingbird	*Archilochus colubris*	X1	//2002	Protected
Belted Kingfisher	*Megaceryle alcyon*	X1	6/2/2000	Protected

Red-bellied Woodpecker	*Melanerpes carolinus*	S2	//2002	Protected
Yellow-bellied Sapsucker	*Sphyrapicus varius*	X1	6/2/2000	Protected
Downy Woodpecker	*Picoides pubescens*	S2	//2004	Protected
Hairy Woodpecker	*Picoides villosus*	X1	5/29/2001	Protected
Northern Flicker	*Colaptes auratus*	P2	6/2/2000	Protected
Pileated Woodpecker	*Dryocopus pileatus*	S2	//2002	Protected
Eastern Wood-Pewee	*Contopus virens*	S2	//2002	Protected
Least Flycatcher	*Empidonax minimus*	S2	//2004	Protected
Eastern Phoebe	*Sayornis phoebe*	X1	5/29/2001	Protected
Great Crested Flycatcher	*Myiarchus crinitus*	S2	//2002	Protected
Eastern Kingbird	*Tyrannus tyrannus*	X1	//2004	Protected
Blue-headed Vireo	*Vireo solitarius*	X1	5/29/2001	Protected
Warbling Vireo	*Vireo gilvus*	S2	//2004	Protected
Red-eyed Vireo	*Vireo olivaceus*	S2	//2002	Protected
Blue Jay	*Cyanocitta cristata*	X1	6/2/2000	Protected
American Crow	*Corvus brachyrhynchos*	X1	6/2/2000	Game Species
Fish Crow	*Corvus ossifragus*	X1	//2004	Protected
Tree Swallow	*Tachycineta bicolor*	FL	6/27/2003	Protected
Cliff Swallow	*Petrochelidon pyrrhonota*	X1	//2002	Protected
Black-capped Chickadee	*Poecile atricapillus*	S2	//2002	Protected
Tufted Titmouse	*Baeolophus bicolor*	S2	//2002	Protected
White-breasted Nuthatch	*Sitta carolinensis*	S2	//2002	Protected
Brown Creeper	*Certhia americana*	S2	//2002	Protected
House Wren	*Troglodytes aedon*	X1	6/2/2000	Protected
Blue-gray Gnatcatcher	*Polioptila caerulea*	X1	//2004	Protected
Veery	*Catharus*	S2	//2002	Protected

	fuscescens			
Wood Thrush	*Hylocichla mustelina*	S2	//2002	Protected
American Robin	*Turdus migratorius*	FY	//2004	Protected
Gray Catbird	*Dumetella carolinensis*	X1	6/2/2000	Protected
Cedar Waxwing	*Bombycilla cedrorum*	S2	//2002	Protected
Yellow Warbler	*Dendroica petechia*	X1	6/2/2000	Protected
Yellow-rumped Warbler	*Dendroica coronata*	X1	6/2/2000	Protected
Black-throated Green Warbler	*Dendroica virens*	X1	//2002	Protected
Blackburnian Warbler	*Dendroica fusca*	X1	//2002	Protected
Black-and-white Warbler	*Mniotilta varia*	X1	//2004	Protected
American Redstart	*Setophaga ruticilla*	S2	//2004	Protected
Worm-eating Warbler	*Helmitheros vermivorum*	S2	//2002	Protected
Ovenbird	*Seiurus aurocapilla*	S2	//2002	Protected
Louisiana Waterthrush	*Seiurus motacilla*	X1	6/27/2003	Protected
Common Yellowthroat	*Geothlypis trichas*	X1	6/2/2000	Protected
Chipping Sparrow	*Spizella passerina*	X1	//2002	Protected
Song Sparrow	*Melospiza melodia*	NE	6/2/2000	Protected
Scarlet Tanager	*Piranga olivacea*	S2	//2002	Protected
Northern Cardinal	*Cardinalis cardinalis*	X1	//2002	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	X1	6/2/2000	Protected
Red-winged Blackbird	*Agelaius phoeniceus*	P2	6/2/2000	Protected
Common Grackle	*Quiscalus quiscula*	FY	//2004	Protected
Brown-headed Cowbird	*Molothrus ater*	X1	6/2/2000	Protected
Baltimore Oriole	*Icterus galbula*	S2	//2004	Protected

American Goldfinch	*Spinus tristis*	X1	//2002	Protected

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List of Species Breeding in Atlas Block 5564B

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Canada Goose	*Branta canadensis*	FL	//2004	Game Species
Mallard	*Anas platyrhynchos*	X1	6/15/2004	Game Species
Common Merganser	*Mergus merganser*	FL	6/15/2001	Game Species
Wild Turkey	*Meleagris gallopavo*	FL	6/15/2004	Game Species
Great Blue Heron	*Ardea herodias*	X1	5/6/2000	Protected
Green Heron	*Butorides virescens*	X1	6/24/2004	Protected
Turkey Vulture	*Cathartes aura*	X1	6/24/2004	Protected
Bald Eagle	*Haliaeetus leucocephalus*	NY	//2002	Threatened
Sharp-shinned Hawk	*Accipiter striatus*	X1	//2004	Protected-Special Concern
Red-shouldered Hawk	*Buteo lineatus*	X1	6/15/2004	Protected-Special Concern
Broad-winged Hawk	*Buteo platypterus*	FL	7/3/2005	Protected
Red-tailed Hawk	*Buteo jamaicensis*	FL	7/2/2004	Protected
American Kestrel	*Falco sparverius*	X1	5/6/2000	Protected
Killdeer	*Charadrius vociferus*	X1	6/21/2005	Protected
Spotted Sandpiper	*Actitis macularius*	X1	7/5/2002	Protected
Rock Pigeon	*Columba livia*	X1	7/5/2002	Unprotected
Mourning Dove	*Zenaida macroura*	FL	6/21/2005	Protected
Yellow-billed Cuckoo	*Coccyzus americanus*	X1	7/3/2005	Protected
Black-billed Cuckoo	*Coccyzus erythropthalmus*	X1	6/15/2004	Protected
Ruby-throated Hummingbird	*Archilochus colubris*	X1	6/24/2004	Protected

Belted Kingfisher	*Megaceryle alcyon*	X1	//2004	Protected
Red-bellied Woodpecker	*Melanerpes carolinus*	FY	6/15/2001	Protected
Yellow-bellied Sapsucker	*Sphyrapicus varius*	NY	7/3/2005	Protected
Downy Woodpecker	*Picoides pubescens*	X1	5/6/2000	Protected
Hairy Woodpecker	*Picoides villosus*	FL	6/24/2004	Protected
Northern Flicker	*Colaptes auratus*	FL	7/18/2004	Protected
Pileated Woodpecker	*Dryocopus pileatus*	X1	5/6/2000	Protected
Eastern Wood-Pewee	*Contopus virens*	S2	7/2/2004	Protected
Least Flycatcher	*Empidonax minimus*	S2	6/21/2005	Protected
Eastern Phoebe	*Sayornis phoebe*	UN	6/15/2004	Protected
Great Crested Flycatcher	*Myiarchus crinitus*	T2	7/18/2004	Protected
Eastern Kingbird	*Tyrannus tyrannus*	DD	6/24/2004	Protected
Yellow-throated Vireo	*Vireo flavifrons*	X1	5/6/2000	Protected
Blue-headed Vireo	*Vireo solitarius*	P2	5/6/2000	Protected
Warbling Vireo	*Vireo gilvus*	DD	6/21/2005	Protected
Red-eyed Vireo	*Vireo olivaceus*	FL	7/3/2005	Protected
Blue Jay	*Cyanocitta cristata*	FY	6/20/2004	Protected
American Crow	*Corvus brachyrhynchos*	FL	6/15/2004	Game Species
Common Raven	*Corvus corax*	X1	5/6/2000	Protected
Tree Swallow	*Tachycineta bicolor*	FL	6/15/2004	Protected
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	X1	6/21/2005	Protected
Cliff Swallow	*Petrochelidon pyrrhonota*	ON	6/21/2005	Protected
Barn Swallow	*Hirundo rustica*	NY	6/15/2004	Protected
Black-capped Chickadee	*Poecile atricapillus*	FL	6/24/2004	Protected
Tufted Titmouse	*Baeolophus bicolor*	FL	6/15/2004	Protected
Red-breasted Nuthatch	*Sitta canadensis*	X1	5/6/2000	Protected

White-breasted Nuthatch	*Sitta carolinensis*	FL	6/20/2004	Protected
Brown Creeper	*Certhia americana*	S2	//2004	Protected
Carolina Wren	*Thryothorus ludovicianus*	D2	7/12/2004	Protected
House Wren	*Troglodytes aedon*	DD	6/21/2005	Protected
Blue-gray Gnatcatcher	*Polioptila caerulea*	X1	7/12/2004	Protected
Eastern Bluebird	*Sialia sialis*	FL	7/18/2004	Protected
Veery	*Catharus fuscescens*	S2	//2004	Protected
Hermit Thrush	*Catharus guttatus*	S2	7/12/2004	Protected
Wood Thrush	*Hylocichla mustelina*	FY	6/21/2005	Protected
American Robin	*Turdus migratorius*	FL	6/15/2004	Protected
Gray Catbird	*Dumetella carolinensis*	FY	6/15/2004	Protected
Brown Thrasher	*Toxostoma rufum*	X1	6/15/2004	Protected
European Starling	*Sturnus vulgaris*	FL	6/15/2004	Unprotected
Cedar Waxwing	*Bombycilla cedrorum*	B2	6/15/2004	Protected
Blue-winged Warbler	*Vermivora pinus*	X1	5/6/2000	Protected
Yellow Warbler	*Dendroica petechia*	S2	6/20/2004	Protected
Chestnut-sided Warbler	*Dendroica pensylvanica*	X1	7/12/2004	Protected
Black-throated Blue Warbler	*Dendroica caerulescens*	X1	7/5/2002	Protected
Yellow-rumped Warbler	*Dendroica coronata*	FY	7/3/2005	Protected
Black-throated Green Warbler	*Dendroica virens*	FY	7/2/2004	Protected
Blackburnian Warbler	*Dendroica fusca*	S2	7/12/2004	Protected
Pine Warbler	*Dendroica pinus*	X1	6/15/2001	Protected
Black-and-white Warbler	*Mniotilta varia*	S2	//2004	Protected
American Redstart	*Setophaga ruticilla*	S2	6/24/2004	Protected
Ovenbird	*Seiurus aurocapilla*	T2	7/2/2004	Protected

Northern Waterthrush	*Seiurus noveboracensis*	X1	6/15/2001	Protected
Louisiana Waterthrush	*Seiurus motacilla*	FY	7/3/2005	Protected
Common Yellowthroat	*Geothlypis trichas*	FL	7/18/2004	Protected
Eastern Towhee	*Pipilo erythrophthalmus*	P2	7/18/2004	Protected
Chipping Sparrow	*Spizella passerina*	FL	6/15/2004	Protected
Song Sparrow	*Melospiza melodia*	DD	7/12/2004	Protected
White-throated Sparrow	*Zonotrichia albicollis*	X1	5/6/2000	Protected
Dark-eyed Junco	*Junco hyemalis*	X1	5/6/2000	Protected
Scarlet Tanager	*Piranga olivacea*	S2	6/24/2004	Protected
Northern Cardinal	*Cardinalis cardinalis*	S2	6/24/2004	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	P2	7/18/2004	Protected
Indigo Bunting	*Passerina cyanea*	DD	7/3/2005	Protected
Red-winged Blackbird	*Agelaius phoeniceus*	FL	6/15/2004	Protected
Common Grackle	*Quiscalus quiscula*	FY	6/15/2004	Protected
Brown-headed Cowbird	*Molothrus ater*	FL	7/3/2005	Protected
Baltimore Oriole	*Icterus galbula*	FY	6/21/2005	Protected
Purple Finch	*Carpodacus purpureus*	X1	7/12/2004	Protected
House Finch	*Carpodacus mexicanus*	FL	6/21/2005	Protected
American Goldfinch	*Spinus tristis*	P2	7/12/2004	Protected
House Sparrow	*Passer domesticus*	ON	6/15/2004	Unprotected

Current Date: 6/22/2016

Attachment E

NYS Department of Environmental Conservation (NYSDEC) Nature Explorer Results

USER DEFINED SEARCH RESULTS

Map | Filter | Print Report

Legend

- Major Cities
- Interstates
- Streets
- Natural Communities
- Rare Plants and Animals (Generalized)
- Counties
- Streams and Rivers
  - Stream, River
- Waterbodies - Small

Criteria: Selected Map Area

Refine Search | Export Results | Create PDF Report

Common Name / *Scientific Name*	Subgroup	Town Distribution Status	Town Year Last Documented	Protection Status		Conservation Rank	
				State	Federal	State	Global
No Records Found							

Note: Restricted plants and animals have also been documented in one or more of the Towns or Cities in which your user-defined area is located, **but are not listed in these results.** This application does **not** provide information at the level of Town or City on state-listed animals and on other sensitive animals and plants. See a list of the restricted animals and plants documented from the following counties: Ulster. **Any individual plant or animal on this county's restricted list may or may not occur in this particular user-defined area.**

This list only includes records of rare species and significant natural communities from the databases of the NY Natural Heritage Program. This list is not a definitive statement about the presence or absence of all plants and animals, including rare or state-listed species, or of all significant natural communities. For most areas, comprehensive field surveys have not been conducted, and this list should not be considered a substitute for on-site surveys.

Attachment F

Bat Habitat Assessment Form

APPENDIX A
PHASE 1 SUMMER HABITAT ASSESSMENTS

INDIANA BAT HABITAT ASSESSMENT DATASHEET

Project Name: Ashokan Rail Trail

Date: 6/28-6/29/16, 7/7/16, 5/17/17

Township/Range/Section: Hurley and Olive

Lat Long/UTM/ Zone: Between 42° 0'20.87"N, 74°16'16.63"W and 41°59'5.60"N, 74° 5'13.93"W (NAD 83).

Surveyor: Johanna Duffy, CWB
Corinne Steinmuller

Brief Project Description

Ulster County is proposing the construction of an 11.5-mile pedestrian and bicycle trail which will run from Basin Road in the Town of Hurley to NYS Route 28A in the Town of Olive. The proposed action includes the creation of a recreational trail corridor on a former rail line north of the Ashokan Reservoir.

Project Area

	Total Acres	Forest Acres	Open Acres
Project	56	40	16

	Completely cleared	Partially cleared (will leave trees)	Preserve acres- no clearing
Proposed Tree Removal (ac)		9.2	

Vegetation Cover Types

Pre-Project	Post-Project
Forested	Forested

Landscape within 5 mile radius

Flight corridors to other forested areas?

Yes

Describe Adjacent Properties (e.g. forested, grassland, commercial or residencial development, water sources)

Ashokan Reservoir, commercial and residential development

Proximity to Public Land

What is the distance (mi.) from the project area to forested public lands (e.g., national or state forests, national or state parks, conservation areas, wildlife management areas)?

Project is on forested public land

APPENDIX A
PHASE 1 SUMMER HABITAT ASSESSMENTS

Use additional sheets to assess discrete habitat types at multiple sites in a project area

Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description
Sample Site No.(s): 1

Water Resources at Sample Site				
Stream Type (# and length)	Ephemeral: Multiple	Intermittent: Multiple	Perennial: Multiple	Describe existing condition of water sources: Water is high quality and is used for public drinking
Pools/Ponds (# and size)	Reservoir >8,000 acres	Open and accessible to bats? Yes		
Wetlands (approx. ac.)	Permanent: Multiple	Seasonal: Multiple		

Forest Resources at Sample Site				
Closure/Density	Canopy (> 50'): 0	Midstory (20-50'): 5	Understory (<20'): 5	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81=100%
Dominant Species of Mature Trees	red maple, striped maple, shagbark hickory, silver maple, northern red oak, eastern white pine, and American beech			
% Trees w/ Exfoliating Bark		30		
Size Composition of Live Trees (%)	Small (3-8 in): 50	Med (9-15 in): 30	Large (>15 in): 20	
No. of Suitable Snags				

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? Yes

Additional Comments:
Size of trees qualifies them for potential use as roost trees.

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources

Attachment G

Species Conclusion Table

Species Conclusions Table Project Name: Ashokan Rail Trail Date: 7/14/16				
Species Name	Potential Habitat Present?	Critical Habitat Present?	ESA/Eagle Act Determination	Notes / Documentation Summary (include full rationale in your report)
Northern long-eared bat *(Myotis septentrionalis) and* Indiana Bat (*Myotis sodalis*)	Yes	No	May effect, not likely to Adversely Affect	Although a small portion of the project area will require removal of trees (2 total) greater than 3 inches DBH, the habitat impact will be minimal. Changes in lighting will also occur as a result of the project, due to increases in mast lighting the proposed project is recommended to have a "May Effect not Likely to Adversely Affect" on these protected bat species.
Bog turtle *(Clemmys muhlenbergii*)	No	No	No Effect	The delineated wetlands to be impacted lacked deep mucky soils, contained common reed, were shaded by upland overstory, and lacked the microtopographic features important to this species.
Bald eagle (*Haliaeetus leucocephalus)*	Yes	No	May Affect, Not Likely to Adversely Affect. No BGEPA permit required.	Suitable habitat and nest with young identified by BBA and NYSDEP. To avoid impact and necessity for a BGEPA permit, it is recommended that construction that will occur within sight or 660 feet of a nest occur during the non-breeding season, from mid-September to December.
Sharp-Shinned Hawk (*Accipiter striatus*)	Yes	No	No Effect	Birds breed in deep forests. In winter, will utilize forest edge and open habitat for hunting.
Osprey (*Pandion haliaetus*)	Yes	No	No Effect	Common around shorelines and waterways. Habitat includes rivers, lakes, reservoirs, lagoons, swamps, and marshes. Nests are usually elevated and within a short distance (12 miles) of an adequate supply of fish.
Red-shouldered hawk (*Buteo lineatus)*	Yes	No	No Effect	Forest birds that prefer an open sub-canopy for hunting. Can be found in suburban areas with mixed forest and housing. Suitable foraging habitat was identified within the corridor. However, impacts will be temporary and limited to noise during construction.
American bittern (*Botaurus lentiginosus)*	Yes	No	No Effect	Shallow, freshwater marshes. Tend to stay hidden among dense vegetation. Suitable habitat was identified immediately adjacent the corridor. However, impacts will be temporary and limited to noise during construction. No direct impacts will occur to suitable wetlands for this species.
Whip-poor-will (*Caprimulgus vociferos*)	No	No	No Effect	Forests with open understory. Found in both deciduous and deciduous pine mix. Nest on forest floor and are strictly nocturnal. No open understory was identified within the project corridor.
Common nighthawk (*Chordeiles minor*)	No	No	No Effect	Nest on bare soil and/or rock in forest clearings, but have also been known to nest on gravel rooftops. No bare soil and/or rock clearings were identified within the project corridor.

Ashokan Rail Trail
Towns of Hurley and Olive
Ulster County, New York

Wetland Delineation Report

May 2017

Barton & Loguidice

Ashokan Rail Trail
Towns of Hurley and Olive
Ulster County, New York

Wetland Delineation Report

May 2017

Ashokan Rail Trail

Towns of Hurley and Olive
Ulster County, New York

Wetland Delineation Report

May 2017

Prepared For:

Ulster County Planning Department
244 Fair Street
Kingston, New York 12401

Prepared By:

Barton & Loguidice, D.P.C.
10 Airline Drive
Albany, NY 12205

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Appendices

1.0 Introduction

This report describes the wetland resources located along portions of the proposed Ashokan Rail Trail located in the Towns of Olive and Hurley, Ulster County, New York. Ulster County is proposing construction of an 11.5-mile pedestrian and bicycle trail which will run from Basin Road in the Town of Hurley to Route 28A in the Town of Olive. The proposed action includes the creation of a recreational trail corridor on a former Ulster & Delaware (U&D) rail line, north of the Ashokan Reservoir on an Ulster County-owned corridor. The project is located within New York City Watershed Lands, which are regulated by the New York City Department of Environmental Protection (NYCDEP). The project includes repurposing the existing ballast, removal of rail and ties, creation of trailheads, installation of two pedestrian bridges and maintenance to/replacement of existing culvert structures. The limits of survey along the corridor, identified as the Project Corridor, were approximately 20 feet from the center of the railway in the Ulster County Right of Way (ROW).

A wetland and stream delineation was conducted by Barton & Loguidice, D.P.C. (B&L) throughout the Project Corridor (see Figures 1 and 2) on June 28 and 29, 2016 and July 7, 2016, in accordance with the Routine Delineation Method set forth in the *Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Version 2.0* (U.S. Army Corps of Engineers [USACE], 2011). These methods were used to identify wetland and water resources within the Project Corridor.

This report summarizes agency resource information obtained for the Project Corridor, details the methods used to identify and delineate the field observed resources, and presents the results of the field wetland boundary delineation. Wetland delineation field data sheets and photographs of the wetland resources located within and adjacent to the Project Corridor are included as Appendices A and B of this report, respectively.

2.0 Site Description

2.1 Location

Located in the Ulster County Towns of Hurley and Olive, the Ashokan Rail Trail will re-purpose an abandoned railway owned by Ulster County within the Catskill Park. This abandoned railroad travels north of, and parallel to, the NYCDEP-regulated Ashokan Reservoir. Portions of the eastern section of railway were recently used by the Catskill Mountain Railway as a tourist attraction. This use ceased in May 2016. The remainder of the U&D railroad has been neglected for many years.

2.2 Site Use

Areas immediately adjacent to the Project Corridor consist primarily of residential and commercial properties to the north developed along NYS Route 28. To the south of the Corridor, the Ashokan Reservoir serves as a drinking water source for New York City and is recreationally limited to fishing and non-motorized boat use. The Project Corridor travels through mature and mid-successional forests, primarily deciduous, and crosses the Esopus Creek at the western end of the proposed trail.

3.0 Agency Resource Information

Prior to undertaking the field wetland delineation, a desktop information search was completed to review the site topography, mapped soils, and mapped wetlands associated with the Project Corridor. This desktop review included the U.S. Geological Survey's (USGS) topographic mapping, soils information from the Natural Resources Conservation Service's (NRCS) Soil Survey Geographic (SSURGO) Database and Web Soil Survey, the National Wetland Inventory (NWI) mapping, and the New York State Department of Environmental Conservation's (NYSDEC) freshwater wetland mapping.

3.1 Topographic Mapping

The Project Corridor is included on the USGS' 7.5-minute Ashokan, Bearsville, Kingston West, Phoenicia, and West Shokan quadrangle maps (Figure 2). Descriptions of the topographic features noted along the Project Corridor within each of these quadrangles are included below.

Ashokan: The northern quarter of the map portrays an elevation ranging from 600 feet above mean sea level (amsl) to approximately 660 feet amsl. The landscape to the north is steeply sloped with a peak of over 2,200 feet amsl adjacent to the "Little Tonshi Mountain" label. To the south of the Project Corridor, the elevation levels out to less than 600 feet amsl at the Ashokan Reservoir. On the other side of the Reservoir (further south), the landscape is undulating with peaks around 800 to 1000 feet amsl.

Bearsville: The southwest corner of the quadrangle was reviewed for a small portion of the Project Corridor. Topographic elevations are consistent with the Ashokan quadrangle.

Kingston West: Showing the eastern most section of the Project Corridor, the topography remains consistent with the same average elevation. To the east of the Project Corridor's eastern terminus, the undulating hills continue with peaks around 700 feet amsl. The Project Corridor's elevations flatten and drop to the southeast, at the Esopus Creek, to around 160 feet amsl.

Phoenicia: The southwest corner of the map was reviewed for the western terminus of the Project Corridor. A benchmark directly adjacent to the intersection of the railway and NYS Route 28A was labelled 651 feet amsl. Lands north and west of the Project Corridor are steeply mountainous, with elevations rising to above 3,500 feet amsl in the Catskill State Park.

West Shokan: The map shows the Project Corridor immediately east of the western end of the Ashokan Reservoir. There is a fairly steep bank between this section of the railway and NYS Route 28, and the alignment shifts from east-west to north-south. Elevation ranges are consistent with those observed from the Ashokan Quadrangle.

3.2 Soils Information

The NRCS' SSURGO Database and Web Soil Survey (WSS) (USDA, 2016) were reviewed to determine the types and characteristics of soils mapped within the limits of the Project Corridor to preliminarily evaluate the presence of hydric soils, one of the required criteria for federally regulated wetlands. Figure 3 displays the soil types mapped within the Project Corridor. Table 1, below, lists the soil symbol, mapping unit name, taxonomic classification, hydric classification and rating, drainage classification, and typical Munsell soil colors information that characterize each soil type mapped along the Project Corridor. As shown in Table 1, four of the soils mapped within the Project Corridor are defined as hydric soils since the WSS indicates they have hydric ratings greater than 50%. The four hydric soil units (Alluvial Land (AA), Atherton silt loam (At), Canandaigua silt loam (Cc), and Menlo silt loam (Mn)) are bolded in Table 1, below.

Table 1. NRCS Mapped Soils Data

Map Unit Name	Soil Symbol	Taxonomic Class	Drainage Class	Hydric Rating (%)	Typical Munsell Soil Horizon Colors	Typical Munsell Redoxymorphic Feature Colors
Alluvial land	**AA**	**Fluvaquents**	**Poorly drained**	**65**	**N/A**	**N/A**
Arnot channery silt loam, 0 to 8 percent slopes	AcB	Lithic Dystrochrepts	Somewhat excessively drained	0	0-6": 10YR 4/2 6-13": 10YR 5/4 13-17": 2.5Y 5/4 17-27": "Gray"	-
Arnot-Oquaga-Rock outcrop complex, very steep	ARF	Lithic Dystrochrepts	Somewhat excessively drained	0	0-6": 10YR 4/2 6-13": 10YR 5/4 13-17": 2.5Y 5/4 17-27": "Gray"	-
Atherton silt loam	**At**	**Aeric Haploquepts**	**Poorly drained**	**90**	**0-9": 10YR 3/1, 9-22": 5Y 5/1**	**0-9": 2.5YR 3/6, 9-22": 2.5Y 5/4**
Canandaigua silt loam	**Cc**	**Mollic Haplaquepts**	**Very poorly drained**	**95**	**0-8": 10YR 3/1 8-12": 10YR 6/2 12-19": 10YR 6/1 19-30": 10YR 6/2**	**8-12": 10YR 5/6, 7.5YR 5/6 12-19": 10YR 7/2, 7.5YR 5/6 19-30": 7.5YR 6/4, 7.5YR 5/6**
Castile gravelly silt loam, 0 to 3 percent slopes	CgA	Aquic Dystrochrepts	Moderately well drained	0	0-13": 10YR 4/2 13-18": 10YR 5/4 18-24": 10YR 5/3	18-24": 10YR 5/1
Castile gravelly silt loam, 3 to 8 percent slopes	CgB	Aquic Dystrochrepts	Moderately well drained	0	0-13": 10YR 4/2 13-18": 10YR 5/4 18-24": 10YR 5/3	18-24": 10YR 5/1
Gravel pit	GP	-	Somewhat excessively drained	5	-	-
Haven loam	He	Typic Dystrochrepts	Well drained	0	0-2": Decomp 2-3": 5YR 2/1 3-6": 10YR 4/2 6-13": 7.5YR 4/4 13-22": 7.5YR 5/6	-
Hoosic gravelly loam, rolling	HgC	Typic Dystrochrepts	Somewhat excessively drained	0	0-6": 10YR 4/2 6-11": 10YR 5/6 11-22": 10YR 5/6	-
Hoosic gravelly loam, 15 to 25 percent slopes	HgD	Typic Dystrochrepts	Somewhat excessively drained	0	0-6": 10YR 4/2 6-11": 10YR 5/6 11-22": 10YR 5/6	-
Hoosic soils, very steep	HSF	Typic Dystrochrepts	Somewhat excessively drained	0	0-6": 10YR 4/2 6-11": 10YR 5/6 11-22": 10YR 5/6	-
Lackawanna flaggy silt loam, 8 to 15 percent slopes	LaC	Typic Fragiudepts	Well drained	0	0-8": 5YR 3/4 8-13": 5YR 4/4 13-26": 2.5YR 4/4	-
Lackawanna and Swartswood soils, moderately steep, very bouldery	LCD	Typic Fragiudepts	Well drained	0	0-8": 5YR 3/4 8-13": 5YR 4/4 13-26": 2.5YR 4/4	-
Lackawanna and Swartswood soils, very steep, very bouldery	LCF	Typic Fragiudepts	Well drained	0	0-8": 5YR 3/4 8-13": 5YR 4/4 13-26": 2.5YR 4/4	-
Lordstown-Arnot-Rock outcrop complex, sloping	LOC	-	-	0	-	-

Table 1. NRCS Mapped Soils Data

Map Unit Name	Soil Symbol	Taxonomic Class	Drainage Class	Hydric Rating (%)	Typical Munsell Soil Horizon Colors	Typical Munsell Redoxymorphic Feature Colors
Made land	ML	Udorthents	Somewhat excessively drained	5	-	-
Menlo silt loam	**Mn**	**Histic Humaquepts**	**Very poorly drained**	**100**	**0-5": 10YR 2/1 5-16": 10YR 2/1 16-22": 7.5YR 5/1**	**5-16": 7.5YR 4/6 16-22": 7.5YR 4/6. 10YR 5/6**
Morris-Tuller complex, gently sloping, very bouldery	MTB	Aeric Fragiaquepts	Somewhat poorly drained	20	0-8": 5YR 4/2 8-10": 7.5YR 4/4 10-14": 5YR 5/2 14-50": 2.5YR 4/4	10-14": 5YR 4/4, N 5/0 14-50": N 6/0, 7.5YR 5/6, N 5/0
Oquaga channery silt loam, 3 to 8 percent slopes	OgB	Typic Dystrochrepts	Well drained	0	0-4": 5YR 3/3 4-11": 2.5YR 3/6 11-28": 2.5YR 4/4	-
Oquaga and Lordstown channery silt loams, 8 to 15 percent slopes	OlC	Typic Dystrochrepts	Well drained	0	0-4": 5YR 3/3 4-11": 2.5YR 3/6 11-28": 2.5YR 4/4	-
Oquaga-Arnot-Rock outcrop complex, sloping	ORC	Typic Dystrochrepts	Well drained	0	0-4": 5YR 3/3 4-11": 2.5YR 3/6 11-28": 2.5YR 4/4	-
Oquaga-Arnot-Rock outcrop complex, moderately steep	ORD	Typic Dystrochrepts	Well drained	0	0-4": 5YR 3/3 4-11": 2.5YR 3/6 11-28": 2.5YR 4/4	-
Plainfield-Riverhead complex, very steep	PmF	Typic Udipsamments	Excessively drained	0	0-7": 10YR 3/3 7-16": 7.5YR 4/4 16-28": 7.5YR 5/6	-
Quarry	QU	-	-	5	-	-
Red Hook gravelly silt loam	Re	Aeric Haploquepts	Somewhat poorly drained	5	0-6": 10YR 3/2 6-8": 10YR 4/3 8-13": 10YR 5/3 13-22" 10YR 5/2	6-8": 10YR 5/2 8-13": 10YR 5/2, 4/4 13-22": 7.5YR 4/4, 10YR 5/6
Schoharie silt loam, 3 to 8 percent slopes	SaB	Typic Hapludalfs	Moderately well drained	0	0-8": 7.5YR 3/2 8-11": 10YR 6/3 11-18": 5YR 5/4 18-33":2.5YR 4/4	18-33": 5YR 5/6
Scriba and Morris soils, 0 to 8 percent slopes	SdB	Aeric Fragiaquepts	Somewhat poorly drained	5	0-9": 10YR 3/2 9-13": 10YR 5/2 13-30": 7.5 YR 5/4	9-13": 10YR 5/6, 7.5YR 5/6, 10YR 6/1 13-30": 10YR 4/4, 7.5 YR 5/6, 7.5YR 6/2
Scriba and Morris soils, gently sloping, very bouldery	SEB	Aeric Fragiaquepts	Somewhat poorly drained	5	0-9": 10YR 3/2 9-13": 10YR 5/2 13-30": 7.5 YR 5/4	9-13": 10YR 5/6, 7.5YR 5/6, 10YR 6/1 13-30": 10YR 4/4, 7.5 YR 5/6, 7.5YR 6/2
Suncook loamy fine sand	Su	Typic Udipsamments	Excessively drained	0	0-7": 10YR 3/2 7-14": 10YR 4/2 14-22": 10YR 3/3	-
Tunkhannock gravelly loam, 0 to 3 percent slopes	TkA	Typic Dystrochrepts	Well drained	0	0-8": 10YR 4/3 8-16": 7.5YR 16-26": 5YR 4/4	-

Table 1. NRCS Mapped Soils Data

Map Unit Name	Soil Symbol	Taxonomic Class	Drainage Class	Hydric Rating (%)	Typical Munsell Soil Horizon Colors	Typical Munsell Redoxymorphic Feature Colors
Tunkhannock gravelly loam, 3 to 8 percent slopes	TkB	Typic Dystrochrepts	Well drained	0	0-8": 10YR 4/3 8-16": 7.5YR 16-26": 5YR 4/4	-
Tunkhannock gravelly loam, rolling	TkC	Typic Dystrochrepts	Well drained	0	0-8": 10YR 4/3 8-16": 7.5YR 16-26": 5YR 4/4	-
Valois very bouldery soils, gently sloping	VAB	Typic Dystrochrepts	Well drained	0	0-7": 10YR 4/3 7-30": 7.5YR 5/6	-
Valois very bouldery soils, moderately steep	VAD	Typic Dystrochrepts	Well drained	0	0-7": 10YR 4/3 7-30": 7.5YR 5/7	-
Wellsboro and Wurtsboro soils, gently sloping, very bouldery	WLB	Typic Fragiochrepts	Moderately well drained	0	0-8": 5YR 4/2 8-18": 5YR 4/4 18-24": 7.5YR 5/4	18-24": 5YR 5/8, 10YR 6/1, 5YR 6/3

3.3 New York State Department of Environmental Conservation Freshwater Wetlands Mapping

Desktop reviews of NYSDEC's freshwater wetland mapping resources (NYSDEC, 2016) were completed prior to a field inspection of the Project Corridor. As shown on Figure 4, several NYSDEC wetland polygons are mapped adjacent to or within the Corridor. NYSDEC regulated Wetland AS-20 is mapped approximately 100-260 feet to the south of the Project Corridor for the majority of its proposed length. A separate polygon, also part of Wetland AS-20, is located just east of Reservoir Road, and is bisected by the proposed Project Corridor. Wetland AS-20 is a Class 1 state-regulated wetland, which is listed as 139 acres in size. Wetland AS-19, a Class 2 wetland of 25.2 mapped acres, is shown immediately north of and overlapping the railway. No other NYSDEC wetlands were mapped within or adjacent to the Corridor.

3.4 National Wetland Inventory Mapping

Multiple wetland polygons were mapped by the U.S. Fish and Wildlife Services' (USFWS) National Wetland Inventory (NWI) along the Project Corridor (Figure 4). Table 2, below, summarizes the characteristics of these NWI mapped wetlands.

Table 2. NWI Mapped Wetlands

Classification Code	Wetland Type	Total Mapped Size (Acres)	Distance and Direction from Corridor
PUBH	Palustrine, unconsolidated bottom, permanently flooded (pond)	2.55	20' south of railway in Hurley, west of Basin Road
PEM1E	Palustrine, scrub-shrub, broad-leaved deciduous, seasonally flooded /saturated	1.34	Crosses railway; corresponds to NYSDEC Wetland AS-20 to north.
PFO1E	Palustrine, forested, broad-leaved deciduous, seasonally flooded /saturated	0.88	Crosses railway; corresponds to NYSDEC Wetland AS-20 to south.
PSS1/EM1C	Palustrine, scrub-shrub, broad-leaved deciduous/ emergent, persistent, seasonally flooded	2.11	Overlaps railway; corresponds to NYSDEC Wetland AS-19
PUBHh	Palustrine, unconsolidated bottom, permanently flooded, diked/impounded (pond)	1.7	60' north of railway, western end near Esopus inlet. (Causeway)
PUBHh	Palustrine, unconsolidated bottom, permanently flooded, diked/impounded (pond)	18.63	60' north of railway, western end near Esopus inlet. (Causeway)
PFO1C	Palustrine, forested, broad-leaved deciduous, seasonally flooded	5.65	Passes through Corridor along northern bank of Esopus Creek.

3.5 Surface Water Resources

The Project Corridor is located within the Lower Hudson Drainage Basin, recognized under Title 6, Chapter 10, Article 10, Part 862 in the New York Codes, Rules, and Regulations (NYCRR). NYSDEC stream mapping indicates that eight streams cross the Project Corridor. Table 3, below, provides the project assigned stream crossing identification number, the watercourse name, the NYSDEC Water Index Number, and the water quality classification/standard for the stream resource.

Stream resources mapped within the Project Corridor are shown on Figure 5. Surface water resources mapped within the Project Corridor drain into the Ashokan Reservoir (Waters Index Number H-171-P 848). This waterbody is designated as a Class AA water with AA(T) Standards, and supplies the City of New York by way of the Catskill Aqueduct to the Kensico Reservoir for distribution.

Table 3. NYSDEC Mapped Stream Resources

Watercourse Name	NYSDEC Waters Index Number	Water Quality (Class, Standard)
Esopus Creek	H-171	A,A(TS)
Tributary 8 of the Ashokan Reservoir	H-171-P 848-8	A,A(T)
Butternut Creek (Trib. 9 of Ashokan Reservoir)	H-171-P 848-9	A,A(T)
Tributary 9a of the Ashokan Reservoir	H-171-P 848-9a	A,A(T)
Tributary 1 of Butternut Creek	H-171-P 848-9-1	A,A(T)
Tributary 10 of the Ashokan Reservoir	H-171-P 848-10	A,A(T)
Tributary 11 of the Ashokan Reservoir	H-171-P 848-11	A,A(T)
Tributary 12 of the Ashokan Reservoir	H-171-P 848-12	A,A

3.6 Results of Background Information Review

A review of the background information conducted prior to the wetland field delineation indicated the potential for federal and state wetlands to be located within or adjacent to the Project Corridor based on the presence of mapped wetlands and prevalence of hydric soil. A field-based wetland identification and delineation was conducted to confirm these preliminary findings and identify the boundaries of wetland and surface water resources within the Project Corridor.

4.0 Site Ecology

4.1 General Cover Types

This section presents a summary of ecological information that is publicly available for the Project Corridor. The Project Corridor is located within mature and mid-successional forests with some scrub shrub patches interspersed throughout.

4.2 Ecological Zone

The proposed Project Corridor is located within the Appalachian Plateau Major Ecological Zone (Zone A) and the Neversink Highlands Minor Zone (NYSDEC, 2008). Characteristics of these ecological zones are provided in Table 4, below.

Table 4. Characteristics of the Ecological Zones

Feature	Appalachian Plateau / Neversink Highlands
Topography	Typical plateau structure with horizontal rock formations
Elevation	Well over 1,000 feet in most of the zone. / Most of the Highlands are above 1,200 feet. Relief is low in relation to sub-zones to the north.
Soils	Over most of the Plateau the soils are generally medium textured, acid, usually with fragipans, developed on glacial till and tend to be shallow and moderately well or poorly drained. The valley soils brought in by the glaciers are more fertile.
Vegetation	This zone is situated in the oak-northern hardwood and the northern hardwood natural vegetation zones. / The forests consist of northern hardwoods with substantial amounts of black cherry and ash. Hemlock and white pine are found in the ravines.
Land Use	The Highlands is the site of the numerous, famous Catskill resorts. Farming contributes to the economy, with a fairly recent shift from dairy to poultry farms taking place.
Mean Summer Temperature	65 to 70 degrees Fahrenheit
Mean Winter Temperature	20 to 25 degrees Fahrenheit
Mean Annual Snowfall	40 to 60 inches (60 to 85 inches in northern portions)
Growing Season	100-160 days

4.3 Wetland Cover Types

General wetland types identified within the Project Corridor are of the palustrine and lacustrine systems (Cowardin, 1979). The palustrine wetlands are dominated by emergent (PEM) and/or forested (PFO) classes. The lacustrine wetlands demonstrated a littoral subsystem and met criteria for an emergent wetland class. The Ashokan Reservoir is classified as a lacustrine system with a limnetic subsystem and a permanently flooded class. Brief descriptions of the two dominant wetland cover types noted within the Project Corridor are presented below, as most of the wetlands delineated within the Corridor are classified as such:

Emergent: Erect, rooted, herbaceous hydrophytic plants characterize emergent wetlands. This vegetation can be observed throughout most of the growing season. These wetlands typically have standing water above the soil surface for a portion of the year and often include fringe communities on open water edges.

Forested: Forested wetlands are dominated by woody vegetation with a diameter at breast height (DBH) greater than 3-inches and where soil is at least periodically saturated or inundated. Forested wetlands within the Project Corridor commonly included deciduous trees with an understory of hydrophytic herbaceous vegetation. The density of the understory varies by location and forest type.

5.0 Wetland Delineation Methodology

The background desktop data described in Section 3.0 was reviewed prior to undertaking the wetland field delineation. The *Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Northeast/Northcentral Regional Supplement to the 1987 Corps of Engineers' Manual Version 2.0* (USACE, 2011) were followed during the 2016 wetland identification and delineation effort to identify wetlands located within the Project Corridor that are subject to federal jurisdiction by the USACE. B&L performed data collection and delineation of wetland boundaries on June 28-29 and July 7, 2016. Observations of vegetative communities, soils, and hydrological characteristics were documented and used to determine the extent of wetland boundaries in the field.

The first step of the wetland field delineation was to determine whether normal conditions were present at each identified wetland location. Each site was then examined for evidence of natural or human induced alteration of vegetation, soils, or hydrology. These investigations were followed by analyzing the surrounding area and determining the location of the wetland/upland interface. Selected points were sampled for vegetation, hydrology, and soil characteristics to determine the location of this boundary. The following sub-sections describe the *2012 Northeast/Northcentral Regional Supplement Version 2.0* (USACE, 2011) delineation methodology, which was followed during the June/July 2016 field delineation effort.

5.1 Vegetation

The presence of wetland vegetation was determined by evaluating the indicator status of dominant plant species in each vegetative stratum (i.e., herbaceous layer, shrub/sapling layer, tree layer, and woody vine layer). Dominant plant species were determined using percent aerial coverage estimates. Plant identification was made using plant keys such as *Newcomb's Wildflower Guide* (Newcomb, 1977). The plant species that immediately exceeded 50% of the total percent cover for a given stratum (when ranked in descending order of abundance and cumulatively totaled), plus any additional species comprising 20% or more of the total cover for that stratum (called the 50/20 rule), were considered to be the dominant vegetative species for the data plot.

The wetland indicator status (obligate - OBL, facultative wetland - FACW, facultative - FAC, facultative upland - FACU, or upland - UPL) for dominant plant species identified in the sample plots were determined from *The Northcentral and Northeast, Regional Wetland Plant List* (Lichvar, et al., 2016).

The Routine Method outlined in the USACE's Regional Supplement requires a sequence of four tests to establish the presence or absence of a dominance of hydrophytic vegetation. The four tests are done in a sequence on an if/then logic test basis. Proceeding to the next indicator

level should only be completed if the preceding indicator did not determine a dominance of hydrophytic vegetation at the sampling location. Indicator one is the rapid test for hydrophytic vegetation. This indicator is applied if all dominant species across all vegetation strata are rated OBL or FACW.

Indicator two is the dominance test. Vegetation is considered to be hydrophytic if more than 50% of the dominant plant species across all strata are rated OBL, FACW, or FAC. The dominance test and rapid test use the 50/20 rule to determine the dominant species within a vegetative plot.

The third indicator of hydrophytic vegetation is linked to the prevalence index. The prevalence index is a weighted-average of wetland indicator statuses of all plant species in the sampling plot. The wetland indicator status of each species is assigned a value according to the following scale: OBL-1, FACW-2, FAC-3, FACU-4, and UPL-5. These assigned values are multiplied by the absolute percent cover of all species with that particular indicator status. The product of each indicator value is then summed and divided by the total percent cover, resulting in the prevalence index for that vegetation plot. The equation is as follows:

$$\text{Prevalence Index} = \frac{A_{OBL}+2*A_{FACW}+3*A_{FAC}+4*A_{FACU}+5*A_{UPL}}{A_{OBL}+A_{FACW}+A_{FAC}+A_{FACU}+A_{UPL}}$$

where A_X is the absolute percent cover

In order for a sample area to contain hydrophytic vegetation, the plot must have a prevalence index of 3 or less.

Indicator four consists of morphological adaptations. Certain plant species exhibit morphological changes in order to survive in areas that are saturated or flooded for prolonged periods of time. Some common vegetative morphological adaptations in the northeast consist of adventitious roots, hypertrophic lenticels, multi-stemmed trunks, and shallow root systems.

Plant community data recorded from each sample plot are included on the wetland delineation field data sheets provided as Appendix A.

5.2 Hydrology

The presence of primary hydrologic indicators (such as surface inundation (indicator A1), a high water table (indicator A2), soil saturation (indicator A3), or secondary hydrologic indicators (such as drainage patterns (indicator B10) or geomorphic position (indicator D2) was determined through visual observations at the data plot locations, the immediately surrounding areas, and within the soil profile. Soil saturation was determined by sampling the soils at each plot to a minimum depth of 20-inches, if possible. The depth of water was observed within

boreholes. Hydrologic data gathered in the field at each sample plot is included on the wetland delineation field data sheets provided as Appendix A.

5.3 Soils

The presence of hydric soil indicators was determined by extracting soil samples with a soil auger up to a minimal depth of 12-inches, if possible. A Munsell Soil Color Chart (2009 Edition) was used to determine soil color for observed horizons within the soil profile, including different layers within the same horizon, if observed. Soil profiles were compared to hydric soil indicators for the USDA Subregion Land Resource Region (LRR R) – Northeastern Forests, included within the Northcentral and Northeast Regional Supplement (USACE, 2011). Soil characteristics and other observations made at each sample plot are included on the wetland delineation field data sheets provided as Appendix A.

5.4 Mapping

A wetland determination was made at each sample plot after characterizing the vegetation, hydrologic indicators, and soil. If the hydrophytic vegetation, hydrology, and hydric soil criteria were met, the area was determined to be a wetland. If the criterion for one or more of the three-wetland indicators was not met, the area was determined to not be a wetland, unless unusual circumstances were observed at the data plot location.

The boundaries of each wetland location were surveyed in the field using a handheld Global Positioning System (GPS), Trimble GeoXH model (Trimble Navigation Limited, Sunnyvale, CA). This GPS model is capable of sub-foot accuracy and was used to gather each point location and map each wetland boundary along the proposed trail route. The wetland boundaries were later added to the geographic information system (GIS) base mapping for the project.

6.0 Results

6.1 Delineated Wetlands

Vegetative, soil, and hydrologic characteristics of each delineated wetland can be viewed on the corresponding field data sheets in Appendix A. The field collected information for each delineated wetland has also been summarized below. Sixteen wetland resources were identified and delineated in the field. The boundary of many of these wetlands was only partially delineated due to the continuation of the wetland limits outside of the Project Corridor. Locations where the wetland continues outside of the project limits (labelled "open") are identified on the Wetland Delineation Figures, 6A through 6J.

Wetland A (Figure 6A) is classified as a palustrine emergent (PEM) wetland and is located approximately 20 feet south of the railway. At the Wetland A data plot, broom sedge (*Carex scoparia*), shallow sedge (*Carex lurida*), and pinkweed (*Persicaria pensylvanica*) were the dominant plant species observed. A dominance of hydrophytic vegetation was indicated within Wetland A based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland A consisted of high water table (A2), saturation (A3) at the soil surface, geomorphic position (D2), and the FAC-neutral test (D5). The observed hydric soil indicator within the wetland soil data plot was sandy mucky mineral (S1). All observed soil layers exhibited muck/mucky sand textured soil. Wetland datasheets documenting the characteristics of Wetland A from the field visit are included in Appendix A.

Wetland B (Figure 6B) is classified as PEM wetland located at the toe of slope south of the railway. Stream 2 (Section 6.2) flows through the wetland, oriented north-south. The delineated wetland boundary is open to the south. At the Wetland B data plot, shallow sedge and broom sedge were the dominant plant species observed. A dominance of hydrophytic vegetation was indicated within Wetland B based on the dominance test and the prevalence index. Observed wetland hydrology indicators within Wetland B consisted of high water table (A2) at a depth of eight inches, saturation (A3) at three inches, stunted or stressed plants – dead trees – (D1) and the FAC-neutral test (D5). The hydric soil indicator observed within the wetland soil data plot was redox dark surface (F6). Observed soil layers exhibited loamy/clay textured soils. Wetland datasheets documenting the characteristics of Wetland B from the field visit are included in Appendix A.

Wetland C (Figure 6A) is a PEM wetland that was observed adjacent to an access roadway off of NYS Route 28. The delineated Wetland C boundary is open to the west. At the Wetland C data plot, American bur-reed (*Sparganium americanum*) was the dominant plant species observed. A dominance of hydrophytic vegetation was indicated within Wetland C based on the dominance test and the prevalence index. Observed wetland hydrology indicators consisted, high water table (A2) at the two inches, saturation (A3) at soil surface, geomorphic

position (D2), and the FAC-neutral test (D5). Observed hydric soil indicators consisted of depleted matrix (F3). A muck and mucky loam/clay texture were observed until 12 inches in depth, where the soil texture shifted to loam/clay. Wetland datasheets documenting the characteristics of Wetland C from the field visit are included in Appendix A.

Wetland D (Figure 6A) is a PEM wetland that was observed along the east side of the Woodford Dike access roadway. The delineated Wetland D boundary is open east. Dominant plant species within the wetland plot were speckled alder (*Alnus incana)*, Japanese stilt grass (*Microstegium vimineum*), and prickly sedge (*Carex stipata*). A dominance of hydrophytic vegetation was indicated within Wetland D based on the dominance test and the prevalence index. Wetland hydrology indicators, high water table (A2) at the two inches, saturation (A3) at soil surface, geomorphic position (D2) and the FAC-neutral test (D5). Hydric soil indicators met at the plot location for Wetland D consisted of depleted matrix (F3). Mucky loam/clay texture was noted until 14 inches, where it became loamy/clay. Wetland datasheets documenting the characteristics of Wetland D from the field visit are included in Attachment B.

Wetland E (Figure 6C) is a PEM wetland that is located to the south of the railway. This wetland is hydrologically fed by an upland runoff that passes from the north and through a cross culvert under the rail. At the time of the survey, water was flowing in the rocky cobble channel at about two to three inches deep (Stream 5). Within the data plot, this wetland was dominated by green bulrush (*Scirpus atrovirens*), arrow-leaf tearthumb (*Persicaria sagittata*), and Japanese stilt grass. A dominance of hydrophytic vegetation was indicated within Wetland E based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland E consisted of saturation (A3) at four inches, drainage patterns (B10), geomorphic position (D2), and the FAC-neutral test (D5). The hydric soil indicator redox dark surface (F6) was observed within the Wetland E soil plot. Wetland datasheets documenting the characteristics of Wetland E from the field visit are included in Appendix A.

Wetland F (Figure 6E) is a PEM wetland that was observed within a low spot influenced by a stream (Stream 8) entering from the west on the north side of the railway. Vegetation in this wetland was dominated by jewelweed (*Impatiens capensis*), pink weed, silver maple (*Acer saccharinum*) and red maple (*Acer rubrum*). A dominance of hydrophytic vegetation was indicated within Wetland F based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland F consisted of, high water table (A2) at approximately one inch from the soil surface, saturation (A3) at soil surface, geomorphic position (D2), and the FAC-neutral test (D5). The hydric soil indicator redox dark surface (F6) was observed within the Wetland F soil plot. Wetland datasheets documenting the characteristics of Wetland F from the field visit are included in Appendix A.

Wetland G (Figure 6E) is a PEM wetland that was observed along a drainage feature south of the railway, beginning where Wetland F ends. Vegetation in Wetland G was dominated

by jewelweed, prickly sedge, red maple (*Acer rubrum*), white ash (*Fraxinus americana*), and American beech (*Fagus grandifolia*). A dominance of hydrophytic vegetation was indicated within Wetland G based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland G consisted of high water table (A2) at approximately two inches from the soil surface, saturation (A3) at soil surface, drainage patterns (B10), geomorphic position (D2) and the FAC-neutral test (D5). The hydric soil indicator redox dark surface (F6) was observed within the Wetland G soil plot. Wetland datasheets documenting the characteristics of Wetland G from the field visit are included in Appendix A.

Wetland H (Figure 6E) is a PEM wetland that was observed along a drainage feature south of the railway. The Wetland H boundary was delineated and left open to the south. Vegetation in this wetland was dominated by jewelweed, Japanese stilt grass, and red maple. A dominance of hydrophytic vegetation was indicated within Wetland H based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland H consisted of saturation (A3) at approximately four inches from the soil surface, drainage patterns (B10), geomorphic position (D2), and the FAC-neutral test (D5). The hydric soil indicator redox dark surface (F6) was observed within the Wetland H soil plot. Wetland datasheets documenting the characteristics of Wetland H from the field visit are included in Appendix A.

Wetland I (Figure 6E), a PEM wetland, is located at the toe of slope on the north side of the railway. The Wetland I boundary was left open to the north. Stream 9 was identified flowing northeast from the wetland and exiting south through a culvert under the railway. Dominant vegetation observed within Wetland I was jewelweed. A dominance of hydrophytic vegetation was indicated within Wetland I based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Plot 1 data plot consisted of saturation (A3) at the soil surface, drainage patterns (B10), geomorphic position (D2) and the FAC-neutral test (D5). The hydric soil indicator redox dark surface (F6) was observed within the Wetland I data plot. Wetland datasheets documenting the characteristics of Wetland I from the field visit are included in Appendix A.

Wetland J (Figure 6F) is a palustrine scrub-shrub/forested (PSS/PFO) wetland to the north of the railway. The wetland was delineated within the Project Corridor and is open to the north. Dominant vegetation observed within Wetland J was red osier dogwood (*Cornus alba*), rattlesnake grass (*Glyceria canadensis*), and shallow sedge. A dominance of hydrophytic vegetation was indicated within Wetland J based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland J consisted of high water table (A2) present at three inches below soil surface, saturation (A3) at two inches below soil surface, and the FAC-neutral test (D5). The hydric soil indicator redox dark surface (F6) was observed within the Wetland J data plot. Wetland datasheets documenting the characteristics of Wetland J from the field visit are included in Appendix A.

Wetland K (Figure 6F) is a PEM wetland, located to the south, north, and within the limits of the abandoned railway. This wetland was delineated across the Project Corridor and is open to the west, north, and south. It is associated with NYSDEC mapped Wetland AS-20. Dominant vegetation observed within Wetland K was common reed (*Phragmites australis*). A dominance of hydrophytic vegetation was indicated within Wetland K based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland K, high water table (A2) present at one inch below soil surface , saturation (A3) at the soil surface, geomorphic position (D2) and the FAC-neutral test (D5). The hydric soil indicator redox dark surface (F6) was observed within the Wetland K data plot. A mucky loam/clay texture was observed until eight inches, where it became loamy/clay. Wetland datasheets documenting the characteristics of Wetland K from the field visit are included in Appendix A.

Wetland L (Figure 6F) is a PEM wetland, located to the south, north, and within the limits of the railway. This wetland was delineated across the Project Corridor and is open to the north, south, and east. It is associated with NYSDEC mapped Wetland AS-20. Dominant vegetation observed within Wetland L was speckled alder, red osier dogwood, and common reed. A dominance of hydrophytic vegetation was indicated within Wetland L based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland L consisted of high water table (A2) present at one inch below soil surface, saturation (A3) at the soil surface, and the FAC-neutral test (D5). The hydric soil indicator redox dark surface (F6) was observed within the Wetland L data plot. All soil layers exhibited a mucky loam/clay texture. Wetland datasheets documenting the characteristics of Wetland L from the field visit are included in Appendix A.

Wetland M (Figure 6F) is a PEM wetland located north of the railway. This wetland was delineated in its entirety. Dominant vegetation observed within Wetland M was Japanese stilt grass and rattlesnake grass. A dominance of hydrophytic vegetation was indicated within Wetland M based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland M consisted of high water table (A2) present at one inch below soil surface, saturation (A3) at the soil surface, geomorphic position (D2) and the FAC-neutral test (D5). The hydric soil indicator redox dark surface (F6) was observed within the Wetland M data plot. A mucky loam/clay texture was observed until a depth of ten inches, where further investigation was restricted by rail ballast. Wetland datasheets documenting the characteristics of Wetland M from the field visit are included in Appendix A.

Wetland N (Figure 6F) is a PEM wetland located south of the railway. This wetland was delineated in its entirety. Wetland N is located on the opposite side of the railway from Wetland M. Dominant vegetation observed within Wetland N was broom sedge, shallow sedge, and soft rush (*Juncus effusus*). A dominance of hydrophytic vegetation was indicated within Wetland N based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland N consisted of high water table (A2) present at two inches below soil surface, saturation (A3) at the soil surface, geomorphic position (D2) and the FAC-neutral test (D5). The hydric soil indicator depleted matrix (F3) was met by the soil profile characteristics recorded within the Wetland N data plot. A mucky loam/clay texture was observed until a depth of eight inches, where further investigation was restricted by rail ballast. Wetland datasheets documenting the characteristics of Wetland N from the field visit are included Appendix A.

Wetland O (Figure 6I) is a PEM wetland located at a topographic low point within the center of the proposed trail alignment. This wetland was delineated in its entirety. Dominant vegetation observed within Wetland O was jewelweed. A dominance of hydrophytic vegetation was indicated within Wetland O based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland O consisted of high water table (A2) present at one inch below soil surface, saturation (A3) at the soil surface, hydrogen sulfide odor (C1) and the FAC-neutral test (D5). The hydric soil indicator redox depressions (F8) was met within the Wetland O data plot. A muck texture was observed until a depth of four inches, where it became mucky loam/clay and was restricted by rail ballast at 12 inches in depth. Wetland datasheets documenting the characteristics of Wetland O from the field visit are included in Appendix A.

Wetland P (Figure 6J) is a PEM wetland located at the toe of slope east of the railway. A culvert was observed with no flowing water or defined channel passing under the railway, to the north, suggesting the area becomes inundated during storms. This storm overflow likely settles within the topographic low spot that represents Wetland P. Investigation of the western side of the culvert did not identify any wetland areas. Dominant vegetation observed within Wetland P was Japanese stilt grass, jewelweed, and white ash. A dominance of hydrophytic vegetation was indicated within Wetland P based on the dominance test and the prevalence index. Wetland hydrology indicators observed within Wetland P consisted of saturation (A3) at three inches in depth, drainage patterns (B10), geomorphic position (D2), and the FAC-neutral test (D5). The hydric soil indicator redox dark surface (F6) was met within the Wetland P data plot. A loamy/clay texture was observed for all soil layers. Wetland datasheets documenting the characteristics of Wetland P from the field visit are included in Appendix A.

6.2 Surface Waters

Surface waters within the Project Corridor were identified in the field during the wetland delineation effort. Potential federal jurisdiction was based on observations of bed, bank, and ordinary high water characteristics. The presence of these characteristics in streams that are hydraulically connected to other regulated resources qualify them as Waters of the U.S. under the Clean Water Act, which is regulated by the USACE. The results of the stream identification field effort are summarized below. Unmapped stream classification is discussed in Section 7, Summary and Conclusions. Stream resources can be seen on Figures 6A-6J.

Stream 1 is an unmapped stream that was observed flowing from north to south through a culvert under the railway. This stream was dry at the time of observation but held pools of approximately 3 inches depth of water in spots. The stream channel was approximately 5 feet wide and exhibited a bedrock cobble substrate (Figure 6B).

Stream 2 is an unmapped stream that was observed flowing through Wetland B, oriented north-south. This stream was observed to have flow ranging from 1-3 inches. The stream channel was approximately 3 feet wide and exhibited a cobble substrate (Figure 6B).

Stream 3 is a NYSDEC mapped stream identified as Tributary 12 of the Ashokan Reservoir (Waters Index Number H-171-P 848-12). The stream was observed flowing north to south with flowing water and a channel width of approximately 10 feet comprised of a silt and cobble substrate. The stream is classified as a Class A stream with A standards (Figure 6B).

Stream 4 is an unmapped stream observed flowing from the northwest to the southeast. Observed water depth in the channel was ½" to 1 foot with a channel width of approximately 8 feet. Total channel depth was noted at 1 ½ feet with a cobble bedrock substrate (Figure 6C).

Stream 5 is an unmapped stream feeding Wetland E as an upland runoff that passes from the north and through a cross culvert under the rail. At the time of the survey, water was flowing in the rocky cobble channel at about two to three inches deep (Figure 6C).

Stream 6 is a NYSDEC mapped stream identified as Tributary 11 of the Ashokan Reservoir (Waters Index Number H-171-P 848-11). The stream was observed flowing northwest to the southeast. Observed water depth in the channel was 2-6 inches with a channel width of approximately 3 feet. This stream is a Class A stream with A(T) standards (Figure 6D).

Stream 7 is an unmapped stream that was observed flowing from north to south through a culvert under the railway. This stream was dry at the time of observation but was a clearly defined rocky cobble channel of approximately 3 feet width (Figure 6E).

Stream 8 is an unmapped stream entering from the west on the north side of the railway at Wetland F. Flow from this stream continued south through a culvert northeast of Wetland G. Flow was observed at a depth of 2-3 inches and a width of 2 feet (Figure 6E).

Stream 9 is an unmapped stream identified flowing from the west on the northern side of the railway through Wetland I and exiting south through a culvert under the railway. Flow was observed at a depth of 2-3 inches and a width of 1-2 feet (Figure 6E).

Stream 10 is a NYSDEC mapped stream identified as Tributary 10 of the Ashokan Reservoir (Waters Index Number H-171-P 848-10). The stream was observed flowing northwest to the southeast. Observed water depth in the channel was 6-14 inches with a channel width of approximately 15 feet. This stream is a Class A stream with A(T) standards (Figure 6F).

Stream 11 is an unmapped stream that was observed flowing from north to south through a culvert under the railway. This stream held approximately 2-4 inches depth of water. The stream channel was approximately 2-3 feet wide and exhibited a silt cobble substrate. Outside and to the south of the Project Corridor, the stream was observed to widen to a channel width of approximately 15 feet (Figure 6F).

Stream 12 is a NYSDEC mapped stream identified as Tributary 9a of the Ashokan Reservoir (Waters Index Number H-171-P 848-9a). This stream held approximately 3 inches of water with a silt substrate and channel width of 1-3 feet. This resource is Class A with A(T) Standards (Figure 6G).

Stream 13 is an unmapped stream that was observed collecting drainage from the east and west of the northern boundary of the rail to the south through a culvert under the railway (Figure 6H). This stream held approximately 3 inches depth of water. The stream channel was approximately 3 feet wide and exhibited a silt substrate.

Stream 14 is a NYSDEC mapped stream identified as Butternut Creek (Waters Index Number H-171-P 848-9), the 9th Tributary of the Ashokan Reservoir. It is important to note that unlike the NYSDEC mapping, the two channels (Tributary 1 of Butternut Creek and Butternut Creek itself) converge north of the railway, not south as shown. The stream was observed flowing northeast to the southwest. Observed water depth in the channel was 3-5 inches with a channel width of approximately 15 feet. This stream is a Class A stream with A(T) standards (Figure 6H).

Stream 15 is an unmapped stream that was observed collecting drainage from the northern boundary of the rail and flowing to the south through a culvert under the railway (Figure 6H). This stream held approximately ½ -3 inches of water. The stream channel was approximately 3 feet wide and exhibited a silt and rocky cobble substrate (Figure 6I).

Stream 16 is an unmapped stream that was observed collecting drainage from the eastern boundary of the rail and continuing to the southwest through a culvert under the railway. This stream held approximately 4 inches depth of water. The stream channel was approximately 3 feet wide and exhibited a rocky cobble substrate (Figure 6I).

Stream 17 is a NYSDEC mapped stream identified as the Esopus Creek (Waters Index No. H-171). The stream was observed flowing northeast to the southwest. Observed water depth in the channel was 3-12 inches with a channel width of approximately 200 feet. This stream is a Class A stream with A(T) standards (Figure 6J).

6.3 Wetland and Surface Water Labeling

A total of 16 wetlands were identified and delineated adjacent to the Project Corridor as part of this wetland delineation field effort. Figures 6A through 6J show the locations of wetlands delineated as part of the Ashokan Rail Trail field walkover, as well as the location of the 17 observed Waters of the U.S. Table 5, below, provides the coordinates of each wetland and stream located within the Project Corridor. Identified wetland areas were individually labeled as A through P. Streams observed within the project area were labeled as Stream 1 through Stream 17. The data collected in the field were recorded on field data sheets provided in Appendix A. Color photographs of various portions of the delineated wetland resources are included in Appendix B.

Table 5. Wetland and Stream Locations

Resource ID	Type of Resource	Lat/Long Coordinates (NAD83)
A	Wetland	41°59'36.01"N, 74° 5'27.64"W
B	Wetland	42° 0'5.23"N, 74° 7'47.75"W
C	Wetland	41°59'42.48"N, 74° 5'32.51"W
D	Wetland	41°59'42.19"N, 74° 5'31.42"W
E	Wetland	41°59'44.24"N, 74° 9'14.53"W
F	Wetland	41°58'49.68"N, 74°10'57.76"W
G	Wetland	41°58'48.99"N, 74°10'59.81"W
H	Wetland	41°58'40.09"N, 74°11'21.86"W
I	Wetland	41°58'35.38"N, 74°11'34.48"W
J	Wetland	41°58'20.23"N, 74°12'15.83"W
K	Wetland	41°58'17.03"N, 74°12'24.42"W
L	Wetland	41°58'17.69"N, 74°12'24.47"W
M	Wetland	41°58'10.89"N, 74°12'40.99"W
N	Wetland	41°58'10.72"N, 74°12'40.71"W
O	Wetland	41°58'20.68"N, 74°14'37.94"W
P	Wetland	42° 0'2.59"N, 74°16'12.76"W

Table 5. Wetland and Stream Locations		
Resource ID	**Type of Resource**	**Lat/Long Coordinates (NAD83)**
1	Stream	42°0'3.955"N, 74°7'35.846"W
2	Stream	42°0'4.43"N, 74°7'50.57"W
3	Stream	42°0'3.126"N, 74°8'5.448"W
4	Stream	41°59'57.381"N, 74°8'51.728"W
5	Stream	41°59'43.523"N, 74°9'14.097"W
6	Stream	41°59'29.018"N, 74°9'45.409"W
7	Stream	41°58'51.309"N, 74°10'51.827"W
8	Stream	41°58'49.08"N, 74°10'57.858"W
9	Stream	41°58'36.267"N, 74°11'34.791"W
10	Stream	41°58'27.057"N, 74°11'55.15"W
11	Stream	41°58'24.273"N, 74°12'4.192"W
12	Stream	41°58'1.983"N, 74°13'10.877"W
13	Stream	41°58'2.626"N, 74°13'44.729"W
14	Stream	41°58'13.383"N, 74°14'23.43"W
15	Stream	41°58'26.086"N, 74°14'54.98"W
16	Stream	41°58'44.687"N, 74°15'28.768"W
17	Stream	41°59'56.32"N, 74°16'14.05"W

7.0 Summary and Conclusions

This wetland and stream delineation effort was completed to determine the locations of freshwater wetlands and waters within and adjacent to the Ashokan Rail Trail Project Corridor, located in the Towns of Hurley and Olive, Ulster County, New York. Based on the field observations and data associated with each delineated wetland, 13 wetlands (A-L and P) meet the criteria for federal wetland jurisdiction and are regulated by the USACE under Section 404 of the Clean Water Act. Wetlands M, N, and O are presumed to be isolated due to lack of bed and bank features, or observed connectivity to any additional Waters of the U.S. Wetlands M and N appear to function as localized drainage ditches, while Wetland O was observed with no inlet or outlet in a topographic low spot within the center of the trail alignment. Regardless of field observations and conclusions, the USACE has the final determination regarding federal resource jurisdiction. The Project Corridor travels through one NYSDEC mapped wetland (AS-20) and adjacent to another, NYSDEC mapped wetland (AS-19). An Article 24 permit will be required for proposed disturbance within delineated Wetlands K and L (as they are associated with NYSDEC mapped Wetland AS-20) and for disturbance within the 100-foot buffer of NYSDEC mapped Wetlands AS-19 and AS-20. A summary table of the wetlands delineated within the Project Corridor, and their recorded characteristics and federal indicators, is provided below.

Table 6. Wetland Data Plot Information and Federal Wetland Criteria

Wetland ID	Wetland Cover Type Class	Hydrologic Indicators	Dominant Vegetation	Hydrophytic Vegetation Indicator	Hydric Soil Indicator
A	Emergent	A2, A3, D2, D5	Broom sedge, shallow sedge, pinkweed	Dominance test	S1
B	Emergent	A2, A3, D1, D5	Shallow sedge, broom sedge	Dominance test	F6
C	Emergent	A2, A3, D2, D5	American bur-reed	Dominance test	F3
D	Emergent	A2, A3, D2, D5	Speckled alder, Japanese stilt grass, prickly sedge	Dominance test	F3
E	Emergent	A3, B10, D2, D5	Green bulrush, arrow-leaf tearthumb, Japanese stilt grass	Dominance test	F6
F	Emergent	A2, A3, D2, D5	Jewelweed, pinkweed, silver maple, red maple	Dominance test	F6
G	Emergent	A2, A3, B10, D2, D5	Jewelweed, prickly sedge, red maple, white ash, American beech	Dominance test	F6
H	Emergent	A3, B10, D2, D5	Jewelweed, Japanese stilt grass, red maple	Dominance test	F6
I	Emergent	A3, B10, D2, D5	Jewelweed	Dominance test	F6
J	Forested/ Scrub-shrub	A2, A3, D5	Red osier dogwood, rattlesnake grass, shallow sedge	Dominance test	F6
K	Emergent	A2, A3, D2, D5	Common reed	Dominance test	F6
L	Emergent	A2, A3, D5	Speckled alder, red osier dogwood, common reed	Dominance test	F6
M	Emergent	A2, A3, D2, D5	Japanese stilt grass, rattlesnake grass	Dominance test	F6
N	Emergent	A2, A3, D2, D5	Broom sedge, shallow sedge, soft rush	Dominance test	F3
O	Emergent	A2, A3, C1, D5	Jewelweed	Dominance test	F8
P	Emergent	A3, B10, D2, D5	Japanese stilt grass, jewelweed, white ash	Dominance test	F6

During the field walkover, stream resources identified within the Project Corridor that met the definition of Waters of the U.S. were recorded. These resources, a total of 17, are assumed to be regulated by the USACE under Section 404 of the Clean Water Act. In addition, six of these streams constitute NYSDEC mapped and protected streams, each with a Class A designation. While eight NYSDEC mapped streams were indicated during the preliminary site investigation (Section 3.5), one stream, Tributary 8 of the Ashokan Reservoir (H-171-P 848-8), was not observed during the field walkover, and a second stream, Tributary 1 of Butternut Creek (H-171-P 848-9-1), was observed outside (north) of the Project Corridor and was therefore not included in the field delineation. In addition to the six NYSDEC mapped streams, 11 unmapped water resources were identified during the site walkover, and were observed to meet criteria to be recognized as federally regulated Waters of the U.S. These 11 tributaries are assumed to be Class A waters, since unmapped streams typically assume the water quality classification of the water body into which they discharge. The mapped streams are regulated by the NYSDEC under the Protection of Waters Program (Article 15) due to their high quality and contribution to a drinking water source. The stream and wetland resources delineated within the Project Corridor will also be reviewed and permitted, if impacted, by the NYCDEP.

A Section 404 Permit from the USACE and a Section 401 Water Quality Certification from the NYSDEC will be required if any temporary or permanent impacts to these wetlands or streams are proposed as part of the project. Wetlands and Waters of the U.S. will be avoided and impacts minimized to the extent possible. Specific resource and location impacts will be determined during the detailed design phase. Feasible mitigative options will be reviewed and identified if greater than 0.1-acre of wetland will be permanently impacted, or permanent impacts to stream resources and aquatic function will occur. Applicable state and federal permits will be identified during the detailed design phase based on the calculated impacts, and a Joint Application for Permit will be assembled and submitted to the USACE, NYSDEC, and NYCDEP to request permit issuance in support of the proposed Ashokan Rail Trail project.

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Figure 1

Site Location Map – Aerial Imagery

Legend

Project Corridor

Barton & Loguidice, D.P.C.

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N W E S

1 inch = 3,000 feet

Ulster County

Ashokan Rail Trail - Aerial Imagery

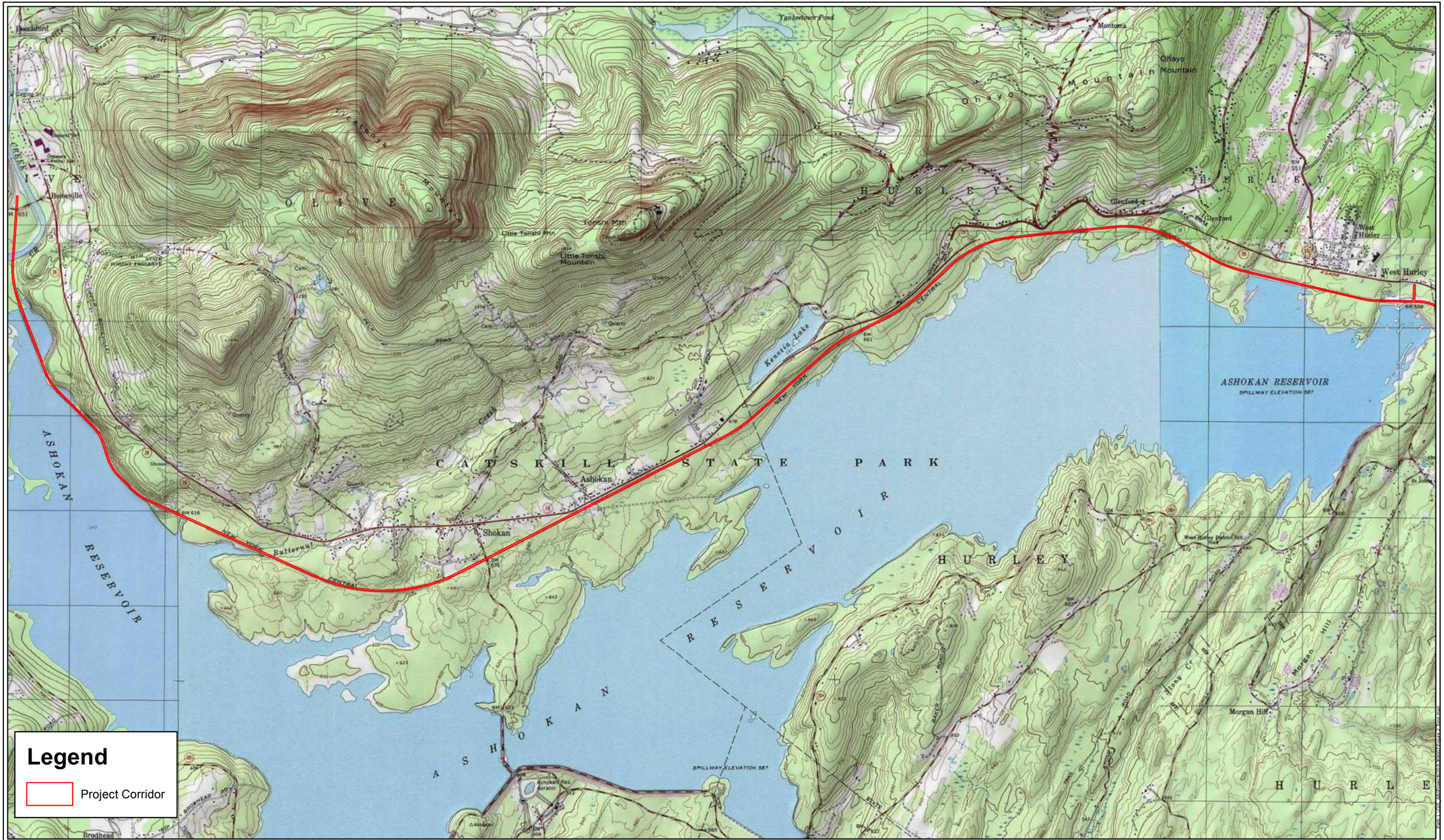
Ulster County March 2017 New York

Figure 1

Project No. 369.007

Figure 2

Site Location Map – Topographic Imagery



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1 inch = 3,000 feet

Ulster County
Ashokan Rail Trail - Topographic Imagery
Ulster County March 2017 New York

Figure 2

Project No. 369.007

Figures 3 and 3A

NRCS Mapped Soils

Legend

Project Corridor

Soil Series Symbol

- ARF - Arnot-Oquaga-Rock outcrop
- AcB - Arnot Channery silt loam
- LCD - Lackawanna and Swartswood soils, moderately steep
- LaC - Lackawanna flaggy silt loam
- ML - Made land
- MTB - Morris-Tuller complex
- Mn - Menlo silt loam
- ORC - Oquaga-Arnot-Rock outcrop, sloping
- ORD - Oquaga-Arnot-Rock complex, moderately steep
- OgB - Oquaga channery silt loam, 3-8% slopes
- OlC - Oquaga channery sil loam, 8-15% slopes
- QU - Quarry
- SEB - Scriba and Morris soils
- W - Water
- WLB - Wellsboro and Wurtsboro soils

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Ashokan Rail Trail - NRCS Soils
Ulster County March 2017 New York

Figure 3

Project No. 369.007

Western Terminus

Legend

Project Corridor

Soil Series Symbol

- At - Atherton silt loam
- Cc - Canandaigua silt loam
- CgA - Castile gravelly silt loam
- CgB - Castile gravelly silt loam, 3-8% slopes
- GP - Gravel pit
- He - Haven loam
- HgC - Hoosic gravelly loam, rolling
- HgD - Hoosic gravelly loam, 15-25% slopes
- LCF - Lackawanna and Swartswood soils, very steep
- LOC - Lordstown-Arnot-Rock outcrop complex
- MTB - Morris-Tuller complex
- OgB - Oquaga channery silt loam, 3-8% slopes
- OIC - Oquaga channery sil loam, 8-15% slopes
- PmF - Plainfield-Riverhead complex
- Re - Red Hook gravelly silt loam
- SEB - Scriba and Morris soils
- SdB - Scriba and Morris soils, 0-8% slopes
- Su - Suncook loamy fine sand
- TkA - Tunkhannock gravelly loam, 0-3% slopes
- TkB - Tunkhannock gravelly loam, 3-8% slopes
- TkC - Tunkhannock gravelly loam, rolling
- VAB - Valois very bouldery soils
- VAD - Valois very bouldery soils, moderately steep
- W - Water
- WLB - Wellsboro and Wurtsboro soils

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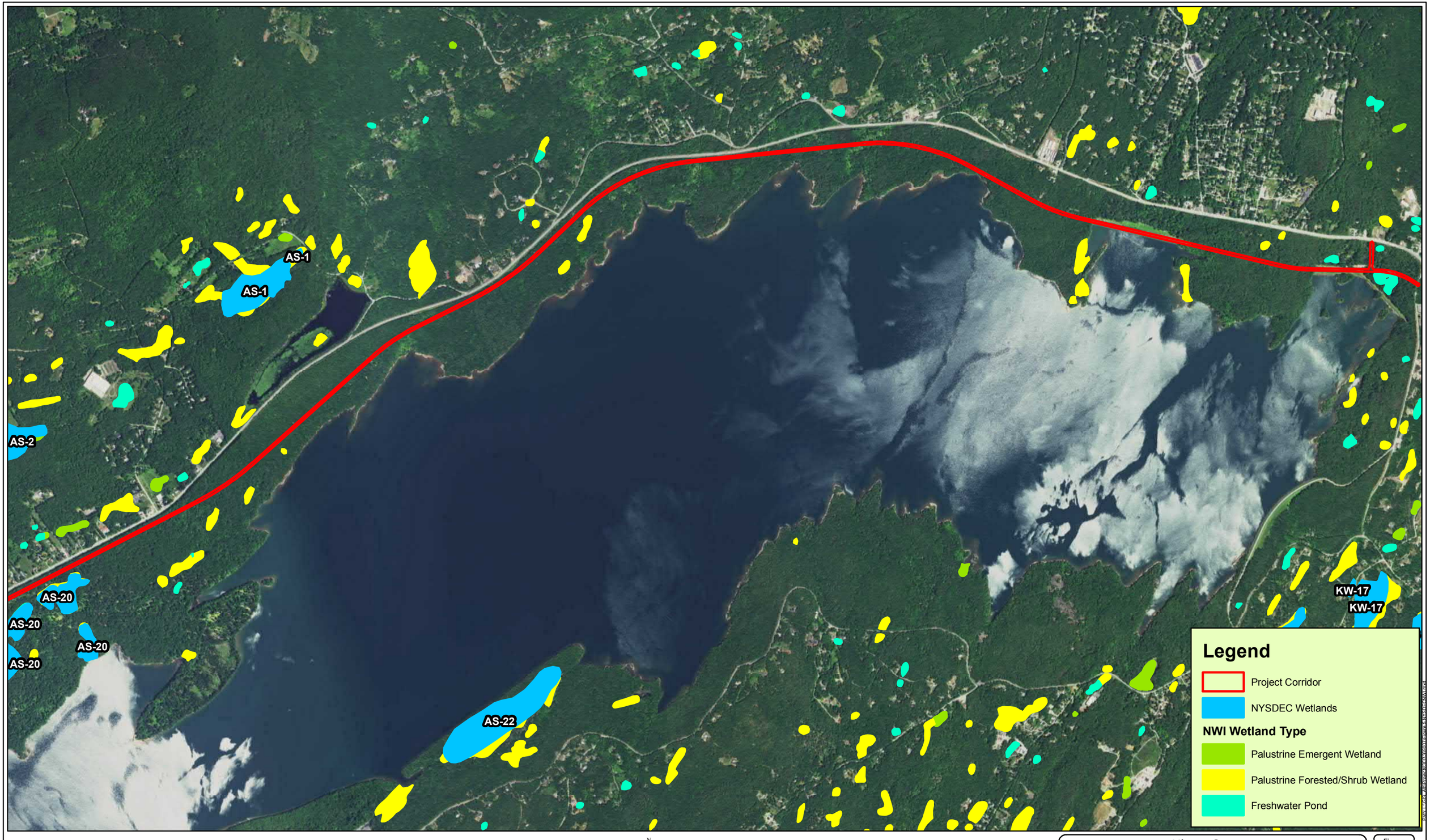
Ulster County
Ashokan Rail Trail - NRCS Soils
Ulster County March 2017 New York

Figure 3A

Project No. 369.007

Figures 4 and 4A

NYSDEC/NWI Wetlands



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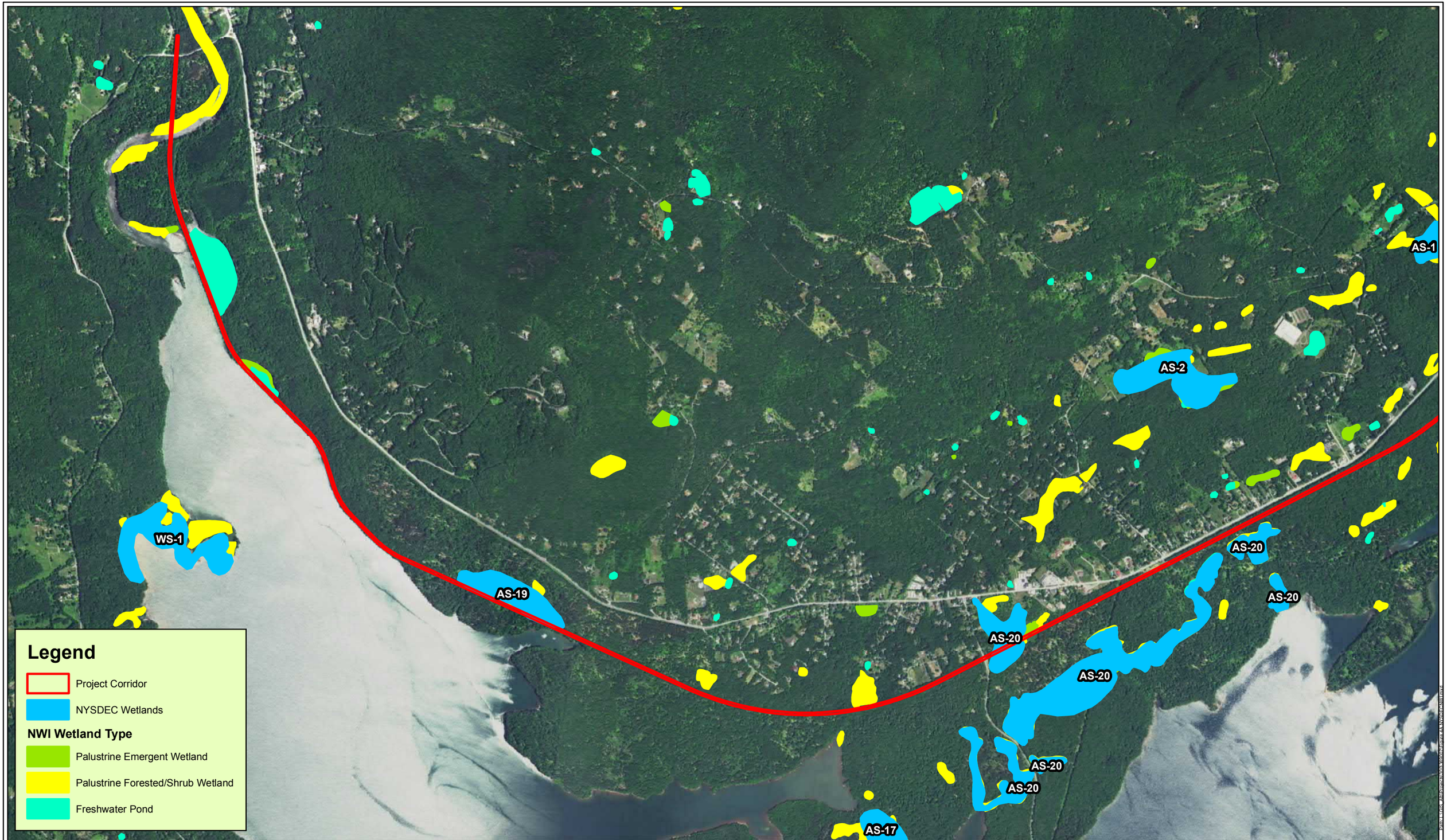
1 inch = 1,750 feet

Ulster County
Ashokan Rail Trail -
NYSDEC/NWI Wetlands
Ulster County March 2017 New York

Figure 4

Project No. 369.007



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N W E S

1 inch = 1,750 feet

Ulster County
Ashokan Rail Trail -
NYSDEC/NWI Wetlands
Ulster County March 2017 New York

Figure 4A

Project No. 369.007

Figure 5

NYSDEC Mapped Streams

Esopus Creek
H-171
Class A, A(TS) Standards

Tributary 8 of the Ashokan Reservoir
H-171-P 848-8
Class A, A(T) Standards

Tributary 1 of Butternut Creek
H-171-P 848-9-1
Class A, A(T) Standards

Butternut Creek (Trib. 9 of Ashokan Reservoir)
H-171-P 848-9
Class A, A(T) Standards

Tributary 9a of the Ashokan Reservoir
H-171-P 848-9a
Class A, A(T) Standards

Tributary 10 of the Ashokan Reservoir
H-171-P 848-10
Class A, A(T) Standards

Tributary 11 of the Ashokan Reservoir
H-171-P 848-11
Class A, A(T) Standards

Tributary 12 of the Ashokan Reservoir
H-171-P 848-12
Class B, B Standards

Legend

Project Corridor

NYSDEC Streams

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W E
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1 inch = 3,000 feet

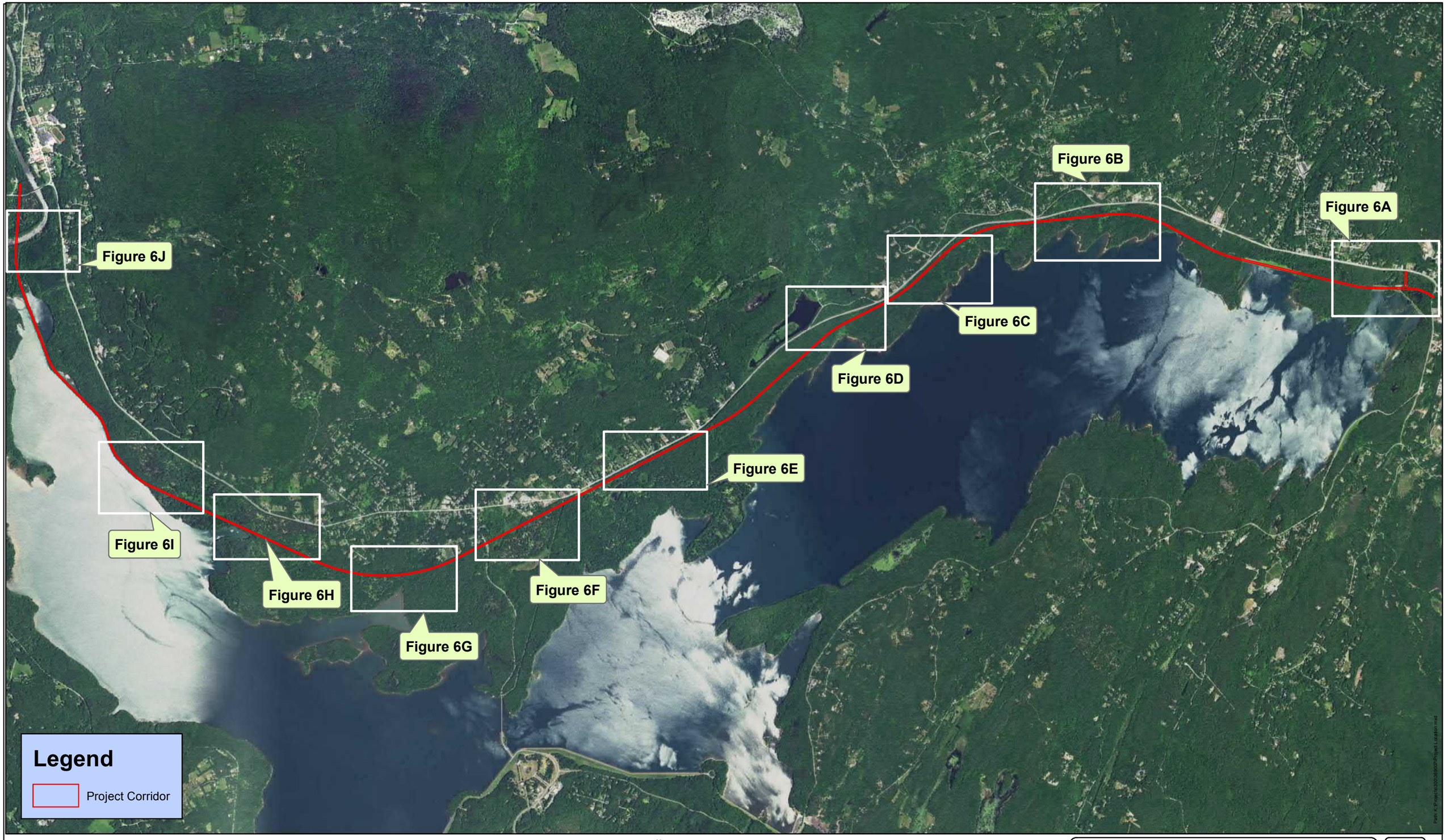
Ulster County
Ashokan Rail Trail -
NYSDEC Mapped Streams
Ulster County March 2017 New York

Figure 5

Project No. 369.007

Figures 6A-6J

Delineated Resources



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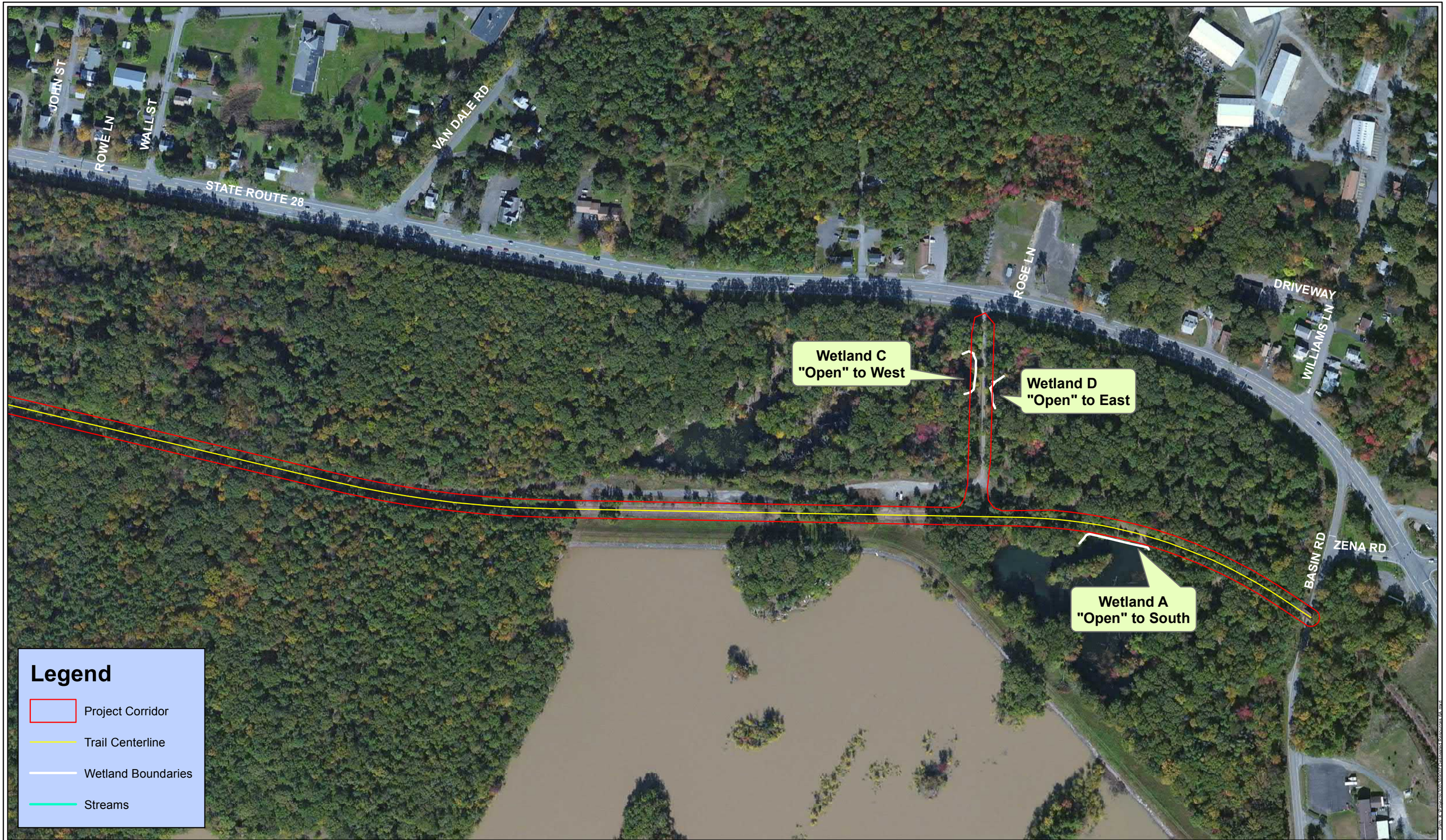
Ulster County Planning Department
Ashokan Rail Trail -
Delineated Resources Index Sheet
Ulster County January 2017 New York

Figure 6
Project No. 369.007



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1 inch = 250 feet

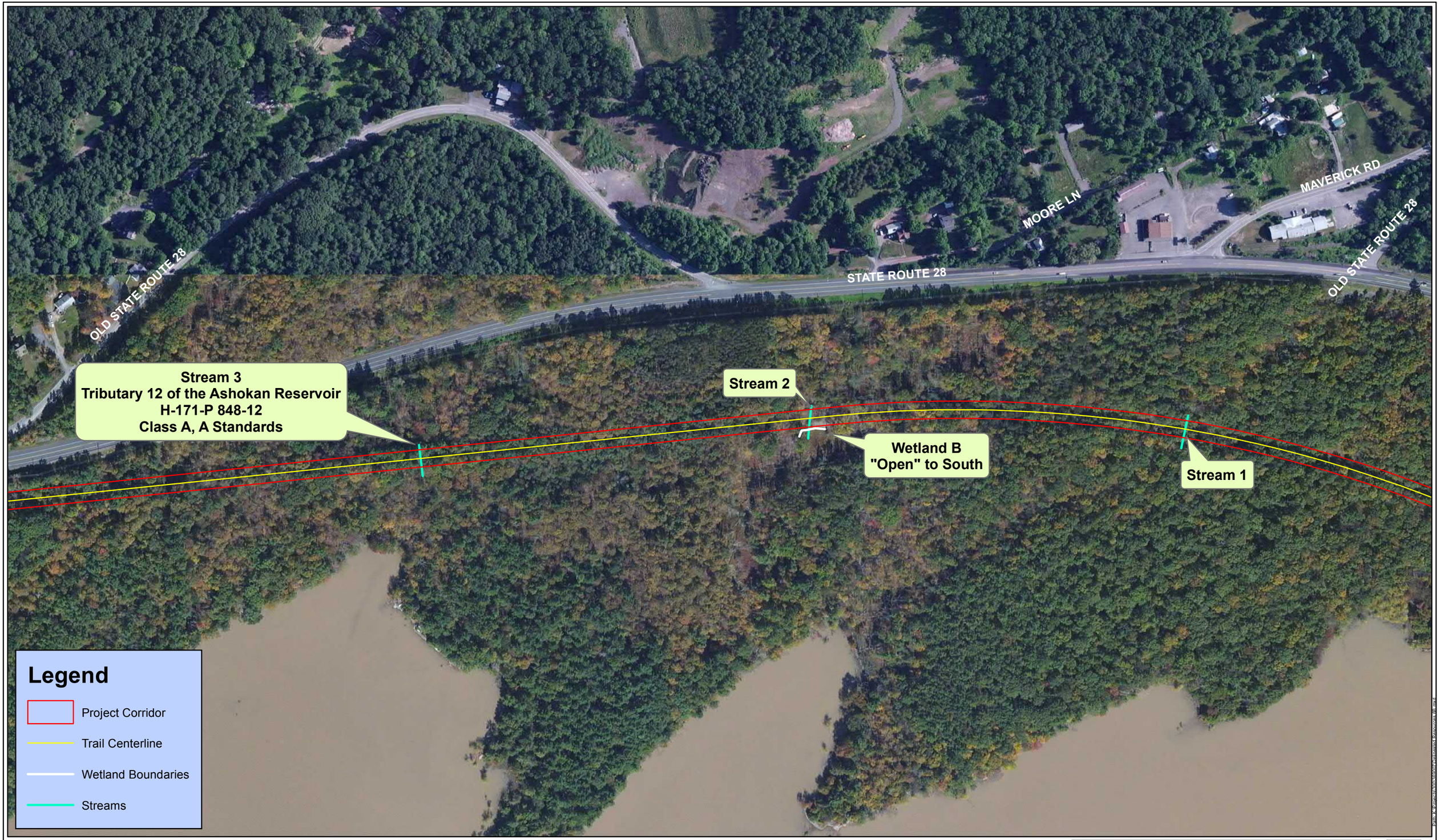
Ulster County Planning Department

Ashokan Rail Trail - Delineated Resources

Ulster County May 2017 New York

Figure 6A

Project No. 369.007



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Ulster County Planning Department
Ashokan Rail Trail -
Delineated Resources
Ulster County May 2017 New York

Figure 6B

Project No. 369.007

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N
W E
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1 inch = 250 feet

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Ashokan Rail Trail - Delineated Resources

Ulster County May 2017 New York

Figure 6C

Project No. 369.007

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Ulster County Planning Department

Ashokan Rail Trail - Delineated Resources

Ulster County May 2017 New York

Figure 6D

Project No. 369.007

Legend

- Project Corridor
- Trail Centerline
- Wetland Boundaries
- Streams

DUBOIS RD

Stream 8

Stream 7

Wetland F
"Open" to Northeast

Wetland G

SUNKIST LN

STATE ROUTE 28

Wetland H
"Open" to Southwest

Wetland I
"Open" to the Northwest

Stream 9

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N
W E
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1 inch = 250 feet

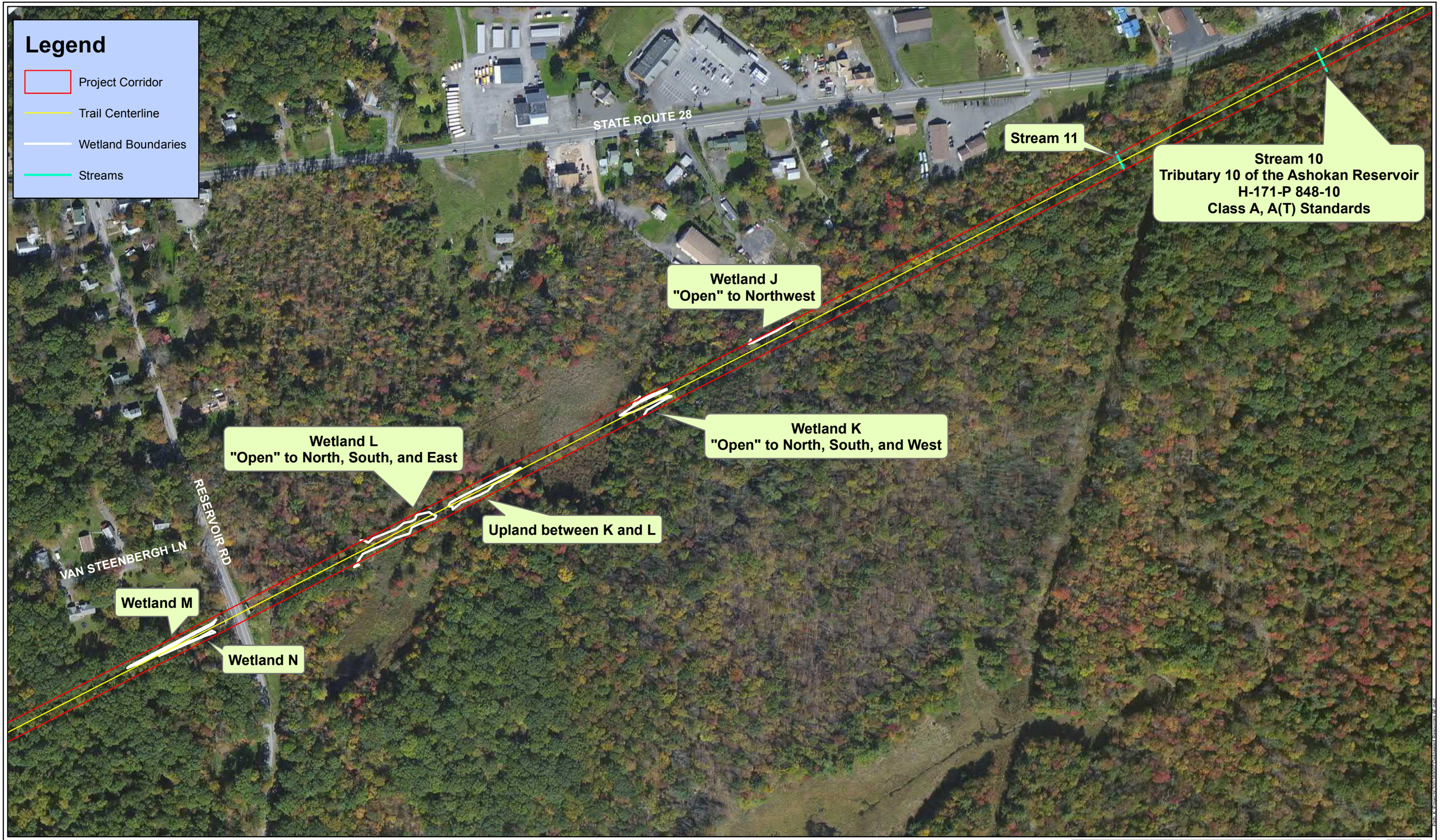
Ulster County Planning Department

Ashokan Rail Trail - Delineated Resources

Ulster County May 2017 New York

Figure 6E

Project No. 369.007



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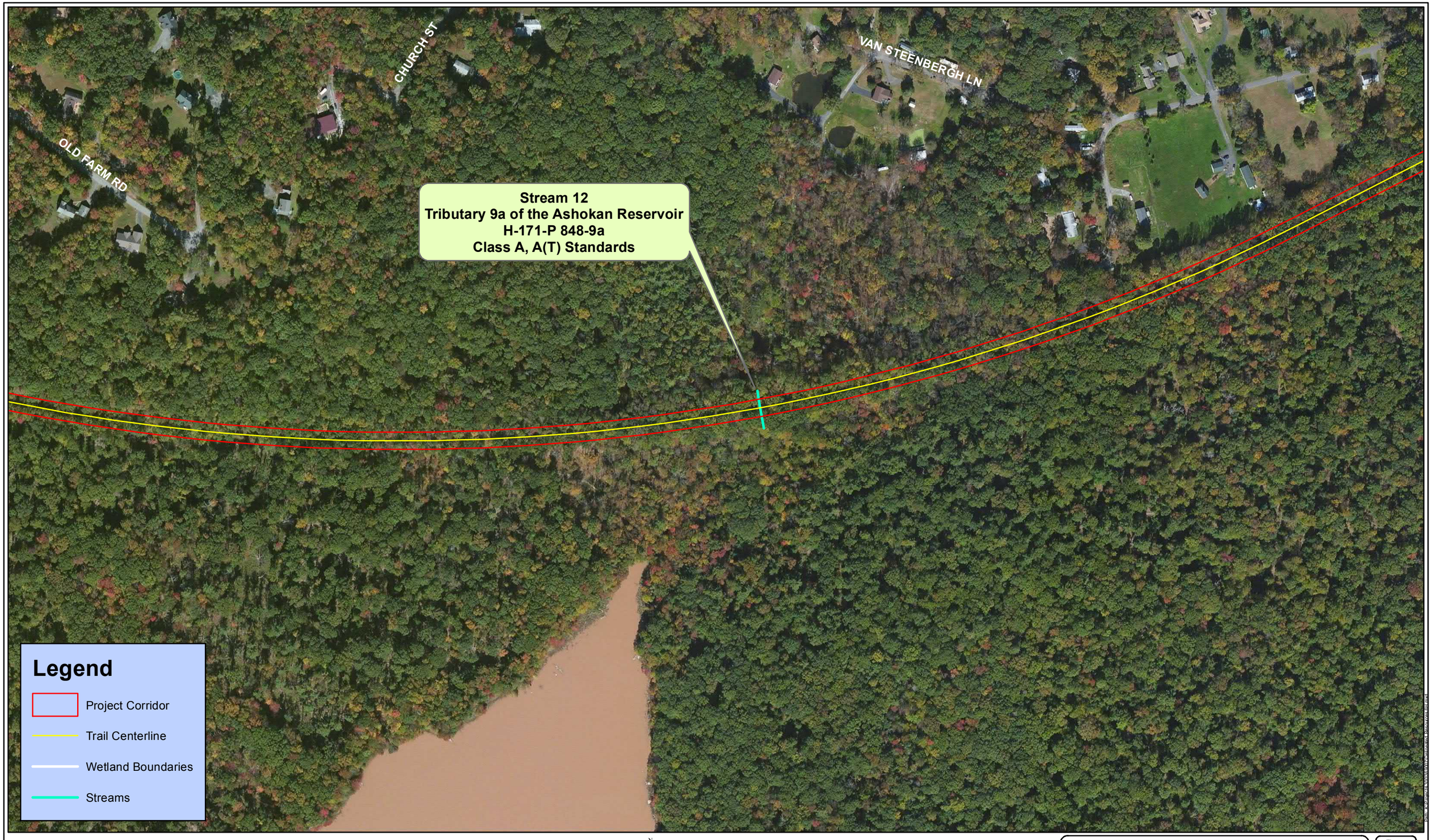
Ashokan Rail Trail -
Delineated Resources
Ulster County May 2017 New York

Figure 6F

Project No. 369.007



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N
W E
S

1 inch = 250 feet

Ulster County Planning Department
Ashokan Rail Trail - Delineated Resources
Ulster County May 2017 New York

Figure 6G
Project No. 369.007

BONNIE BRAE LN

MARKLE RD

STATE ROUTE 28

LONGYEAR RD

Stream 14
Butternut Creek (Trib. 9 of the Ashokan Reservoir)
H-171-P 848-9
Class A, A(T) Standards

Stream 13

Legend

- Project Corridor
- Trail Centerline
- Wetland Boundaries
- Streams

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1 inch = 250 feet

Ulster County Planning Department
Ashokan Rail Trail -
Delineated Resources
Ulster County May 2017 New York

Figure 6H

Project No. 369.007

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N W E S

1 inch = 250 feet

Ulster County Planning Department
Ashokan Rail Trail - Delineated Resources
Ulster County May 2017 New York

Figure 6I

Project No. 369.007

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N W E S

1 inch = 250 feet

Ulster County Planning Department
Ashokan Rail Trail - Delineated Resources
Ulster County January 2017 New York

Figure 6J

Project No. 369.007

Appendix A

Wetland/Upland
Field Delineation Datasheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Hurley/Ulster Sampling Date: 6/28/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet A

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 30

Subregion (LRR or MLRA): LRR R Lat: 41°59'36.01"N Long: 74° 5'27.64"W Datum: NAD '83

Soil Map Unit Name: Oquaga-arnot-rock outcrop complex NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Located on south side of trail, just northeast of Ashokan Reservoir and the Woodstock Dike. Area is an impoundment of water, mostly likely fed by seepage from the reservoir and is mapped by the NWI.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrology present at surface. Ponding potentially fed by Ashokan reservoir. Water table was noted to be at surface; the majority of wetland was inundated with depths of water ranging from 2"-12+".

VEGETATION – Use scientific names of plants. Sampling Point: Wet A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Carex scoparia*	25	Yes	FACW
2. *Carex lurida*	20	Yes	OBL
3. *Persicaria pensylvanica*	20	Yes	FACW
4. *Lemna minor*	10	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	45	x 2 =	90
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	75 (A)		120 (B)

Prevalence Index = B/A = 1.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
All vegetation noted was hydrophytic, with duckweed present on surface waters.

SOIL

Sampling Point Wet A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1						Muck	50% Organic material
3-6	10YR 2/1	80	10YR 5/4	20	C	M	Mucky Sand	Distinct redox concentrations
6-8	10YR 3/2	80	10YR 6/8	20	C	M	Mucky Sand	Prominent redox concentrations
8-10	2.5YR 5/4	100					Mucky Sand	
10-22	2.5YR 6/4	90	7.5YR 4/6	10	C	M	Mucky Sand	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- X Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The indicator S1 (sandy mucky mineral) was satisfied as greater than 2" of mucky sand material was present within the upper 6" of the soil. The top layers were primarily dark muck that shifted to a much lighter matrix below 6". There were few, but prominent, redox concentrations present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Hurley/Ulster Sampling Date: 6/28/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL A

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): Slope %:

Subregion (LRR or MLRA): LRR R Lat: 41°59'36.01"N Long: 74° 5'27.64"W Datum: NAD '83

Soil Map Unit Name: OrC NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Located on south side of trail, just west of Ashokan Reservoir.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches): 0
Water Table Present?	Yes	No X	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches): 0

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus strobus*	45	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	45	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Populus tremuloides*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Fragaria vesca*	30	Yes	UPL
2. *Microstegium vimineum*	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	55	x 4 =	220
UPL species	30	x 5 =	150
Column Totals:	100 (A)		415 (B)

Prevalence Index = B/A = 4.15

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100						
4-10	10YR 5/2	100						
10-24	10YR 5/2	90	10YR 5/3	10				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Hurley/Ulster Sampling Date: 6/28/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet B

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %:

Subregion (LRR or MLRA): LRR R Lat: 42° 0'5.23"N Long: 74° 7'47.75"W Datum: NAD 83

Soil Map Unit Name: Morris Tuller complex NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID: Wetland B

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland B is located at the toe of slope on the south side of the abandoned rail line. North of this location, Old State Route 28 converges with the current State Route 28 and it is just east of Maverick Cove. No mapped wetlands are indicated in this area but an unmapped stream resources runs through from north to south. The wetland continues southward, toward the Ashokan Reservoir.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- X Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes X	No	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): 3

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: Wet B

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Lonicera*	2	No	
2.			
3.			
4.			
5.			
6.			
7.			
	2	=Total Cover	
Herb Stratum (Plot size:)			
1. *Carex lurida*	60	Yes	OBL
2. *Carex scoparia*	25	Yes	FACW
3. *Juncus effusus*	10	No	OBL
4. *Glyceria*	2	No	
5. *Poaceae*	2	No	
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	99	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	25	x 2 =	50
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	95 (A)		120 (B)

Prevalence Index = B/A = 1.26

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Prominent wetland vegetation evident.

SOIL

Sampling Point Wet B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	85	5YR 4/6	15	C	M	Loamy/Clayey	Prominent redox concentrations
6-8	10YR 3/2	98	10YR 6/8	2	C	M	Loamy/Clayey	Prominent redox concentrations
8-12	10YR 3/2	85	10YR 6/8	15	C	M	Loamy/Clayey	Prominent redox concentrations
12-18	10YR 3/2	88	10YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/8	2				
18-23	10YR 4/3	70	10YR 5/8	30	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The hydric soil indicator F6 (redox dark surface) was satisfied within the first layer of soil (1-6"), which had a color of 10YR 3/1 with 15% redox concentrations. Indicator F6 is met when 4" layer of soil, entirely within the upper 12", has a matrix value of 3 or less and chroma of 1 or less with at least 2% or more distinct or prominent redox concentrations,

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Hurley/Ulster Sampling Date: 6/28/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL B

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range: _____

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____

Subregion (LRR or MLRA): LRR R Lat: 42° 0'5.23"N Long: 74° 7'47.75"W Datum: NAD 83

Soil Map Unit Name: MtB NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes _____	No X	**within a Wetland?** **Yes** _____ **No** X
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ? Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No _____	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL B

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Quercus rubra*	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	15 =Total Cover		
Herb Stratum (Plot size:)			
1. *Poaceae*	60	Yes	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	15 (A)		60 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/4							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Ballast

Depth (inches): 2

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Hurley/Ulster Sampling Date: 6/28/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet C

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %:

Subregion (LRR or MLRA): LRR R Lat: 41°59'42.48"N Long: 74° 5'32.51"W Datum: NAD 83

Soil Map Unit Name: Oquaga-Arnot-Rock outcrop complex NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID: Wetland C

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland C is ponded on west side of reservoir access roadway near the Woodstock and Glenford Dike areas, and is parallel to Wetland D. Both wetlands are mapped by NWI. A stream resource feeds this wetland from the north; a culvert under the access drive allows for hydrology to pass to Wetland D.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches): 0
Water Table Present?	Yes X	No	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
At wetland plot, high water table and saturation at surface were noted. Wetland also features considerable ponding of surface water, from 2-4" and deeper in spots.

VEGETATION – Use scientific names of plants.

Sampling Point: Wet C

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Sparganium americanum*	50	Yes	OBL
2. *Eupatorium perfoliatum*	5	No	FACW
3. *Lemna minor*	5	No	OBL
4. *Impatiens capensis*	2	No	FACW
5. *Galium*	2	No	
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	64 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	55	x 1 =	55
FACW species	7	x 2 =	14
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	62 (A)		69 (B)

Prevalence Index = B/A = 1.11

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Prominent wetland vegetation evident.

SOIL

Sampling Point Wet C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					Muck	15% organic material
4-6	7.5YR 4/2	95	7.5YR 4/6	5	C	M	Mucky Loam/Clay	Prominent redox concentrations
6-12	2.5Y 6/2	70	2.5Y 5/6	30	C	M	Mucky Loam/Clay	Prominent redox concentrations
12-24	2.5Y 6/3	80	2.5Y 6/8	20	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The hydric soil indicator F3 (depleted matrix) was met when both criteria (2" within upper 6" or 6" within upper 10" of soil with chroma of 2 or less). A chroma of 2 or less was noted to a depth of 12". Additionally, prominent redox concentrations were noted in all layers from 6" to 24" depth.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Hurley/Ulster Sampling Date: 6/28/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL C/D

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %:

Subregion (LRR or MLRA): LRR R Lat: 41°59'42.48"N Long: 74° 5'32.51"W Datum: NAD 83

Soil Map Unit Name: OrC NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland C on west side of reservoir access roadway.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Hurley/Ulster Sampling Date: 6/28/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet D

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 10

Subregion (LRR or MLRA): LRR R Lat: 41°59'42.19"N Long: 74° 5'31.42"W Datum: NAD 83

Soil Map Unit Name: Oquaga-Arnot-Rock outcrop complex NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland D is ponded on the east side of reservoir access roadway near the Woodstock and Glenford Dike areas, and is parallel to Wetland C. Both wetlands are mapped by NWI. An offsite stream resource feeds wetland C from the north; a culvert under the access drive allows for hydrology to pass to Wetland D.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
At wetland plot, high water table and saturation at surface were noted. Wetland also features considerable ponding of surface water, from 2-4" and deeper in spots.

VEGETATION – Use scientific names of plants.

Sampling Point: Wet D

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Alnus incana*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	60	Yes	FAC
2. *Carex stipata*	20	Yes	OBL
3. *Scirpus atrovirens*	10	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	10	x 2 =	20
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		230 (B)

Prevalence Index = B/A = 2.30

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Prominent hydrophytic vegetation present.

SOIL

Sampling Point Wet D

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100						Organic Matter
2-6	10YR 2/1	100					Mucky Loam/Clay	
6-8	10YR 2/1	75	10YR 6/8	25	C	M	Mucky Loam/Clay	Distinct redox concentrations
8-14	2.5Y 6/2	85	10YR 6/8	15	C	M	Mucky Loam/Clay	Distinct redox concentrations
14-24	2.5Y 6/3	80	2.5Y 6/6	20	C	M	Loamy/Clayey	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The hydric soil indicator F3 (depleted matrix) was met when both criteria (6" within upper 10" of soil with chroma of 2 or less). A chroma of 2 or less was noted to a depth of 12" for all layers. Additionally, prominent redox concentrations were noted in all layers from 6" to 24" depth.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Hurley/Ulster Sampling Date: 6/28/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet E

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: 15

Subregion (LRR or MLRA): LRR R Lat: 41°59'44.24"N Long: 74° 9'14.53"W Datum:

Soil Map Unit Name: Oquaga-Arnot-Rock outcrop complex NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland E

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland E was located on the south side of the rail corridor and continued southeast beyond the delineated limits. No wetland mapping is recorded in this area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- X Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 4

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Saturation was present within 4" of the soil surface. Visible drainage patterns were noted in bare patches of soil as well as bent vegetation suggesting water passage.

VEGETATION – Use scientific names of plants.

Sampling Point: Wet E

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Scirpus atrovirens*	25	Yes	OBL
2. *Persicaria sagittata*	15	Yes	OBL
3. *Microstegium vimineum*	15	Yes	FAC
4. *Phleum pratense*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	60 (A)		105 (B)

Prevalence Index = B/A = 1.75

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
A dominance of wetland vegetation was present. The invasive Japanese stiltgrass was present throughout the corridor and on the wetland E fringe.

SOIL

Sampling Point Wet E

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	90	2.5Y 7/8	10	C	M	Loamy/Clayey	Prominent redox concentrations
2-6	10YR 3/2	85	5YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
			2.5Y 7/8	5	C	M		Prominent redox concentrations
6-14	5YR 3/2	90	5YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
14-22	5YR 4/3	90	7.5YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The hydric soil indicator F6 (redox dark surface) was met as the upper 14" demonstrated a value of 3 with a chroma of 2 or less in all layers. Redox features were noted throughout all layers, as well.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Hurley/Ulster Sampling Date: 6/28/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL E

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range: _____

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____

Subregion (LRR or MLRA): LRR R Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: OrC NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes _____	No X	**within a Wetland?** **Yes** _____ **No** X
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No _____	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL E

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phleum pratense*	60	Yes	FACU
2. *Microstegium vimineum*	10	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	70 (A)		270 (B)

Prevalence Index = B/A = 3.86

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL E

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2							
2-12	10YR 4/2							
12-18	10YR 4/3							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet F

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 10

Subregion (LRR or MLRA): LRR R Lat: 41°58'49.68"N Long: 74°10'57.76"W Datum: NAD 83

Soil Map Unit Name: Valois very bouldery soils NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland F

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland F was located on the north side of the railroad tracks, south of the intersection of Dubois Road and Route 28. Wetland G was located on the south side of the tracks, at the western end of Wetland F.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Soil was saturated at surface, with the water table within 1 inch of the surface.

VEGETATION – Use scientific names of plants.

Sampling Point: Wet F

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	50	Yes	FACW
2. *Acer rubrum*	45	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	95	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Impatiens capensis*	45	Yes	FACW
2. *Persicaria pensylvanica*	15	Yes	FACW
3. *Persicaria sagittata*	5	No	OBL
4. *Lemna minor*	5	No	OBL
5. *Pilea pumila*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	115	x 2 =	230
FAC species	45	x 3 =	135
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	170 (A)		375 (B)

Prevalence Index = B/A = 2.21

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Prominent hydrophytic vegetation noted with the dominance test.

SOIL

Sampling Point Wet F

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2								Organic detritus
2-4	10YR 2/2	95	10YR 6/8	5	C	M	Mucky Loam/Clay	Prominent redox concentrations
4-10	10YR 2/2	85	10YR 6/8	15	C	M	Mucky Loam/Clay	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Ballast

Depth (inches): 10

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The indicator F6 (redox dark surface) was met as all soil layers exhibited a value of 2 with a chroma of 2 with 5-15% redox concentrations present. All were within 10 inches as ballast prohibited further depth.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL F

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Slope %:

Subregion (LRR or MLRA): LRR R Lat: Long: Datum:

Soil Map Unit Name: VaB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL F

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Fragaria vesca*	50	Yes	UPL
2. *Galium aparine*	20	Yes	FACU
3. *Alliaria petiolata*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	30	x 4 =	120
UPL species	50	x 5 =	250
Column Totals:	100 (A)		430 (B)

Prevalence Index = B/A = 4.30

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL F

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2						Loamy/Clayey	
2-20	10YR 4/2						Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Ballast

Depth (inches): 10

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet G

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 41°58'48.99"N Long: 74°10'59.81"W Datum: NAD 83

Soil Map Unit Name: Valois very bouldery soils NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland G

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland G was located on the south side of the rail corridor, opposite from Wetland F's western edge.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
The soil surface was saturated and water table was within 2" of the surface. Drainage patterns were also visible.

VEGETATION – Use scientific names of plants.

Sampling Point: Wet G

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	15	Yes	FAC
2. *Fraxinus americana*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Fagus grandifolia*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Impatiens capensis*	40	Yes	FACW
2. *Carex stipata*	30	Yes	OBL
3. *Glyceria canadensis*	15	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	45	x 1 =	45
FACW species	40	x 2 =	80
FAC species	15	x 3 =	45
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	125 (A)		270 (B)

Prevalence Index = B/A = 2.16

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
The dominance test was indicated for hydrophytic vegetation.

SOIL

Sampling Point Wet G

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					Loamy/Clayey	
2-6	10YR 3/2	60	10YR 5/8	20	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 6/8	20	C	M		Prominent redox concentrations
6-10	10YR 3/2	60	10YR 6/8	25	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/8	15	C	M		Prominent redox concentrations
10-23	10YR 3/3	70	10YR 4/6	30	C	M	Loamy/Clayey	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The soil indicator, F6 (redox dark surface), was met within the first 6" of soil. Both layers had a matrix of 3 or less and chroma of 2 or less; from 2-6", prominent redox concentrations were present, totalling 40%.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL G

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range: _____

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____

Subregion (LRR or MLRA): LRR R Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: VaB NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL G

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.	15	Yes	
2.	15	Yes	
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.	10	Yes	
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	20	Yes	FAC
2. *Fragaria vesca*	15	Yes	UPL
3. *Quercus rubra*	10	Yes	FACU
4. *Toxicodendron radicans*	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	10	x 4 =	40
UPL species	15	x 5 =	75
Column Totals:	50 (A)		190 (B)

Prevalence Index = B/A = 3.80

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL G

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2							
2-6	10YR 4/2							
6-18	10YR 4/3							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet H

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 15

Subregion (LRR or MLRA): LRR R Lat: 41°58'40.09"N Long: 74°11'21.86"W Datum:

Soil Map Unit Name: Valois very bouldery soils NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland H

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland H was located south of the railroad corridor in a drainage swale. This drainage feature likely feeds Wetland G.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 4

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Saturation was present within 4 inches of the soil surface, and visible drainage patterns were noted.

VEGETATION – Use scientific names of plants.

Sampling Point: Wet H

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	90	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	90	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Impatiens capensis*	35	Yes	FACW
2. *Microstegium vimineum*	30	Yes	FAC
3. *Persicaria pensylvanica*	10	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	120	x 3 =	360
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	165 (A)		450 (B)

Prevalence Index = B/A = 2.73

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
A dominance of hydric vegetation was present within the wetland.

SOIL

Sampling Point Wet H

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2							
2-6	10YR 3/2	85	10YR 6/8	15	C	M	Loamy/Clayey	Prominent redox concentrations
6-14	10YR 3/2	85	10YR 4/6	15	C	M	Loamy/Clayey	Prominent redox concentrations
14-22	10YR 3/3	80	10YR 5/6	20	C	M	Loamy/Clayey	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The hydric soil indicator F6 (redox dark surface) was satisfied when the layer between 2-6" had a value of 3 and chroma of 2, with prominent redox concentrations of 15%.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL H

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope %:

Subregion (LRR or MLRA): LRR R Lat: 41°58'40.09"N Long: 74°11'21.86"W Datum:

Soil Map Unit Name: VaB NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 0	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL H

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	100	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
1. *Alliaria petiolata*	35	Yes	FACU
2. *Rosa multiflora*	25	Yes	FACU
3. *Urtica dioica*	15	No	FAC
4. *Galium aparine*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	115	x 3 =	345
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column Totals:	185 (A)		625 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL H

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Ballast

Depth (inches): 2

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet I

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 41°58'35.38"N Long: 74°11'34.48"W Datum: NAD 83

Soil Map Unit Name: Valois very bouldery soils NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland I

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland I was located on the north side of the rail corridor in a drainage swale.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Soils were saturated at surface and visible drainage patterns were present.

VEGETATION – Use scientific names of plants. Sampling Point: Wet I

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Impatiens capensis*	90	Yes	FACW
2. *Carex scoparia*	3	No	FACW
3. *Persicaria pensylvanica*	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	=Total Cover	
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	95	x 2 =	190
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	95 (A)		190 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
A dominance of wetland vegetation was present.

SOIL

Sampling Point Wet I

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Loamy/Clayey	25% organic matter
2-6	10YR 3/2	83	10YR 5/8	15	C	M	Loamy/Clayey	Prominent redox concentrations
			5Y 7/8	2	C	M		Prominent redox concentrations
6-12	10YR 3/2	60	10YR 5/6	20	C	M	Loamy/Clayey	Prominent redox concentrations
			5Y 7/6	10	C	M		Prominent redox concentrations
12-22	10YR 6/4	60	10YR 5/6	20	C	M	Loamy/Clayey	Distinct redox concentrations
			5Y 7/6	10	C	M		Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The soil indicator F6 (redox dark surface) was met between 2-6", which exhibited a matrix of 3 and chroma of 2 with 17% redox concentrations.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL I

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %:

Subregion (LRR or MLRA): LRR R Lat: 41°58'35.38"N Long: 74°11'34.48"W Datum: NAD 83

Soil Map Unit Name: VaB NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL I

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carya ovata*	20	Yes	FACU
2. *Acer rubrum*			FAC
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Poaceae spp.*	50	Yes	FACU
2. *Rosa multiflora*	10	No	FACU
3. *Persicaria pensylvanica*	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	62	=Total Cover	
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	0	x 3 =	0
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	82	(A)	324 (B)

Prevalence Index = B/A = 3.95

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL I

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2							Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet J

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 10

Subregion (LRR or MLRA): LRR R Lat: 41°58'20.23"N Long: 74°12'15.83"W Datum: NAD 83

Soil Map Unit Name: Red hook gravelly silt loam NWI classification: PSS/PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland J

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland J was located in a drainage swale north of the corridor, just east of wetlands L and K.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 3
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 2

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
The water table was present at 3 inches, with saturation at 2.

VEGETATION – Use scientific names of plants. Sampling Point: Wet J

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Cornus alba*	25	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	25	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Glyceria canadensis*	30	Yes	OBL
2. *Carex lurida*	15	Yes	OBL
3. *Sparganium americanum*	10	No	OBL
4. *Typha angustifolia*	10	No	OBL
5. *Toxicodendron radicans*	2	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	67	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	65	x 1 =	65
FACW species	25	x 2 =	50
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	92 (A)		121 (B)

Prevalence Index = B/A = 1.32

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Dominant wetland vegetation was present.

SOIL

Sampling Point Wet J

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	98	5YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
2-12	10YR 2/1	80	5YR 4/6	20	C	M	Loamy/Clayey	Prominent redox concentrations
12-23	10YR 3/2	85	5YR 4/6	15	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The hydric soils indicator F6 (redox dark surface) was met as within the first 12", the soils exhibited a value of 2 and chroma of 1, with redox concentrations 20 percent in the 2-12" layer.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL J

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range: _____

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____

Subregion (LRR or MLRA): LRR R Lat: 41°58'20.23"N Long: 74°12'15.83"W Datum: NAD 83

Soil Map Unit Name: Re NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes _____	No X	**within a Wetland?** **Yes** _____ **No** X
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ? Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL J

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Quercus rubra*	25	Yes	FACU
2. *Lonicera tatarica*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	40 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Dryopteris carthusiana*	2	No	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	2 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1. *Vitis aestivalis*	10	Yes	FACU
2.			
3.			
4.			
	10 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	52 (A)		204 (B)

Prevalence Index = B/A = 3.92

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL J

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2						Loamy/Clayey	
2-20	10YR 4/2							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet K

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Flat plain Local relief (concave, convex, none): concave Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 41°58'17.03"N Long: 74°12'24.42"W Datum: NAD 83

Soil Map Unit Name: Atherton silt loam NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland K

Remarks: (Explain alternative procedures here or in a separate report.)
This wetland is located on the across the entire width of the project corridor and is open to the west, north, and south. It is mapped as NYSDEC wetland AS-20. The wetland K line represents the eastern boundary of AS-20 and wetland L represents the western boundary, with one upland island between.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Areas of the wetland were ponded with up to 3" of water. The soils were saturated at surface and the water table was evident at 1".

VEGETATION – Use scientific names of plants.

Sampling Point: Wet K

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Phragmites australis*	80	Yes	FACW
2. *Onoclea sensibilis*	10	No	FACW
3. *Carex lurida*	2	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	92	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Vitis riparia*	2	No	FAC
2.			
3.			
4.			
	2	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	90	x 2 =	180
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	94 (A)		188 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
The invasive phragmites dominated this wetland.

SOIL

Sampling Point Wet K

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	90	7.5YR 4/6	10	C	M	Mucky Loam/Clay	Prominent redox concentrations
2-8	10YR 3/2	80	10YR 4/6	20	C	M	Mucky Loam/Clay	Prominent redox concentrations
8-16	10YR 3/2	60	7.5YR 6/8	40	C	M	Loamy/Clayey	Prominent redox concentrations
16-22	10YR 4/2	60	7.5YR 6/8	40	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The hydric soil indicator F6 (redox dark surface) was met within the first 8" of soil with values of 3 or less and chroma of 2 and redox concentrations ranging from 10-20%.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL K

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope %:

Subregion (LRR or MLRA): LRR R Lat: 41°58'17.03"N Long: 74°12'24.42"W Datum: NAD 83

Soil Map Unit Name: At, Re, CgA NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL K

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus strobus*	100	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	100	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Malva neglecta*	25	Yes	UPL
2. *Fragaria vesca*	10	Yes	UPL
3. *Toxicodendron radicans*	2	No	FAC
4. *Verbascum thapsus*	2	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	39	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Vitis riparia*	2	No	FAC
2.			
3.			
4.			
	2	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	4	x 3 =	12
FACU species	100	x 4 =	400
UPL species	37	x 5 =	185
Column Totals:	141	(A)	597 (B)

Prevalence Index = B/A = 4.23

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL K

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 4/2	100					Loamy/Clayey	
2-7	7.5YR 4/3	100					Loamy/Clayey	
7-20	7.5YR 3/4							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet L

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Flat plain Local relief (concave, convex, none): concave Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 41°58'17.69"N Long: 74°12'24.47"W Datum: NAD 83

Soil Map Unit Name: Atherton silt loam NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland L

Remarks: (Explain alternative procedures here or in a separate report.)
This wetland is located on the across the entire width of the project corridor and is open to the east, north, and south. It is mapped as NYSDEC wetland AS-20. The wetland L line represents the western boundary of AS-20 and wetland L represents the western boundary, with one upland island between.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Areas of the wetland were ponded with up to 3" of water. The soils were saturated at surface and the water table was evident at 1".

VEGETATION – Use scientific names of plants. Sampling Point: Wet L

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Alnus incana*	50	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	50 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Cornus alba*	5	Yes	FACW
2. *Phragmites australis*	2	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	7 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	57	x 2 =	114
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	57 (A)		114 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Bryophyte ground cover. The invasive phragmites dominated this wetland.

SOIL

Sampling Point Wet L

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 2.5/2	85	10YR 5/6	15	C	M	Mucky Loam/Clay	Prominent redox concentrations
3-8	10YR 3/2	85	10YR 4/6	15	C	M	Mucky Loam/Clay	Prominent redox concentrations
8-18	10YR 3/2	60	7.5YR 6/8	60	C	M	Mucky Loam/Clay	Prominent redox concentrations
18-24	10YR 4/2	40	10YR 4/6	20	C	M	Mucky Loam/Clay	Prominent redox concentrations
			7.5YR 6/8	20	C	M		Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The hydric soil indicator F6 (redox dark surface) was met within the first 8" of soil with values of 3 or less and chroma of 2 and redox concentrations at 15%.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet M

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 2

Subregion (LRR or MLRA): LRR R Lat: 41°58'10.89"N Long: 74°12'40.99"W Datum: NAD 83

Soil Map Unit Name: Valois very bouldery soils NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland M

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland M was a drainage ditch feature north of the railway with no visible connections to other waters of the U.S., parallel to wetland N to the south.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Surface water was noted at a depth of 2 inches in locations. High water table was present at 1" and saturation at soil surface.

VEGETATION – Use scientific names of plants.

Sampling Point: Wet M

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	25	Yes	FAC
2. *Glyceria canadensis*	25	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	50 (A)		100 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Sparse vegetation was hydrophytic in nature.

SOIL

Sampling Point Wet M

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Mucky Loam/Clay	Org 35%
2-10	10YR 2/1	85	10YR 5/6	15	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Ballast

Depth (inches): 10

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The soils met the indicator F6 (redox dark surface) within the 10" assessed. A value of 2 and chroma of 1 were noted, with redox concentrations at 15%. The soils were restricted by ballast material at 10", prohibiting further investigation.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet M

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope %:

Subregion (LRR or MLRA): LRR R Lat: 41°58'10.89"N Long: 74°12'40.99"W Datum: NAD 83

Soil Map Unit Name: VaB NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wet M

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Poaceae*	25	Yes	FACU
2. *Verbascum thapsus*	15	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	25	x 4 =	100
UPL species	15	x 5 =	75
Column Totals:	40 (A)		175 (B)

Prevalence Index = B/A = 4.38

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point Wet M

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Ballast

Depth (inches): 2

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 6/29/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet N

Investigator(s): Johanna Duffy, Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 2

Subregion (LRR or MLRA): LRR R Lat: 41°58'10.72"N Long: 74°12'40.71"W Datum: NAD 83

Soil Map Unit Name: Valois very bouldery soils NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland N

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland N was a drainage ditch feature to the south with no visible connections to other waters of the U.S., parallel to wetland M to the north.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Surface water was noted to a depth of 3" in places. High water table was noted at 2" and saturation at surface.

VEGETATION – Use scientific names of plants. Sampling Point: Wet N

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Carex scoparia*	30	Yes	FACW
2. *Carex lurida*	30	Yes	OBL
3. *Juncus effusus*	25	Yes	OBL
4. *Equisetum arvense*	15	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	55	x 1 =	55
FACW species	30	x 2 =	60
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		160 (B)

Prevalence Index = B/A = 1.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
A dominance of wetland vegetation was noted.

SOIL

Sampling Point: Wet N

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	90	10YR 5/6	10	C	M	Mucky Loam/Clay	Prominent redox concentrations
3-8	10YR 4/1	90	10YR 6/6	10	C	M	Mucky Loam/Clay	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Ballast

Depth (inches): 8

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Soils met the indicator F6 (redox dark surface) within the 8" assessed. A value of 2 and chroma of 1 were noted, with redox concentrations at 10%. Soils were observed to a depth of 8" due to a restrictive layer of ballast.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 7/7/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet O

Investigator(s): Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 10

Subregion (LRR or MLRA): LRR R Lat: 41°58'20.68"N Long: 74°14'37.94"W Datum: NAD 83

Soil Map Unit Name: Red Hook gravelly silt loam NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland O

Remarks: (Explain alternative procedures here or in a separate report.)
The wetland was located in a low spot crossing the rail corridor with no observed inlet or outlet.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
A high water table was present within 1" of the soil surface with saturation at surface. Additionally, hydrogen sulfide odor was noticed.

VEGETATION – Use scientific names of plants.

Sampling Point: Wet O

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Impatiens capensis*	60	Yes	FACW
2. *Microstegium vimineum*	20	No	FAC
3. *Persicaria sagittata*	15	No	OBL
4. *Scirpus atrovirens*	5	No	OBL
5. *Urtica dioica*	5	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	60	x 2 =	120
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	105 (A)		215 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
A prevalance of hydrophytic vegetation was located within the wetland.

SOIL

Sampling Point Wet O

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2						Mucky Loam/Clay	Organic matter 20%
2-4	10YR 3/2	85	10YR 5/8	15	C	M	Loamy/Clayey	Prominent redox concentrations
4-12	10YR 3/3	85	10YR 5/6	10	C	M	Loamy/Clayey	Distinct redox concentrations
			10YR 5/8	5	C	M		Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Ballast

Depth (inches): 12

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The indicator F8 (redox depressions) was also met due to the presence of low spot ponding and prominent redox concentrations of 15% within all soil layers.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 7/7/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL O

Investigator(s): Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope %:

Subregion (LRR or MLRA): LRR R Lat: 41°58'20.68"N Long: 74°14'37.94"W Datum: NAD 83

Soil Map Unit Name: NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL O

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer pensylvanicum*	10	Yes	FACU
2. *Robinia pseudoacacia*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Acer pensylvanicum*	80	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	80	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Fallopia japonica*	20	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	120	x 4 =	480
UPL species	0	x 5 =	0
Column Totals:	120 (A)		480 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL O

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					Loamy/Clayey	
2-4	10YR 3/2	100					Loamy/Clayey	
4-12	10YR 4/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Ballast

Depth (inches): 12

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 7/7/16

Applicant/Owner: Ulster County State: NY Sampling Point: Wet P

Investigator(s): Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope %: 20

Subregion (LRR or MLRA): LRR R Lat: 42° 0'2.59"N Long: 74°16'12.76"W Datum: NAD 83

Soil Map Unit Name: Tunkhannock gravelly loam NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland P

Remarks: (Explain alternative procedures here or in a separate report.)
At the base of a steep slope, this wetland was located north of the Esopus Creek.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 3

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Saturation was present within 3" of the soil surface. Drainage patterns were visible in distinctly bent vegetation.

VEGETATION – Use scientific names of plants.

Sampling Point: Wet P

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus americana*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	45	Yes	FAC
2. *Impatiens capensis*	45	Yes	FACW
3. *Scirpus atrovirens*	5	No	OBL
4. *Juncus effusus*	2	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	97	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	7	x 1 =	7
FACW species	45	x 2 =	90
FAC species	45	x 3 =	135
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	107 (A)		272 (B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
A dominance of wetland vegetation was present.

SOIL

Sampling Point Wet P

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2						Loamy/Clayey	
2-4	10YR 3/2	80	10YR 4/6	20	C	M	Loamy/Clayey	Prominent redox concentrations
4-10	10YR 3/2	60	10YR 4/6	40	C	M	Loamy/Clayey	Prominent redox concentrations
10-22	10YR 3/2	60	10YR 5/8	40	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The hydric soil indicator F6 (redox dark surface) was met within the first 10" of soil. The value was 3 and chroma was 2, with redox concentrations between 20 and 40%.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ashokan Rail Trail City/County: Olive/Ulster Sampling Date: 7/7/16

Applicant/Owner: Ulster County State: NY Sampling Point: UPL P

Investigator(s): Corinne Steinmuller Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope %:

Subregion (LRR or MLRA): LRR R Lat: 42° 0'2.59"N Long: 74°16'12.76"W Datum: NAD 83

Soil Map Unit Name: TkB NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL P

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus americana*	25	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	25	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	50	x 3 =	150
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	75 (A)		250 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL P

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2						Loamy/Clayey	
2-4	10YR 3/3						Loamy/Clayey	
4-18	10YR 4/3						Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Appendix B

Site Photographs

Photo 1. Wetland A looking east.

Photo 2. Wetland B looking south.

Photo 3. Wetland C looking south.

Photo 4. Wetland D looking east.

Photo 5. Wetland E looking south.

Photo 6. Wetland F looking east.

Photo 7. Wetland G looking south.

Photo 8. Wetland J looking north.

Photo 9. Wetland K on either side of rail, looking east.

Photo 10. Wetland K looking north.

Photo 11. Wetland M looking east.

Photo 12. West of Wetlands M and N.

Photo 13. Wetland N drainage continuing northwest.

Photo 14. Wetland O looking east.

Photo 15. Wetland P looking north.

Photo 16. Typical culvert under rail.

Photo 17. Typical stream crossing south of railway, from culvert.

Photo 18. Flow of stream through large culvert.

Photo 19. Typical stream through corridor.

Photo 20. Butternut creek, looking south from failed culvert.

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

October 3, 2016

Ms. Corinne Steinmuller
Environmental Scientist II
Barton and Loguidice
10 Airline Drive
Albany, NY 12203

Re: DEC
Ashokan Rail Trail
16PR06122

Dear Ms. Steinmuller:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential impacts that must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6NYCRR Part 617).

We note that the proposed project is located partially within the National Register eligible Ulster and Delaware Railroad Corridor. The historic section of the railway, extending from Shokan to Phoenicia, is listed under National Register Criterion A for its association with historical development of the towns of Shandaken and Olive from the period 1897-1942. We understand that the proposed project will include construction of a pedestrian and bicycle pathway along the existing rail bed extending approximately 11.5 miles from West Hurley to Olive. The proposed rail trail will affect approximately six miles of the historic railway, and will include removal of the rail and ties, repairs to existing culverts, and construction of multiple trailheads within the twenty foot wide easement.

We are pleased that this adaptive reuse project will retain the rail corridor along with its historic feeling, association, and use as a transportation route. Based on this review, it is the opinion of the SHPO that the proposed project will have No Adverse Impact upon the historic Ulster and Delaware Railroad Corridor provided the following conditions are incorporated into the project:

1. A Preservation Plan is developed for the historic rail corridor. At minimum the Plan will identify all historic structures and engineering features that will be impacted by the project.
2. Historic interpretation of the railway will be integrated into development of the rail trail. Interpretive materials should include interpretive signage along the rail trail. A qualified professional should be retained to develop the preservation and interpretive plans.

3. Materials related to documentation and interpretation of historic features should be submitted to our office for review in the preliminary and pre-final stages.

Any additional measures that would further ensure the preservation and understanding of the historic railway are encouraged. Towards this goal, we suggest the following:

- Small sections of track (roughly 50') may be retained at the beginning and end of the proposed rail trail. One or both ends of this could display the existing heavy gauge rails along with a sample of the previous iteration of light rail as part of an interpretive exhibit.
- Additional historic features including buildings, structures, and engineering features that are identified along the eligible route will be protected and interpreted in accordance with the Preservation Plan.

Consultation with our office should continue as the preservation and interpretation measures suggested above are developed. Plans, specifications, and other documentation requested in this letter should be provided via our Cultural Resource Information System (CRIS) at www.nysparks.com/shpo/online-tools/. Once on the CRIS site, you can log in as a guest and choose "submit" at the very top menu. Next choose "submit new information for an existing project". You will need this project number and your e-mail address.

If you have any questions, I can be reached at (518) 268-2164.

Sincerely,

Weston Davey
Historic Site Restoration Coordinator
weston.davey@parks.ny.gov

via e-mail only

CC: Scott Ballard (DEC)
Charles Laing (NYCDEP)
Christopher White (Ulster County)

Appendix I

Web Soil Survey Map and Soil Data Mart Soil Descriptions

Legend

Project Corridor

Soil Series Symbol

- ARF - Arnot-Oquaga-Rock outcrop
- AcB - Arnot Channery silt loam
- LCD - Lackawanna and Swartswood soils, moderately steep
- LaC - Lackawanna flaggy silt loam
- ML - Made land
- MTB - Morris-Tuller complex
- Mn - Menlo silt loam
- ORC - Oquaga-Arnot-Rock outcrop, sloping
- ORD - Oquaga-Arnot-Rock complex, moderately steep
- OgB - Oquaga channery silt loam, 3-8% slopes
- OlC - Oquaga channery sil loam, 8-15% slopes
- QU - Quarry
- SEB - Scriba and Morris soils
- W - Water
- WLB - Wellsboro and Wurtsboro soils

Barton & Loguidice, D.P.C.
Engineers • Environmental Scientists • Planners • Landscape Architects

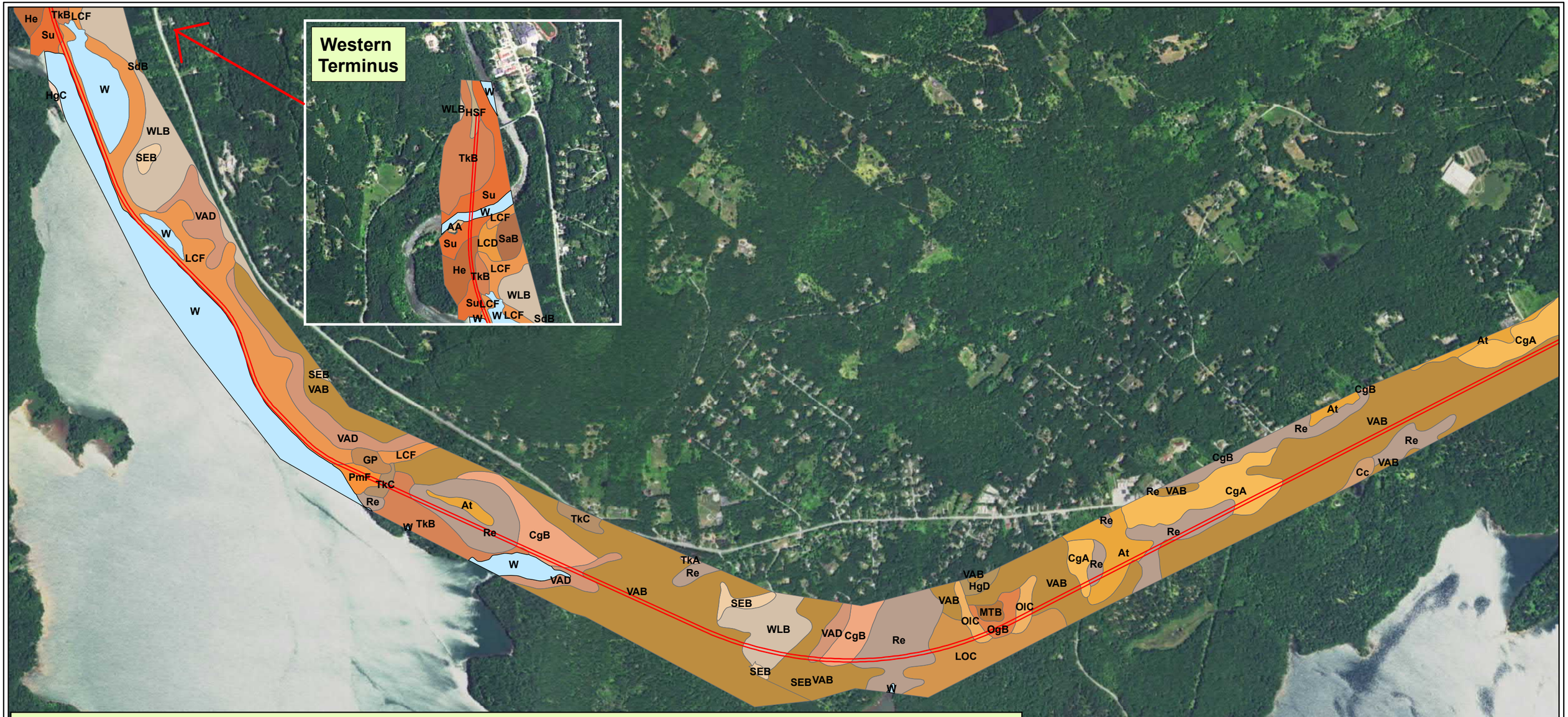
N W E S

1 inch = 1,500 feet

Ulster County
Ashokan Rail Trail - NRCS Soils
Ulster County March 2017 New York

Figure 3

Project No. 369.007



Legend

Project Corridor

Soil Series Symbol

- At - Atherton silt loam
- Cc - Canandaigua silt loam
- CgA - Castile gravelly silt loam
- CgB - Castile gravelly silt loam, 3-8% slopes
- GP - Gravel pit
- He - Haven loam
- HgC - Hoosic gravelly loam, rolling
- HgD - Hoosic gravelly loam, 15-25% slopes
- LCF - Lackawanna and Swartswood soils, very steep
- LOC - Lordstown-Arnot-Rock outcrop complex
- MTB - Morris-Tuller complex
- OgB - Oquaga channery silt loam, 3-8% slopes
- OIC - Oquaga channery sil loam, 8-15% slopes
- PmF - Plainfield-Riverhead complex
- Re - Red Hook gravelly silt loam
- SEB - Scriba and Morris soils
- SdB - Scriba and Morris soils, 0-8% slopes
- Su - Suncook loamy fine sand
- TkA - Tunkhannock gravelly loam, 0-3% slopes
- TkB - Tunkhannock gravelly loam, 3-8% slopes
- TkC - Tunkhannock gravelly loam, rolling
- VAB - Valois very bouldery soils
- VAD - Valois very bouldery soils, moderately steep
- W - Water
- WLB - Wellsboro and Wurtsboro soils

Barton & Loguidice, D.P.C.
Engineers • Environmental Scientists • Planners • Landscape Architects

N W E S

1 inch = 1,500 feet

Ulster County

Ashokan Rail Trail - NRCS Soils

Ulster County March 2017 New York

Figure 3A

Project No. 369.007

Appendix J

MS4 SWPPP Acceptance Form

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Contact Person:
14. Street Address:
15. City/State/Zip:
16. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

Appendix K

Technical Field Guidance for Spill Reporting and Initial Notification

TECHNICAL

FIELD GUIDANCE

SPILL REPORTING AND INITIAL NOTIFICATION REQUIREMENTS

NOTES

Spill Reporting and Initial Notification Requirements

GUIDANCE SUMMARY AT-A-GLANCE

- Reporting spills is a crucial first step in the response process.
- You should understand the spill reporting requirements to be able to inform the spillers of their responsibilities.
- Several different state, local, and federal laws and regulations require spillers to report petroleum and hazardous materials spills.
- The state and federal reporting requirements are summarized in Exhibit 1.1-1.
- Petroleum spills must be reported to DEC unless they meet all of the following criteria:
  - The spill is known to be less than 5 gallons; and
  - The spill is contained and under the control of the spiller; and
  - The spill has not and will not reach the State's water or any land; and
  - The spill is cleaned up within 2 hours of discovery.

  All reportable petroleum spills and most hazardous materials spills must be reported to DEC hotline (1-800-457-7362) within New York State; and (1-518 457-7362) from outside New York State. For spills not deemed reportable, it is strongly recommended that the facts concerning the incident be documented by the spiller and a record maintained for one year.
- Inform the spiller to report the spill to other federal or local authorities, if required.
- Report yourself those spills for which you are unable to locate the responsible spiller.
- Make note of other agencies' emergency response telephone numbers in case you require their on-scene assistance, or if the response is their responsibility and not BSPR's.

NOTES

1.1.1 Notification Requirements for Oil Spills and Hazardous Material Spills

Spillers are required under state law and under certain local and federal laws to report spills. These various requirements, summarized in Exhibit 1.1-1, often overlap; that is, a particular spill might be required to be reported under several laws or regulations and to several authorities. Under state law, all petroleum and most hazardous material spills must be reported to DEC Hotline (1-800-457-7362), within New York State, and to 1-518-457-7362 from outside New York State. Prompt reporting by spillers allows for a quick response, which may reduce the likelihood of any adverse impact to human health and the environment. Yo will often have to inform spillers of there responsibilities.

Although the spiller is responsible for reporting spills, other persons with knowledge of a spill, leak, or discharge is required to report the incident (see Appendices A and B). You will often have to inform spillers of their responsibilities. You may also have to report spills yourself in situations where the spiller is not known or cannot be located. However, it is the legal responsibility of the spiller to report spills to both state and other authorities.

BSPR personnel also are responsible for notifying other response agencies when the expertise or assistance of other agencies is needed. For example, the local fire department should be notified of spills that pose a potential explosion and/or fire hazard. If such a hazard is detected and the fire department has not been notified, call for their assistance immediately. Fire departments are trained and equipped to respond to these situations; you should not proceed with your response until the fire/safety hazard is eliminated. For more information on interagency coordination in emergency situations see Part 1, Section 3, Emergency Response.

Another important responsibility is notifying health department officials when a drinking water supply is found to be contaminated as a result of a spill. It will be the health department's responsibility to advise you on the health risk associated with any contamination.

Exhibits 1.1-1 and 1.1-2 list the state and federal requirements to report petroleum and hazardous substance spills, respectively. The charts describe the type of material covered, the applicable act or regulation, the agency that must be notified, what must be reported, and the person responsible for reporting. New York state also has a emergency notification network for spill situations (e.g., major chemical releases) that escalate beyond the capabilities of local and regional response agencies/authorities to provide adequate response. The New York State Emergency Management Office (SEMO) coordinates emergency response activities among local, state, and federal government organizations in these cases.

Exhibit 1.1-1

State and Federal Reporting Requirements for Petroleum Spills, Leaks, and Discharges

Materials Covered	Act or Regulation	Agency to Notify	What Must Be Reported and When	Who Must Report
Petroleum from any source	Navigation Law Article 12; 17 NYCRR 32.3 and 32.4	DEC Hotline 1-800-457-7362	The notification of a discharge must be *immediate, but in no case later than* two hours after discharge. 1. Name of person making report and his relationship to any person which might be responsible for causing the discharge. 2. Time and date of discharge. 3. Probable source of discharge. 4. The location of the discharge, both geographic and with respect to bodies of water. 5. Type of petroleum discharges. 6. Possible health or fire hazards resulting from the discharge. 7. Amount of petroleum discharged. 8. All actions that are being taken to clean up and remove the discharge. 9. The personnel presently on the scene. 10. Other government agencies that have been or will be notified.	Any person causing discharge of petroleum. Owner or person in actual or constructive control must notify DEC unless that person has adequate assurance that such notice has already been given.
All aboveground petroleum and underground storage facilities with a combined storage capacity of over 1100 gallons.	ECL §17-1007; 6 NYCRR §613.8	DEC Hotline 1-800-457-7362	1. Report spill incident within two hours of discovery. 2. Also when results of any inventory, record, test, or inspection shows a facility is leaking, that fact must be reported within two hours of discovery.	Any person with knowledge of a spill, leak, or discharge.
Petroleum contaminated with PCB.	Chemical Bulk Storage Act 6 NYCRR Parts 595, 596, 597	DEC Hotline 1-800-457-7362	Releases of a reportable quantity of PCB oil.	Owner or person in actual or constructive possession or control of the substance, or a person in contractual relationship, who inspects, tests, or repairs for owner.

Exhibit 1.1-1

State and Federal Reporting Requirements for Petroleum Spills, Leaks, and Discharges (continued)

Materials Covered	Act or Regulation	Agency to Notify	What Must Be Reported and When	Who Must Report
Any liquid (petroleum included) that if released would be likely to pollute lands or waters of the state.	ECL §17-1743	DEC Hotline 1-800-457-7362	Immediate notification that a spill, release, or discharge of any amount has occurred. Owner or person in actual or constructive possession or control of more than 1,100 gallons of the liquid.	
Petroleum Discharge in violation of §311(b)(3) of the Clean Water Act	40 CFR §110.10 (Clean Water Act)	1. National Response Center (NRC) 1-800-424-8802. 2. If not possible to notify NRC, notify Coast Guard or predesignated on-scene coordinator. 3. If not possible to notify either 1 or 2, reports may be made immediately to nearest Coast Guard units, provided NRC notified as soon as possible.	Immediate notification as soon as there is knowledge of an oil discharge that violates water quality standards or causes sheen on navigable waters. Procedures for notice are set forth in 33 CFR Part 153, Subpart B, and in the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, Subpart E.	Person in charge of vessel or on-shore or off-shore facility.
Petroleum, petroleum by-products or other dangerous liquid commodities that may create a hazardous or toxic condition spilled into navigable waters.	33 CFR 126.29 (Ports and Waters Safety Act)	Captain of the Port or District Commander	As soon as discharge occurs, owner or master of vessel must immediately report that a discharge has occurred.	Owner or master of vessel or owner or operator of the facility at which the discharge occurred.

Exhibit 1.1-1

State and Federal Reporting Requirements for Petroleum Spills, Leaks, and Discharges (continued)

Materials Covered	Act or Regulation	Agency to Notify	What Must Be Reported and When	Who Must Report
Petroleum or hazardous substance from a vessel, on-shore or off-shore facility in violation of §311(b)(3) of the Clean Water Act.	33 CFR 153.203 (Clean Water Act)	1. NRC U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593; 1-800-424-8802. 2. Where direct reporting not practicable, reports may be made to the Coast Guard (District Offices), the 3rd and 9th district of the EPA regional office at 26 Federal Plaza, NY, NY 10278; 1-201-548-8730. 3. Where none of the above is possible, may contact nearest Coast Guard unit, provided NRC notified as soon as possible.	Any discharger shall immediately notify the NRC of such discharge.	Person in charge of vessel or facility.

Exhibit 1.1-2

State and Federal Reporting Requirements for Hazardous Substance Spills, Leaks, and Discharges

Materials Covered	Act or Regulation	Agency to Notify	What Must Be Reported and When	Who Must Report
Any hazardous substance pursuant to Article 37. Does not include petroleum.	Chemical Bulk Storage Act 6 NYCRR Parts 595, 596, 597; ECL 40-0113(d)	DEC Hotline 1-800-457-7362	Releases of a reportable quantity of a hazardous substance.	Owner or person in actual or constructive possession or control of the substance, or a person in contractual relationship, who inspects, tests, or repairs for owner.
Hazardous materials or substances as defined in 49 CFR §171.8 that are transported. (See federal reporting requirements.)	Transportation Law 14(f); 17 NYCRR 507.4(b)	Local fire department or police department or local municipality	Immediate notification must be given of incident in which any of the following occurs as a direct result of a spill of hazardous materials: 1. Person is killed. 2. Person receives injuries requiring hospitalization. 3. Estimated damage to carrier or other property exceeds $50,000. 4. Fire, breakage, spillage, or suspected contamination due to radioactive materials. 5. Fire, breakage, spillage, or suspected contamination involving etiologic agents. 6. Situation is such that, in the judgment of the carrier, a continuing danger to life or property exists at the scene of the incident.	All persons and carriers engaged in the transportation of hazardous materials.

Exhibit 1.1-2
State and Federal Reporting Requirements for Hazardous Substance Spills, Leaks, and Discharges
(continued)

Materials Covered	Act or Regulation	Agency to Notify	What Must Be Reported and When	Who Must Report
Hazardous materials (wastes included) that are transported, whose carrier is involved in an accident.	Department of Transportation Regulations 49 CFR 171.15; 17 NYCRR Part 924; 17 NYCRR Part 507	1. U.S. Department of Transportation 1-800-424-8802 2. DEC Hotline 1-800-457-7362 3. Rail Carrier <u>On-Duty</u> 518-457-1046 <u>Off-Duty</u> 518-457-6164 4. Notify local police or fire department.	Notice should be given by telephone at the earliest practicable moment and should include: 1. Name of reporter. 2. Name and address of carrier represented by reporter. 3. Phone number where reporter can be contacted. 4. Date, time, and location of incident. 5. The extent of injuries, if any. 6. Classification, name and quantity of hazardous materials involved, if available. 7. Type of incident and nature of hazardous material involved and whether a continuing danger to life exists at scene. 8. Each carrier making this report must also make the report required by §171.16.	Each carrier that transports hazardous materials involves in an accident that causes any of the following as a direct result: 1. A person is killed 2. A person receives injuries requiring hospitalization 3. Estimated damage to carrier or other property exceeds $50,000 4. Fire, breakage, spillage, suspected or otherwise involving radioactive material. 5. Fire, breakage, spillage, suspected contamination involving etiologic agents. 6. Situation is such that carrier thinks it should be reported in accordance with paragraph b.

Exhibit 1.1-2
State and Federal Reporting Requirements for Hazardous Substance Spills, Leaks, and Discharges
(continued)

Materials Covered	Act or Regulation	Agency to Notify	What Must Be Reported and When	Who Must Report
Reportable quantity of a hazardous substance into navigable waters or adjoining shorelines. Substances are listed in 40 CFR 302.4.	Department of Transportation Regulations 49 CFR §171.16 as authorized by the Hazardous Materials Transportation Act	U.S. Coast Guard National Response Center (NRC), 1-800-424-8802 or 1-202-267-2675	As soon as person in charge becomes aware of a spill incident, he must notify NRC and provide the following information: 1. The information required by 49 CFR §171.15 (see above). 2. Name of shipper of hazardous substance. 3. Quantity of hazardous substance discharged, if known. 4. If person in charge is incapacitated, carrier shall make the notification. 5. Estimate of quantity of hazardous substance removed from the scene and the manner of disposition of any unremoved hazardous substance shall be entered in Part (H) of the report required by 49 CFR 171.16 (see above).	Person in charge of aircraft, vessel, transport vehicle, or facility. Must inform NRC directly, or indirectly through carrier.
Reportable quantity of a hazardous substance from vessel, on-shore or off-shore facility. Substances and requirements specified in 40 CFR §117.3.	40 CFR §117.21 as authorized under the FWPCA	NRC 1-800-424-8802. If not practicable report may be made to the Coast Guard (3rd or 9th Districts) District Offices or to EPA, designated On-Scene Coordinator, Region II, 26 Federal Plaza, NY, NY 10278; 1-201-548-8730	Immediate notification is required.	Person in charge of vessel, or on-shore or off-shore facility

Exhibit 1.1-2
State and Federal Reporting Requirements for Hazardous Substance Spills, Leaks, and Discharges (continued)

Materials Covered	Act or Regulation	Agency to Notify	What Must Be Reported and When	Who Must Report
Facilities where a hazardous chemical is produced, used, or stored, and there is a reportable quantity of any extremely hazardous substance as set out in Appendix A to 40 CFR 355 or a CERCLA hazardous substance as specified in 40 CFR 302.4. (This section does not apply to a release that does not go beyond the facility, that emanates from a facility that is federally permitted, is continuous as defined under §103(f) of CERCLA or to any release exempt from CERCLA §103(a) reporting under §101(22) of CERCLA.)	40 CFR 355.40 (SARA) Releases of CERCLA Hazardous Substances are subject to release reporting requirements of CERCLA §103, codified at 40 CFR Part 302, in addition to being subject to the requirements of this Part.	Community emergency coordinator for the local emergency planning committee of any area likely to be affected and the State Emergency Response Commission of any state likely to be affected by the release. If there is no local emergency planning commission notification shall be made to relevant local emergency response personnel.	Immediately notify agencies at left and provide the following information when available: 1. Chemical name or identity of any substance involved in the release. 2. Indication of whether the substance is an extremely hazardous substance. 3. An estimate of the quantity released. 4. Time and duration of release. 5. Medium or media into which the release occurred. 6. Known health risks associated with emergency and where appropriate advice regarding medical attention for those exposed. 7. Proper precautions/actions that should be taken, including evacuation. 8. Names and telephone numbers of person to be contacted for further information. As soon as practicable after release, followup notification by providing the following information: 1. Actions taken to respond to and contain the release. 2. Health risks. 3. Advice on medical attention for exposed individuals.	Owner or operator of facility

Exhibit 1.1-2
State and Federal Reporting Requirements for Hazardous Substance Spills, Leaks, and Discharges
(continued)

Materials Covered	Act or Regulation	Agency to Notify	What Must Be Reported and When	Who Must Report
Hazardous liquids transported in pipelines, a release of which results in any circumstances as set out in 195.50(a) through (f). Also any incident that results in circumstances listed in 195.52(g).	49 CFR 195.50, 195.52 and 195.54 (Hazardous Liquid Pipeline Safety Act).	NRC, 1-800-424-8802	Notice must be given at the earliest practicable moment and the following information provided: 1. Name and address of the operator. 2. Name and telephone number of the reporter. 3. Location of the failure. 4. The time of the failure. 5. The fatalities and personal injuries, if any. 6. All other significant facts known by the operator that are relevant to the cause of the failure or extent of the damages.	Operator of system.
Hazardous wastes in transport	40 CFR §263.30(a) (RCRA)	1. Local authorities 2. If required by 49 CFR 171.15, notify the NRC at 1-800-424-8802 or 1-202-426-2675 3. Report in writing to Director of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, DC 20590	Notification must be immediate. For discharge of hazardous waste by air, rail, highway, or water, the transporter must: 1. Give notice as in 49 CFR 161.15 (if applicable). 2. Report in writing as in 49 CFR 171.16. Wastes transporter (bulk shipment) must give same notice as required by 33 CFR 153.20.	Transporter by air, rail, highway, or water.

Exhibit 1.1-2
State and Federal Reporting Requirements for Hazardous Substance Spills, Leaks, and Discharges
(continued)

Materials Covered	Act or Regulation	Agency to Notify	What Must Be Reported and When	Who Must Report
Vinyl Chloride from any manual vent valve, or polyvinyl chloride plants	Clean Air Act 40 CFR 61.64	Administrator of EPA	Within 10 days of any discharge from any manual vent valve, report must be made, in writing, and the following information provided: 1. Source, nature and cause of the discharge 2. Date and time of the discharge 3. Approximate total vinyl chloride loss during discharge 4. Method used for determining loss 5. Action taken to prevent the discharge 6. Measures adopted to prevent future discharges.	Owner or operator of plant.
Radioactive Materials	6 NYCRR §380.7	Commissioner of DEC	1. Notify immediately by telephone when concentration, averaged over a 24-hour period, exceeds or threatens to exceed 5000 times the limits set forth in Schedule 2 of 380.9 (in uncontrolled areas). 2. Notify within 24 hours by telephone when concentration, averaged over 24- hour period, exceeds or threatens to exceed 500 times the limits set forth in Schedule 2 above (in uncontrolled areas). 3. Report within 30 days the concentration and quantity of radioactive material involved, the cause of the discharge, and corrective steps taken or planned to ensure no recurrence of the discharge.	Operator of the radiation installation.

Exhibit 1.1-2
State and Federal Reporting Requirements for Hazardous Substance Spills, Leaks, and Discharges
(continued)

Materials Covered	Act or Regulation	Agency to Notify	What Must Be Reported and When	Who Must Report
Low Level radioactive wastes in transport. Any suspected or actual uncontrolled releases.	6 NYCRR 381.16 ECL §27-0305 Waste Transporter Permits	DEC and Department of Health	Immediate notification.	Transporter

Appendix L

Notice of Termination

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ___ ___ ___ ___ ___ ___

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person:	4a.Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. □ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ___ ___ ___ ___ ___ ___
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? □ yes □ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? □ yes □ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? □ yes □ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

Appendix M

Drainage and Utility Plans

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Appendix N

Construction Drawings

Refer to Construction Drawings dated May 30, 2018

Bound Seprately