BUFFALO AND ERIE COUNTY INDUSTRIAL LAND DEVELOPMENT CORPORATION

AGRIBUSINESS PARK MASTER PLAN, ERIE COUNTY, TOWN OF EVANS, NEW YORK

DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

PROJECT SPONSOR AND LEAD AGENCY

BUFFALO AND ERIE COUNTY INDUSTRIAL LAND DEVELOPMENT CORPORATION (ILDC)

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Executive Summary

ES.1 Description of the Proposed Action

The Buffalo and Erie County Industrial Land Development Corporation (ILDC), acting as lead agency pursuant to the State Environmental Quality Review Act and its implementing regulations promulgated thereto in 6 NYCRR Part 617 (collectively referred to as SEQRA), has prepared this Draft Generic Environmental Impact Statement (DGEIS) to assess the potential environmental impacts that may result from the implementation and construction of the proposed Erie County Agribusiness Park (the "Project," "Proposed Action," or "Master Plan").

The total Project site consists of 242.03 acres and is located on Eden Evans Center Road in the Town of Evans (the "Project Site"). The Project involves the adoption and implementation of a master plan for development of the Project Site and installation and construction of utilities and infrastructure in support of the future Agricultural related light industrial and commercial development of the Project Site.

It is anticipated that the Project will result in the use of a former on-site aircraft runway for installation of an on-site roadway, new water and sewer infrastructure, and new stormwater management facilities. Private utilities are also required to be constructed to support the future build-out of development parcels for agriculturally related commercial and light industrial opportunities. The number of businesses to be accommodated at the Project Site will depend upon demand and user needs.

It is anticipated that the Project will leverage alternative energy sources through the creation of a microgrid and will include trails and other greenspace amenities.

Thresholds and standards for future development will be established to help guide development in a manner consistent with the Master Plan and in a manner that mitigates potential environmental impacts.

ES.2 State Environmental Quality Review Act Process

A Full Environmental Assessment Form, Part 1, was completed by the ILDC in accordance with 6 NYCRR § 617(f) of the SEQRA regulations. The Proposed Action is classified as a Type 1 Action for the purposes of this SEQRA review. The ILDC circulated a lead agency solicitation letter on March 26, 2021, proposing to seek SEQRA lead agency status for the Project. On April 28, 2021, upon receiving no objections from potentially involved agencies, the ILDC resolved to assume designation as lead agency. A draft scoping document dated April 15, 2021, was prepared and circulated to the involved agencies and interested parties. A public scoping meeting was held on May 18, 2021. The final scoping document was issued by the ILDC on June 23, 2021.

ES.3 Environmental Assessment of Proposed Action

Section 3 of the DGEIS describes the existing environmental setting of the Project Site and identifies potential impacts from the preferred alternative: Option 1, full build-out of the Master Plan as a multi-site agricultural park. Portions of Section 3 analysis also consider and compare impacts of Option 1 to the potential wetland/conservation area option: Option 2, partial build-out. Wherever possible, Section 3 of the DGEIS offers mitigation measures to reduce the magnitude of potential significant adverse impacts.

ES.3.1 Potential Adverse Environmental Impacts

Land Resources: Topography and Soils

The overall topography of the Project Site is relatively uniform, and site soils are characterized as poorly drained. Major portions of the natural topographic features across the Project Site have been previously disturbed as the property was utilized over the years as a small local airport. A runway and taxiways, a few small metal buildings, and roadways are present on the former airport property. The Project Site is categorized as currently vacant.

Portions of the Project's proposed development lots will be disturbed again as the Project Site is developed as an agricultural park with buildings, parking, new infrastructure and utilities, and/or landscaped green space. This disturbance will cause temporary, short-term impacts to land and soils associated with construction-related activities. Impacts will include earth-moving work to construct and install on-site infrastructure, including access roads and utility lines. Grading may be conducted at some locations to accommodate development. Future development is expected to include the construction of new structures, parking lots, stormwater detention ponds, landscaping, and other elements of development. This construction may result in site alteration to accommodate foundations, paved areas, and other features. Temporary construction impacts, such as generation of dust, erosion, or sediment run-off, may occur. The contractors will be required to follow the provisions of a Stormwater Pollution Prevention Plan (SWPPP) prepared in compliance with regulations of the New York State Department of Environmental Conservation (NYSDEC) during the course of on-site construction activities.

Land use on the Project Site will be changed permanently, and the amount of impervious surfaces at the Project Site will increase. Provisions regarding maximum lot coverage and required landscaping will be adhered to in accordance with the Town of Evan's zoning requirements. Tenants will be required to follow the provisions of the SWPPP during the course of site construction activities. Future developers will be required to comply with Town of Evans zoning regulations addressing maximum lot coverage and required landscaping. With these measures in place, no significant negative impacts to lands or soils are anticipated as a result of the Proposed Action.

Water Resources

Presently, no groundwater wells are located on the Project Site, and the Project Site is not located over a primary, principal, or sole-source aquifer. The Project Site contains several small surface water resources, consisting of two small ponds and an intermittent stream. Drainage ditches and culverts are also present within and around the existing on-site structures. The ditches are contoured into the landscape on the eastern side of the main runway to promote drainage from the impervious surface of the runway. Culverts in place under the runway carry natural surface water flows from adjacent areas. Because the ditches lack a scoured channel and an ordinary high-water mark, they do not meet the federal definition of a waterway and therefore are not considered surface waters.

The two small ponds are located west of the runway on the southern portion of the Project Site and to the north of the existing airplane hangar. These ponds comprise approximately 0.6 acre. No named streams are present on the Project Site according to U.S. Geological Survey (USGS) topographic maps, but an unnamed tributary to Little Sister Creek is present in the southeastern corner of the Project Site. An on-site delineation of potential wetlands mapped approximately 632 linear feet of this stream. This delineation also determined the stream has intermittent flow and flows to the north, where it joins Little Sister Creek off site.

An initial review of the National Wetland Inventory (NWI) indicated the presence of three potentially regulated wetlands located on the Project site. Two of these potentially regulated wetlands are described as palustrine forested wetlands (PFO1B) and palustrine forested with scrub-shrub component (PFO/SS1B), and they are located in the northwestern quadrant of the Project Site. The third potentially regulated wetland is located on the southeastern quadrant and is described as a palustrine scrub-shrub wetland (PSS1C). The total acreage of potentially regulated wetlands that may be present on the Project Site according to the NWI maps is 13.6 acres. Despite the NWI maps identifying only 6 percent of the Project Site as potentially regulated wetlands, the walkover survey conducted in April 2021 identified a larger portion of the Project Site as potentially regulated wetlands. In light of the recent U.S. Supreme Court's decision in *Sackett v. U.S. Environmental Protection Agency*, and in order to better guide the design process and evaluate potential impacts, a further wetland delineation report was finalized in July 2023. A delineation of areas that could potentially be regulated state and federal wetlands was conducted over several days in November 2021 and again in July 2023. These on-site field surveys mapped a total of 89.26 acres of potentially regulated wetlands.

Importantly, and again in light of the U.S. Supreme Court's decision in *Sackett v. U.S. Environmental Protection Agency,* the surveys could not connect these potentially regulated wetlands to any permanent waterway that is a part of the stream network to a traditional navigable waterway. As such, the potential wetlands at the Project Site are assumed to be non-regulated under the Clean Water Act. As the Project progresses, an Approved Jurisdictional Determination will be sought from the U.S. Army Corps of Engineers to confirm this preliminary survey prior to the development of certain areas of the Project Site. According to NYSDEC wetlands maps, no wetlands are present at the Project Site that are subject to New York State regulation. Option 1 and Option 2 of the Master Plan for the site development reflects this issue, with Option 1 representing the potential wetlands being non-regulated and Option 2 representing these potential wetlands being regulated and avoiding them for development.

The Project, through construction of roads, buildings, and facilities, will increase the impervious surface area on the Project Site. Impervious surfaces reduce the ability of water to percolate into the soil, thereby reducing an area's contribution to recharging groundwater supplies. The quality of the water running off of impervious surfaces can also be degraded due to the presence of soluble pollutants such as nitrates and chlorides. Option 1 (full build-out) would convert 99 acres of land to impervious land, and Option 2 (partial build-out) would convert 48 acres to impervious land.

Because no Federal Emergency Management Agency mapped floodplains are present at the Project Site, no effects to floodplains will occur as a result of the Project.

Potentially regulated wetlands encompass a large area of the Project Site, and implementing the Project will have direct and indirect impacts to these potentially regulated on-site wetlands. The preferred alternative, Option 1, will have the most direct impacts to these potentially regulated wetlands, with approximately 51.30 acres of potentially regulated on-site wetlands being impacted, dredged, or filled. However, 100 percent of these 51.30 acres will most probably be categorized as federally non-regulated wetland, as they do not have a significant nexus to surface waters.

The Project may have indirect impacts to these potentially regulated wetlands by changing surficial and groundwater flows to potential regulated wetlands adjacent to developed areas on site and off site. The amount and direction of the flows may be altered by the Project, resulting in localized changes to the hydroperiod within these potentially regulated wetlands. This may cause changes in the local plant communities to species more tolerant of frequent ponding or to those more tolerant of drier conditions. These potentially regulated wetlands may also receive an increase in sedimentation, nutrients, and pollutants within runoff from the Project, which can also create changes in these potentially regulated wetlands that result in additional localized plant community shifts. Habitat fragmentation is another indirect wetland impact that several of these potentially regulated wetlands could experience from implementing the Project. Wetlands A–North, D, and E extend outside of the Project boundaries. Impacts to these potentially regulated wetlands reduce the overall size of the wetland area and cause fragmentation of it. This fragmentation can decrease the ecological services the wetland provides to the watershed and allow for the colonization of invasive species. The project design and mitigations will help to reduce these impacts.

It is anticipated that the Project Site will require permanent stormwater retention and treatment measures to mitigate the impervious surface impacts. Per the *New York State Stormwater Design Manual* (2015), green infrastructure practices such as preserving forested areas, utilizing vegetation buffers, open space design, and rain gardens will be used whenever practicable. The Project Site will be designed and built to meet state stormwater performance standards, thus minimizing impacts on groundwater quantity and quality.

It is expected that over one acre of ground disturbance will occur; therefore, a SWPPP will be prepared and implemented during construction. The SWPPP will comply with the requirements of the New York State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001). This will ensure that stormwater discharges such as silt-laden runoff that could occur during construction will not have an adverse impact on neighboring surface waters.

Air Quality and Climate

Impacts to air quality may occur from vehicular exhausts. Based on the traffic impact analysis studies, traffic is not anticipated to exceed that of the average annual growth rate for the area; therefore, vehicle-related emissions impacts are anticipated to be minimal, and no significant adverse impacts are expected. During construction, dust may increase, but it is anticipated to be temporary in nature and will not occur over prolonged periods of time. Should tenants propose any use that requires a state or federal air quality permit, or if the proposed use requires air modeling and analysis, adherence to the necessary steps for obtaining the air permit would be required, including adoption of mitigation measures or testing or modelling.

In addition, the Town of Evans Zoning Code regulates air quality by requiring that all industrial districts, which includes the Project Site (zoned Light Industrial [LI]), curb air pollution (Town of Evans 1987). Section 200-26(C)(1) requires that "the emission of smoke, soot, fly ash, fumes, dust and other types of air pollution borne by the wind shall be controlled so that the rate of emission and quantity deposited shall not be detrimental to, or endanger, the public health, safety, comfort or welfare or adversely affect property values." Section 200-26(C)(8) requires that "the emission of toxic, noxious or corrosive fumes or gases which would be injurious to property, vegetation, animals or human health at or beyond the boundaries of the lot occupied by the use shall not be permitted." Therefore, future uses of the Project's proposed lots by future tenants must adhere to all aspects of the Town of Evans Zoning Code and are not anticipated to significantly impact air quality.

The Project intends to be, to the extent feasible, electric/renewable/battery powered, which could potentially offset the fossil fuel emissions generated from the vehicles and equipment used for Project construction. Coordination with the Erie County Department of Environment and Planning to ensure that the Project and its tenants comply with the county's climate action and sustainability initiatives will help avoid, minimize, and potentially mitigate any climate change impacts associated with the Project.

Terrestrial and Ecological Resources

No rare, threatened, or endangered species are known to occur at the Project Site or within the vicinity of the Project Site. Northern long-eared bat, a federally and state endangered species, could be utilizing the forested areas on the Project Site during the spring and summer months. Inadvertent impacts to this listed species can be avoided by conducting tree clearing activities between November 1 and March 31 when the bats are hibernating offsite. Habitat is not a limiting factor for this species therefore loss of forestland at the Project Site will not have an adverse effect on this species. The Project Site lacks significant, unique or rare natural communities as well. The implementation of the Master Plan and subsequent site development will not result in significant adverse impacts to those natural communities or listed species when adhering to tree clearing restriction dates.

Subsequent build-out of the individual development lots will result in the loss of forestland and the preservation of greenspace which will include wetlands and forestland. The forest types found at the Project Site are common forest types for the region and forestland is in abundance in the region. The resulting impacts will not have an overall effect on the regional ecology and land cover. It will have an impact on the local wildlife individuals who currently utilize the Project Site as habitat. The Project Site is relatively small compared to a regional/landscape scale necessary to support wildlife assemblages.

Wildlife on and in the vicinity of the Project Site is typical of wildlife found in suburban and rural areas in Western New York. Development of the Project Site will result in temporary and permanent impacts to wildlife resources and habitat. How wildlife responds to construction and operation of the Project is species dependent. In general, less mobile species will have high mortality whereas more mobile species will retreat during construction, and many will return and interact on the Project Site differently than before. The lawn and landscaping around the facilities within the Project will provide different habitat for wildlife and change how many wildlife species currently utilize the Project Site. There will be less natural cover and food resources once the Project is implemented.

Land Use, Zoning, and Agriculture

The Master Plan for this site will allow a currently vacant and commercial/industrial designated land use to be redeveloped with new and varied light industrial uses to support agriculture in the County. The Project Site has remained predominantly vacant for the past 20 years and contains a former airport hangar building, a mechanic's shop, and an airport runway. Recently, a new Water Storage Tank and related infrastructure has been constructed at the project site.

The Comprehensive Plan for the Town of Evans supports the zoning of this site and the development of this Agricultural Industrial Park. The Project Site is zoned light industrial (LI), which meets the intent of this project. The Master Plan is consistent with the allowable land uses and dimensional requirements for this district. Meeting the applicable zoning requirements would minimize potential impacts to land use, visual resources, and noise and air quality guidelines. The proposed use of the Project Site for Light Industrial uses will not result in significant adverse impacts to the surrounding community.

Presently, the Project Site is not actively farmed and, due to the quality of the Project Site, has not been used for agriculture in many years. However, the Project Site is located within 500 feet of the Southwest #8 Agricultural District (Erie County 2021), and it is required that projects within an agricultural district or within 500 feet of a farm operation that is located in an agricultural district prepare an agricultural data statement. This rule is applicable for projects seeking an application for a special use permit, site plan approval, use variance, or subdivision approval requiring municipal review and approval.

The Project will have a positive impact on agricultural resources in the Town of Evans and Erie County because it will support the processing and transportation of agricultural products grown throughout the region.

Aesthetic Resources

Land uses in the vicinity of the Project Site are a mix of rural residential and open space. Some other commercial/industrial uses are located along Eden Evans Center Road. It is anticipated that at least some of the new construction for the Project will be visible from Eden Evans Center Road. The Project will present a different character from the existing use and from adjoining land uses. Future development will include new commercial/industrial/warehouse structures, parking lots, and ancillary structures in place of open and wooded lands. The existing views are of dilapidated metal buildings that do not contribute to the visual character of the area. Future development will be governed by the Town of Evans' zoning code, which addresses maximum lot coverage and landscaping requirements. The Project is consistent with the Town of Evans' comprehensive plan and its zoning, and with other similar uses within the town.

No existing significant aesthetic resources were identified and therefore, none would be affected by the Project. No significant views will be eliminated, and no officially designated scenic resources are located nearby. It is expected that the new buildings of the Project will be relatively low-profile, one- or two-story buildings, helping to mitigate their visibility and impacts to aesthetics.

There are some existing residential uses near the front of the project site along Eden Evans Center Road and the project design (buffers, landscaping and Town design requirements) will reduce visual impacts to these adjoining uses.

Future development will be subject to site plan review by the Town of Evans Planning Board, and developers will be required to comply with zoning regulations. Potential mitigations could include restrictions on building heights and/or implementation of architectural standards, especially fror buildings visible from Eden Evans Center Road. Screening and landscaping will be in accordance with the town's zoning requirements.

With these measures in place, no significant negative impacts to aesthetic resources are anticipated as a result of the Proposed Action.

Historic and Cultural Resources

A Phase 1A archaeological survey was prepared in response to a request by the New York State Office of Parks, Recreation and Historic Preservation/State Historic Preservation Office (SHPO). This Phase 1A survey, prepared in June 2021, concluded that no historic properties or sensitive archaeological or historic resources will be affected by the Project development. A potentially sensitive archaeological area was noted on the southern portion of the Project Site, but it will be avoided during construction. Therefore, it is anticipated that implementation of the Master Plan and build-out of the individual development sites, either fully or partially, will not result in any significant adverse impacts. Consequently, no mitigation measures for cultural resources are required.

Transportation

A Traffic Impact Study (TIS) was completed by Wendel Engineering to evaluate the existing local vehicular transportation network and to assess potential impacts the Project would have on local traffic. In order to quantify potential impacts to the transportation network, the quality of traffic flow was assessed in terms of levels of service (LOS). The preferred alternative, Option 1, will have the most impact on traffic and require more extensive mitigation, including signalization of the intersection of Eden Evans Center Road and the Project Site access road, and the addition of dedicated left turn lanes to the eastbound and westbound approaches of the intersection of Eden Evans Center Road and US Route 20. Option 2 will have a minor impact on traffic; the only mitigation required will be optimization of the signal at the intersection of Eden Evans Center Road and US Route 20. The project development will be phased to allow for these improvements/mitigations when warranted.

The site also has access to a railroad and the potential for a railroad spur has been accommodated into the Master Plan for option 1.

Public Utilities and Infrastructure

With improvements to existing distribution systems, adequate natural gas, electric, water, and telecommunications/telephone/cable services are available to support the Project. Improvements (storage tank and waterlines) to the water system have already been completed and will service this site. However, it was determined that there is limited capacity at the Big Sister Creek Water Resource Recovery Facility (WRRF). Without upgrades to the WRRF, only 100,000 gallons per day (peak daily flow) of sewer capacity may be available for the Project, based on monthly discharge limits.

One of the proposed improvements, when warranted, is the construction of a new 15 kV substation to serve the Project Site, which has the potential to be part of a micro-grid, a self-sufficient energy system that uses distributed energy, such as solar panels, wind turbines, battery storage and other technologies to produce and store power.

The Project will increase the amount of solid waste generated by the Project Site as the Project Site is currently unoccupied. As individual developments are built out, they will be responsible for contracting for solid waste collection and complying with Chapter 168 of the Evans Town Code, as well as NYSDEC regulations if small quantities of regulated hazardous waste are generated. No solid waste will be disposed of on site.

Natural gas would need to be extended to the site, but at this time, there are no plans to extend this service to the site.

As the Project will alter drainage patterns on site, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared and enacted, using a "regional" stormwater management approach. As individual developments are built out, they may be required to implement their own supplemental stormwater management practice.

Noise, Odor, and Light

At present, noise at and around the Project Site is largely associated with current low-density rural residential and agricultural activities, including farm equipment operation, the times of which vary depending on crop and season. Intermittent noise is also generated from vehicles traveling along Eden Evans Center Road. The Project Site is relatively isolated from many residential noise receptors. The closest residences are at the south of the property on Eden Evans Center Road adjacent to the Project Site. The anticipated increase in noise levels resulting from operations associated with the future light and medium manufacturing and industrial uses on the individual development lots may increase the current noise levels associated with on-going operations of surrounding businesses. However, because the anticipated uses in the Project are permitted uses in the existing town zoning code and will be required to adhere to Section 200-26(C)(6) of the Town of Evans zoning code, a detailed noise study is not recommended. If further assessment is warranted due to the proposed location or type of uses, then a noise study should be completed in adherence with NYSDEC noise policy as part of site plan review.

Construction activities for the Project will result in temporary noise impacts, primarily due to the operation of construction-related equipment, including trucks entering and exiting the Project Site, and heavy equipment operations. However, construction is anticipated to be limited to "normal business hours," from about 8:00 am to 6:00 pm.

Current odors present at the Project Site are generally nonexistent, but when they are present, they are consistent with those of rural areas and agricultural operations. The Town of Evans regulates odors in its zoning code Section 200-26(C)(7), which applies to all industrial properties (the Project Site is zoned LI): *Odorous matter. The emission of odorous matter so as to produce a public nuisance beyond the lot occupied by the use shall not be permitted*. Proposed uses for the Project Site are not anticipated to have a significant adverse effect.

Project construction followed by the operation of commercial tenants on the Project Site will increase the amount of artificial light emitted throughout the Project Site. Currently, no artificial light is emitted from the Project Site except around the buildings along the Eden Evans Center Road boundary, so all additional lighting will have some noticeable impact on the Project Site at night. All construction activities and commercial tenant operations must adhere to the Town of Evans zoning code light requirements. Although adding artificial lights to the buildings, roadways, and parking lots is needed for safety, lighting will be reduced as much as possible to avoid disturbance to nearby wildlife and other natural processes occurring in and around the Project Site boundaries.

Public Safety

The demand for public safety services (police, medical, and fire protection) may increase as facilities are constructed and employment increases. This demand is not anticipated to increase significantly above a level where additional public safety resources would be necessary.

Socioeconomic Conditions

Implementation of the Master Plan and future build-out of the individual development sites will not create substantial population growth within the Project Site. However, the Project is expected to generate direct and indirect positive economic effects through increased employment opportunities and can be considered a catalyst for economic development that may result in some limited population growth in the local area and region.

According to the ECIDA Agribusiness Park Employment Impact Statement, under the Preferred alternative (maximum build-out of the individual development lots) may add a total of approximately 5,849 one-time construction jobs (Assuming a three-year construction timeframe, the estimated annual impact is approximately 1,950 jobs per year). In addition, according to order-of-magnitude employment yields published by National Association for Industrial and Office Parks (NAIOP), the Project may add approximately 803 permanent jobs upon achieving stabilized operations in Year 3 to Year 5 (Wildan Financial Services).

Overall, socioeconomic impacts from implementation of the Master Plan and development of the individual parcels on the Project Site are expected to be positive, and, therefore, no mitigation of them is deemed necessary.

Community Facilities and Services

Development at the Project Site will have minimal to no impact on community facilities and services; therefore, no mitigation measures are deemed necessary.

Temporary and Short-Term Impacts

Development of the Project Site will result in temporary and short-term impacts related to construction activities. The short-term noise impacts will cease upon completion of the Project construction activities. To mitigate short-term air quality impacts caused by construction activities, low-sulfur fuel should be used whenever possible, and engine idling time should be limited. Dust will be controlled by utilizing the appropriate best management practices (BMPs), such as use of mulch, water sprinkling, and wind barriers.

Significant Unavoidable Adverse Impacts

Certain environmental impacts associated with the Proposed Action are unavoidable. Unavoidable adverse impacts have been reduced to the extent practicable through the design of the Master Plan, and, where appropriate, through the identification of mitigation measures and use of BMPs. Unavoidable environmental impacts associated with the Proposed Action include:

- Conversion of 99 and 48 acres of land to impervious land cover from Option 1 (full build-out) and Option 2 (partial build-out), respectively (i.e., conversion to buildings, parking lots, and roads).

- Changes to the existing drainage conditions caused by the increase in impervious surface area and potential impacts from erosion and sedimentation of local drainageways.
- Short- and long-term impacts to the existing noise setting due to construction and operation of the developed properties.
- Change in land use from vacant and commercial to LI, as permitted by the Town of Evans' zoning code.
- Changes to the visual setting of the Project Site.
- Minor increases in local traffic.
- Short-term, temporary impacts related to construction activities, including noise from construction vehicles and equipment, and short-term impacts to air quality from dust and exhaust emissions. In addition, construction activities may increase the potential for limited drainage problems, although implementation of BMPs will ensure these problems are minimized.

Irreversible and Irretrievable Commitment of Resources

The Project will require some irreversible and irretrievable commitment of certain material, natural, and financial resources. Existing vacant and open-space lands and some current vegetation will be replaced with development. Various construction materials and building supplies will also be committed to the future build-out of the individual development lots. The use of construction materials, such as gravel, concrete, steel, etc., will represent a long-term commitment of these resources. The expenditure of public funds will continue to be required throughout the process for environmental review, site and building design, permitting, site plan approval, and construction phases of infrastructure for the Project. The commitment of these resources makes them unavailable for other uses.

Growth-Inducing Impacts

Implementation of the Master Plan and build-out of the individual development lots are not likely to result in a greater level of development than the existing zoning otherwise allows. Any secondary development pressure (i.e., for housing and commercial services resulting from development of the Project Site) can easily be absorbed by vacant lands and underdeveloped properties, and redevelopment of existing structures and lands, within the Town of Evans and surrounding communities. Therefore, the Project is not anticipated to result in significant negative impacts to the surrounding area or the Town of Evans as the result of further growth in the community.

Cumulative Impacts

In general, cumulative impact analysis of external projects proposed for construction in the region is required by SEQRA where the external projects have been specifically identified. Since no external projects have been identified to be considered under an in-depth analysis of cumulative impacts associated with the Project, no further analysis has been determined to be appropriate for this action.

Any development of individual lots within the Project Site that exceeds the thresholds identified in Section 5.0 of this DGEIS that necessitates additional SEQRA review would also be required to address potential cumulative impacts.

Additionally, the Master Plan is designed to meet market demand in terms of lot size, access, and infrastructure. The road layout and lot configuration is flexible and capable of being developed in phases. Therefore, not all the roads and utility infrastructure must be constructed at one time in order to build out some or all the individual development lots. The assessments conducted for this DGEIS consider the full build-out of all the infrastructure and development of all the land available in accordance with the current zoning. The implementation of the Master Plan, including the mitigation measures identified herein, will be no less protective of the environment if all or part of the Project is completed.

ES.4 Alternatives Considered

Preferred Alternative: Option 1, Full Build-Out: The preferred alternative is the implementation of the Master Plan for the full build-out of an agriculture light industrial park in order to advance the ILDC's economic and community development goals. Maximum build-out of the individual development lots is expected to create approximately 1.89 million square feet of office, controlled growth facility, and cold storage facility space. The preferred alternative presents the ILDC's objectives to have in place a conceptual design for roads and utilities that can be implemented, in a phased approach as needed, to facilitate the full build-out of the Project Site. The potential impacts of implementation of the Master Plan and future build-out of the development lots (the preferred alternative) are summarized in Section 3 of this DGEIS. Potential impacts have been reduced or mitigated through concept design and the establishment of regulatory requirements.

Potential Wetland/Conservation Area Option: Option 2, Partial Build-Out: This alternative is designed to be flexible in terms of building lot placement and configuration, and road and utility layout. Option 2 was developed for implementation if site conditions warrant fewer lots being feasible for construction and development, and the net developable area is reduced. Differences under these scenarios would result in fewer lots being developed and a reduction in the overall length of roads and extent of utility installation required.

No-Action Alternative: Under the no-action alternative, the Project Site would remain in its existing condition. There would be no further public or private investment in infrastructure improvements. The property would not be subdivided into individual development lots and would remain vacant and underutilized, resulting in a loss of future economic, employment, and fiscal benefits to the community.

The no-action alternative would result in economic uncertainties and does not meet the ILDC's objectives to obtain shovel-ready certification and market the Project Site for development as an agribusiness park; therefore, it was considered but not selected as the preferred alternative.

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Acronyms/Terminology List

AQI	Air Quality Index
BMP	Best Management Practice
CLCPA	Climate Leadership and Community Protection Act
CRIS	Cultural Resources Information System
CWA	Clean Water Act
DGEIS	Draft Generic Environmental Impact Statement
ECDEP	Erie County Department of Environment and Planning
ECDOH	Erie County Department of Health
ECDPW	Erie County Department of Public Works
ECDSM	Erie County Division of Sewerage Management
ECIDA	Erie County Industrial Development Agency
ECSD	Erie County Sewer District
ECWA	Erie County Water Authority
EIS	Environmental Impact Statement
EJ	Environmental Justice
EV	Electric Vehicle
FEAF	Full Environmental Assessment Form
FEMA	Federal Emergency Management Agency
FGEIS	Final Generic Environmental Impact Statement
GEIS	Generic Environmental Impact Statement
HSG	Hydrologic Soil Group
IDA	International Dark-Sky Association
ILDC	[Erie County] Industrial Land Development Corporation
IPaC	Information for Planning and Consultation
kV	Kilovolt
kVA	Kilovolt Amperes
LF	Linear Feet
LI	Light Industrial
LOS	Level of Service
MSL	Mean Sea Level
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NAIOP	National Association for Industrial and Office Parks

NPS	U.S. National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
NWI	National Wetland Inventory
NYPA	New York Power Authority
SEQRA	State Environmental Quality Review Act
SHPO	State Historic Preservation Office
SMDM	[New York State] Stormwater Management Design Manual
SPDES	[New York] State Pollution Discharge Elimination System
SPS	Solar Photovoltaic System
SWPPP	Stormwater Pollution Prevention Plan
TIS	Traffic Impact Study
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WNS	White Nose Syndrome
WRRF	Water Resource Recovery Facility

1 Introduction: Project Description

1.1 Proposed Action

The Buffalo and Erie County Industrial Land Development Corporation (ILDC), acting as lead agency pursuant to the State Environmental Quality Review Act and its implementing regulations promulgated thereto in 6 NYCRR Part 617 (collectively referred to as SEQRA), has prepared this Draft Generic Environmental Impact Statement (DGEIS) to assess the potential environmental impacts that may result from implementation and construction of the proposed Erie County Agribusiness Park (the "Project," "Proposed Action," or "Master Plan"). The total Project site consists of 242.03 acres and is located on Eden Evans Center Road in the Town of Evans (the "Project Site"). The Project involves the adoption and implementation of a master plan for development of the Project Site and installation and construction of utilities and infrastructure in support of the future industrial and commercial development of the Project Site.

It is anticipated that the Project will result in the use of a former aircraft runway and existing roadways for the installation of an on-site roadway, other infrastructure, and new stormwater management facilities. Private utilities are also required to be constructed to support the future build-out of development parcels for agriculturally related commercial and light industrial opportunities. The number of businesses to be accommodated at the Project Site will depend upon demand and user needs. Thresholds and standards for future development will be established to help guide development in a manner consistent with the Master Plan and in a manner that mitigates potential significant adverse environmental impacts.

1.2 Project Site Description

The Project Site is located at 1526 Eden Evans Center Road in the Town of Evans, on the north side of the roadway. The Project Site lies east of Delamater Road and a pair of parallel-running railroad tracks, and west of Southwestern Boulevard (Route 20). It is approximately one mile west of Exit 57A (Eden-Angola exit) of the New York State Thruway (see Figure 1-1).

The Project Site of a single parcel (S.B.L 221.00-4-200.111), which is currently owned by the ILDC. The parcel totals approximately 242.03 acres of land and has approximately 1,850 linear feet (LF) of frontage along the roadway.

The Project Site was formerly operated as the Evans-Angola Airport. A paved runway and several buildings remain on the Project Site. These buildings include former airplane hangars and offices. The former runway runs north-south along the westerly portion of site. A paved area along the east side of the old runway was previously used as an aircraft apron. To the east of the paved apron area is a paved access road that runs south and connects to Eden Evans Center Road. A previous fill area exists to the east of this access road. A large, cleared area at the north end of the paved runway runs east-west and was operated as part of an old turf runway. Recently a new water storage tank and related infrastructure was constructed on the northern side of the site. The remainder of the Project Site is wooded.

The Project Site is bounded on the west by a single-family residence. There are two residential parcels along the frontage of the property that are not part of the Project Site (see Figure 1-1). The Norfolk Southern railroad runs along the rear western boundary of the property. Other surrounding land uses are agricultural, wooded, or undeveloped land.

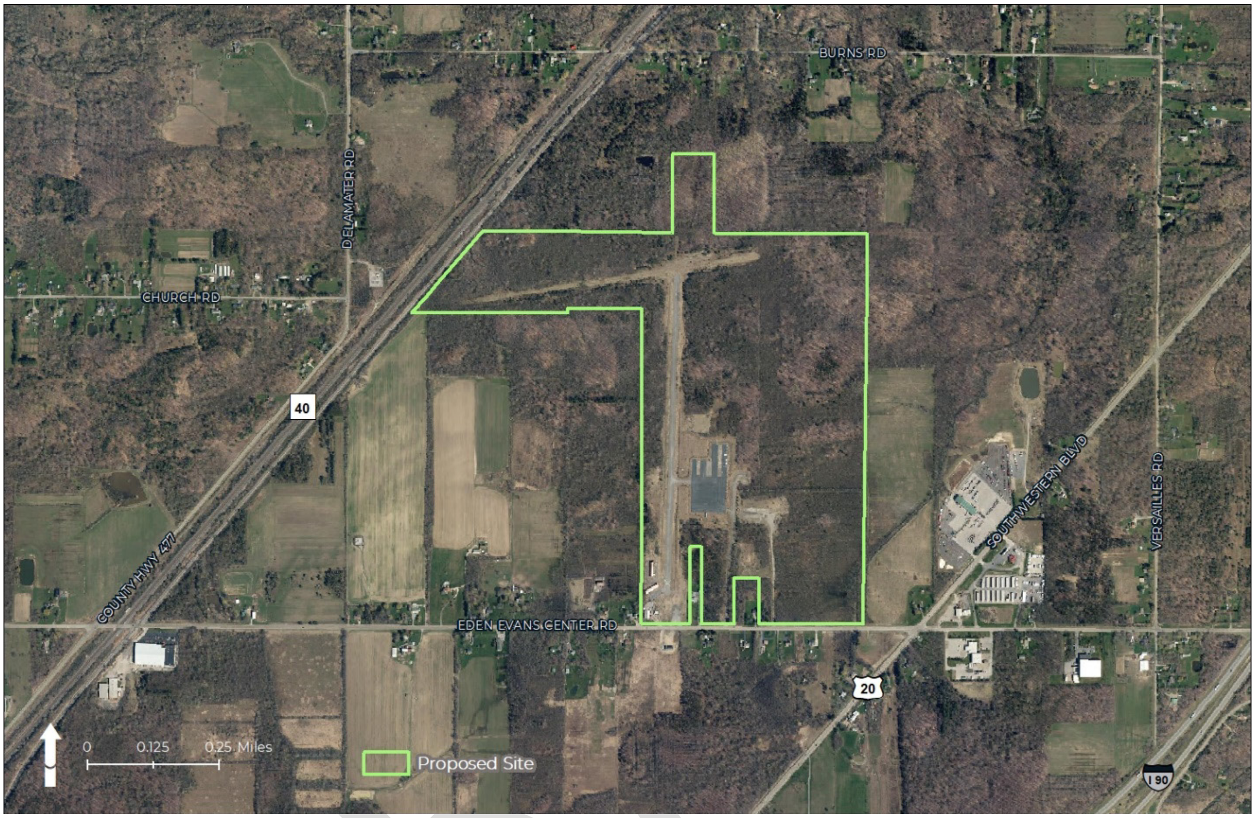


Figure 1-1 Project Site Location, Town of Evans, New York

1.3 Project Description

The Project will involve Master Plan approval and construction and operation of necessary infrastructure in support of the development of an agribusiness park at the Project Site. Implementation of the Master Plan will result in the installation of public access roads and extension of sewer, water, and private utilities into the Project Site to service the development, which is anticipated to consist of a mix of cold storage and related buildings supporting site activity. These uses are consistent with the zoning for the Project Site, which is Light Industrial (LI).

The Master Plan anticipates the creation of up to approximately 20 separate lots ranging in size from approximately 1 acre to 50 acres. The conceptual lots are arranged along both the repurposed airport runway/apron and several access drives that provide access to site buildings. The ILDC intends to subdivide and sell individual lots for private development. The Master Plan is presented as two options that vary in the amount of land that is developed on the Project Site (see Section 1.5).

1.4 Project Purpose, Need, and Benefits

The primary purpose of the Project is to establish an agricultural business park in support of agricultural and farming activities in the region. Implementation of the Project will achieve a stated goal of Erie County's Agricultural and Farmland Protection Plan, which calls for the establishment of a shovel-ready agribusiness park to attract food and agricultural processing businesses to the region in an effort to expand available markets for local farms. The Project will help retain agricultural jobs and enterprises in the region while creating new job opportunities at the businesses established at the agricultural business park.

1.5 Alternatives

This section presents a description of various alternatives considered for the Proposed Action, which consists of implementation of the ILDC's Master Plan. Implementation of the Master Plan includes the following components: the Town of Evans' review of the Master Plan; design and construction of roads and public infrastructure; and the ultimate sale and development of individual development lots. As the subject of a DGEIS, the Project is still at the conceptual stage, and potential future site-specific development projects are somewhat speculative. Correspondingly, the following alternatives analysis is general in nature, focusing on alternative uses and scale of future development.

1.5.1 Preferred Alternative: Option 1, Full Build-Out

The preferred alternative is the implementation of the Master Plan for the development of the agribusiness park on the Project Site depicted in Figure 1-2. The preferred alternative best advances the ILDC's goal of a conceptual design for roads, utilities, and development lots that can be implemented in a phased approach, as needed, to facilitate the maximum redevelopment of this property and encouraging new investment and job creation.

The preferred alternative consists of the full build-out of the Project Site. It is anticipated that the Project will result in the conversion of the existing site runway to the main access road into the Project Site and the installation of new streets to access the development parcels. It includes a main access road and an emergency ,means of egress to Eden Evans Center Road. Maximum build-out of the individual development lots is expected to create approximately 1.89 million square feet of office, light industrial, controlled growth facility, and cold storage facility space. Water, sewer, stormwater retention facilities, and utilities will also need to be installed in support of the build-out of individual development lots. The proposed development lots are a mix of office and LI uses (for cold storage), with some areas designated as controlled-growth facilities. This alternative also includes a potential logistics hub/ alternative energy area and new rail spur and power feed on the northwest portion of the Project Site to connect the Project Site to the existing adjacent Norfolk Southern rail lines. A 50-acre wetlands/conservation area is also designated on the southeast portion of the Project Site. The Master Plan full build-out option shows 19 individual development lots ranging in size from 0.9 acre to 38.2 acres. The number and size of the development lots to be subdivided and sold remains to be determined, depending on demand. The lots are arranged along the converted runway and a series of new access streets. The Master Plan depicts a total of approximately 5,300 LF of new streets and access ways.

1.5.2 Potential Wetland/Conservation Area Option: Option 2, Partial Build-Out

Option 2 (Potential Wetland/Conservation Area Option) has less acreage available for development due to avoidance of site environmental constraints (i.e., potentially regulated wetlands). Option 2 presents a conceptual design for roads, utilities, and development of a smaller number of lots that can be implemented in a phased approach to encourage new investment and job creation (See Figure 1-3).

Option 2 calls for development of a portion of the Project Site. Proposed site uses are similar to those of Option 1; however, the main difference with this option is the establishment of large conservation areas on the southeast, northeast, and northwest portions of the Project Site that allow for avoidance of potentially regulated wetlands. This option does not include the potential railroad spur or logistics area.

1.5.3 No-Action Alternative

Under the no-action alternative, the Project Site would remain in its existing condition. There would be no further public or private investment in infrastructure improvements. The Project Site would not be subdivided into individual development lots and would remain vacant and underutilized, resulting in a loss of future economic, employment, and fiscal benefits to the community.

The no-action alternative would result in economic uncertainties and does not meet the ILDC's objectives to obtain shovel-ready certification for the Project Site and market it for development as an agribusiness park; therefore, it was considered but not selected as the preferred alternative.

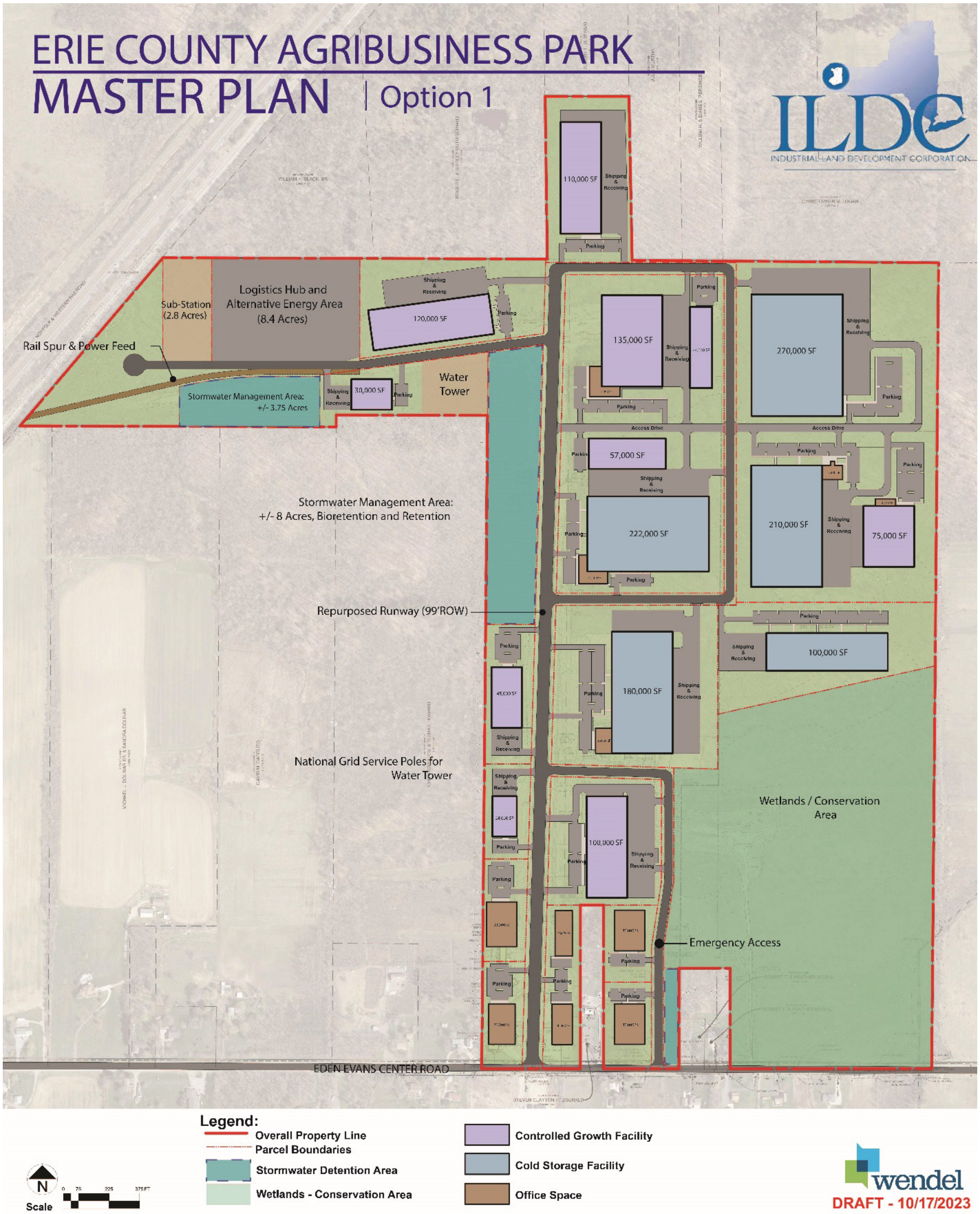


Figure 1-2 Preferred Option (Full Build-Out)

Figure 1-3 Potential Wetland/Conservation Area Option (Partial Build-Out)

2. State Environmental Quality Review Act Process

Pursuant to regulations promulgated under SEQRA, all state, regional, and local government agencies are to consider potential environmental impacts equally with social and economic factors during the preliminary stages of proposed development actions. The lead agency and other involved agencies must assess the environmental significance of all actions they have discretion to approve, fund, or directly undertake. The intent of SEQRA is not that environmental factors be the sole consideration in the decision-making process; instead, SEQRA requires involved agencies to balance environmental impacts with social, economic, and other essential considerations when deciding to approve or undertake an action.

2.1 Legislative Intent of SEQRA

All discretionary decisions of a state, regional, or local agency to approve, fund, or directly undertake an action that may affect the environment are subject to review under SEQRA. SEQRA, as implemented by 6 NYCRR Part 617, requires the consideration of environmental factors in the early stages of the planning, review, and decision-making processes of state, regional, and local agencies. The intent of SEQRA is to ensure that a balance of social, economic, and environmental factors is incorporated into the planning and decision-making processes. Incorporating SEQRA early in the design process facilitates revisions to the project that minimize negative impacts while still meeting other goals.

A critical aspect of SEQRA is its public participation component. Opportunities for public participation are incorporated into the Environmental Impact Statement (EIS) process and include the public scoping of the DGEIS, conducting a SEQRA public hearing, the mandated 30-day public comment period on the DGEIS, and the review period after completion of the Final Generic Environmental Impact Statement (FGEIS) but before findings are made. These opportunities allow other agencies and the public to provide input into the environmental review process.

2.2 Steps in the Environmental Review Pursuant to SEQRA

The first step in the SEQRA review process is to conduct an initial review to determine whether the proposed action is subject to SEQRA and, if it is, to determine the likelihood of potential impacts. The proposed action is classified as a Type I, Type II, or Unlisted action. Type I actions are presumed to be more likely to have potential significant adverse environmental impacts and therefore require a more structured process of evaluation. Type II actions are those that SEQRA has determined to not have a significant impact, and further review of them under SEQRA is not required. The majority of actions are Unlisted, which means they are not Type I or Type II.

The ILDC completed a Full Environmental Assessment Form (FEAF), Part 1. The FEAF, Part 1, provided information about the Project and identified agencies that have permitting and approval jurisdiction over it. The FEAF provided basic information, as it was the intent of the ILDC to have a Generic Environmental Impact Statement (GEIS) completed for the Project. Completing the FEAF provided the ILDC with a better understanding of the types of impacts that may potentially result from the Project. Based on that information, the ILDC classified the Proposed Action as a Type I Action under SEQRA because the Project will ultimately involve the physical alteration of 10 or more acres, a threshold for a Type I Action that is set forth at 6 NYCRR § 617.4(b). Other Type I thresholds may be exceeded by the Project, but one is sufficient to classify the action as a Type I Action.

The second step in the process is to establish the lead agency. It is up to the involved agencies to select a lead agency that will be primarily responsible to coordinate the environmental review process as required under SEQRA for Type I actions. The lead agency determines whether an Environmental Impact Statement (EIS) is needed, and it is responsible for the content of the EIS, if one is prepared. Generally, the lead agency is that agency among the involved agencies that has the most prominent role in decision making for the project. The ILDC, as owner of the Project Site and funding agency for the Project, sought lead agency status.

Involved agencies have jurisdiction to fund, approve, or directly undertake a project. Interested agencies do not have jurisdiction but may desire to participate in the review process because of their expertise or other interest in the project. They are included in the SEQRA process to better ensure a thorough evaluation of potential impacts.

Conducting a coordinated review enables an effective way to communicate among the involved and interested agencies. This step alerts all interested and involved agencies about a given project and allows them an opportunity to comment on the project early in the process. The ILDC distributed a request to act as lead agency on March 26, 2021, and solicited comments. The following agencies were notified:

- United States Department of the Interior, Fish and Wildlife Service (New York Ecological Services Field Office)
- New York State Department of Environmental Conservation (NYSDEC), Region 9
- New York State Department of Transportation (NYSDOT), Region 5
- Empire State Development
- New York State Office of Parks, Recreation and Historic Preservation, Division for Historic Preservation
- New York State Department of Health
- New York State Department of Agriculture and Markets
- Erie County Department of Environment and Planning (ECDEP)
- Erie County Department of Health (ECDOH)
- Erie County Department of Public Works (ECDPW)
- Erie County Legislature
- Erie County Sewer District (ECSD), Division of Sewerage Management
- Erie County Water Authority (ECWA)
- Erie County Industrial Development Agency (ECIDA)

- Town of Evans (Town Board and Planning Board)
- Evans Center Fire Company
- Town of Evans Police Department
- National Grid, Environmental Health
- Invest Buffalo Niagara

Following distribution of the ILDC's intent to seek lead agency, the ILDC collected comments from the other agencies. None of the agencies contacted objected to the ILDC acting as lead agent for the Project. On April 28, 2021, the ILDC assumed the designation as lead agency for the Project.

Based on the FEAF, Part 1, and previous information generated on the Project Site, the ILDC had prepared Part 2 of the FEAF in order to identify the range of potential impacts, their scale, and whether impacts so identified could be mitigated or reduced. Subsequently, the ILDC determined that the Proposed Action and the future development of the Project Site could have a potential significant adverse impact on the environment. Based upon its determination of significance, the ILDC issued a positive declaration on April 28, 2021, requiring the preparation of a GEIS.

Following the determination of significance, the next step in the SEQRA process is scoping, which is no longer optional but instead required. The purpose of scoping is to identify and address public issues and concerns, and ensure that the important environmental impacts are included in the DGEIS. A draft scoping document dated April 15, 2021, was prepared that outlined the proposed content of the DGEIS and circulated to all the agencies. A virtual public scoping meeting was held on May 18, 2021, and public and agency comments on the scope were accepted until May 21, 2021. The final scoping document was issued by the ILDC on June 23, 2021.

Once scoping was complete, the DGEIS was prepared. The DGEIS provides a detailed description of the Proposed Action, identifies the various permits and approvals required, identifies the relevant positive and adverse impacts of the Proposed Action, discusses measures to mitigate or lessen potentially adverse impacts, and evaluates reasonable alternatives to the Proposed Action.

After the ILDC, as lead agency, reviews the DGEIS and accepts it as complete and ready for public and agency review, the DGEIS will be released for public review and comment. During the public comment period, written comments on the DGEIS will be accepted, and a public hearing will be held to allow individuals to provide input. The public review and comment period will be a minimum of 30 days in length, in keeping with SEQRA requirements.

Upon completion of the public review period, the ILDC will prepare a FGEIS, which will respond to the public and agency comments received on the DGEIS. The FGEIS will serve as a complement to the DGEIS. It will include the DGEIS and its appendices by reference, along with a summary of all substantive comments that were received, responses to those comments, and a description of any significant revisions to the original DGEIS, along with the reasons for the revisions.

The final step of the environmental review process under SEQRA is the preparation of a findings statement by the lead agency. The findings statement positively demonstrates that the Proposed Action minimizes or avoids potential significant adverse environmental effects to the maximum extent practicable and that the Proposed Action incorporates practicable mitigation measures that were identified through the SEQRA process. The Lead Agency will issue their Findings at the end of this process. Other Involved (Approval) Agencies will issue their Findings when an application for approvals is submitted to them.

These demonstrations must be based on facts and conclusions that are derived from the DGEIS, public and agency comments, any hearing records, and the approved FGEIS. The findings statement identifies the considerations that have been weighed and the lead agency's rationale for its approval or disapproval of the Proposed Action.

2.3 Reasons Supporting the Preparation of a DGEIS

The ILDC determined that a GEIS was the most appropriate approach for review of the Project because the Proposed Action involves the preparation and implementation of a Master Plan to guide potential development of the Project Site for agricultural businesses and related light manufacturing, and because no site-specific development project has yet been determined. The specific types of users who may choose to locate in the Project's proposed agribusiness park are not known at this time. The Proposed Action includes the installation of infrastructure (access roads, sewer and water service, private utilities) as well as the future development of the Project Site for agribusinesses. The GEIS for the Project has evaluated a preferred alternative but recognizes that future development could vary somewhat from that scenario. A GEIS entails a comprehensive approach and the consideration of potential cumulative impacts. The Project is therefore addressed in its entirety, enabling a single comprehensive review. The requirements of SEQRA also set forth a public process to address community concerns without unduly delaying future projects.

The DGEIS presents an evaluation of potential impacts from the full build-out of the Project as currently anticipated in order to conduct a thorough evaluation of these potential impacts. The ILDC will consider whether the proposed development falls within the parameters established by the GEIS. If it does and no further impacts are identified, the ILDC will be able to determine that the requirements of SEQRA have been met, and development of the Project can move forward with site plan and other approvals expeditiously, without further SEQRA review. In this way, the GEIS expedites the project-specific aspects of the environmental review process for future projects that meet the thresholds established within the GEIS. For projects that do not meet the thresholds and require additional evaluation, the information in the GEIS can serve as a resource to facilitate an evaluation of potential impacts.

The ILDC, at this time, is the only funding/approval agency and therefore has assumed Lead Agency. If in the future, the ILDC wants to participate in New York State's "Shovel Ready" program, which enables a "fast tracked" process for properties approved for the program. The Shovel Ready program must meet SEQRA requirements. Using a GEIS to evaluate potential environmental impacts of development is an effective means of meeting that evaluation requirement for projects where specifics are as yet unknown.

This DGEIS was prepared in accordance with SEQRA. The purpose of this document is to identify and evaluate the potential significant adverse environmental impacts of developing the Project Site and, where applicable, to identify reasonable mitigation measures to reduce the effects of potential significant adverse environmental impacts. The DGEIS also discusses a range of reasonable alternatives that are feasible and presents them with sufficient detail to allow a comparative assessment of each.

The DGEIS is also a method of enabling input and comments from involved and interested agencies, providing a comprehensive and sound basis for decision making relating to the Project.

The final step in the SEQRA process is the preparation of the findings statement. In order for the Proposed Action to be approved, the lead agency and the involved agencies must prepare findings statements that positively demonstrate that the Proposed Action minimizes or avoids the potential significant adverse environmental effects to the maximum extent practicable and that the Proposed Action incorporates practicable mitigation measures that were identified during the SEQRA process. These demonstrations must be based on facts and conclusions derived from the DGEIS, public and agency comments, any hearing records (as applicable), the approved FGEIS, and pertinent regulatory requirements governing, funding, approving, or undertaking the Proposed Action. The findings statement will identify the potential impacts and provide the ILDC's rationale for its approval or disapproval of the Proposed Action.

3 Environmental Setting, Potential Impacts, and Mitigation

This section describes the environmental setting in which the Project is located; identifies potential impacts from implementation of the Master Plan; and, where applicable, identifies possible mitigation measures to reduce the magnitude of significant adverse impacts. The analysis primarily assesses the impacts from implementation of the preferred alternative, Option 1 (Full Build-Out). In general, it can be assumed impacts from the Potential Wetland/Conservation Area Option, Option 2 (Partial Build-Out) will be reduced across all environmental resource areas. However, where appropriate, detailed comparisons of impacts between Option 1 and Option 2 are presented.

Assessments of anticipated impacts are provided commensurate with the level of detail known at this time. The assessments are based on the conceptual Master Plan prepared to date (Figures 1-1 and 1-2) with the understanding that this plan is subject to change as individual development sites are defined, sold, and built out. Where limited or no detail is available, this section provides qualitative assessments of potential impacts in order to identify the additional review that may be required at the time individual development projects are proposed (See Section 5, Thresholds).

3.1 Land Resources

3.1.1 Existing Environment

3.1.1.1 Topography

The Project Site has only moderate changes in grade. Elevations range from approximately 666 feet above mean sea level (MSL) to a high point of approximately 749 feet above MSL on site. The lowest elevation of the property is at the far northwesterly corner of the Project Site, near the rail line and in an area of wetlands, and the highest elevation is located at an area of fill at the southeastern portion of the Project Site. See Figure 3.1 for some topographic information (and the Appendix for a topographic survey).

The elevation at the road frontage on the southern boundary of the Project Site near Eden Evans Center Road is approximately 708 feet above MSL. This is the portion of the Project Site where existing structures are located. Elevations are slightly lower (approximately 0.3 percent) heading northerly, to an elevation 697 above MSL at the north end of the existing paved runway. The turf runway that runs east-west at the north end of the Project Site also has a slight slope, decreasing approximately 0.8 percent from an elevation of 701 feet above MSL at its east end to an elevation of 688 feet above MSL at its west end. The area nearest the railroad tracks at the western edge of the property is the lowest portion of the Project Site, with elevations ranging from 666 to 672 feet above MSL.

The wooded areas at the far northern boundary of the Project Site slope from an elevation 705 feet above MSL at the east to an elevation 668 feet above MSL to the west near the railroad tracks. The wooded areas at the northeastern portion of the Project Site are at an elevation of 715 feet above MSL. From there, grades drop to the northwest at approximately 1.9 percent, to an elevation of 691 feet above MSL near the paved runway and to the southeast at approximately 0.8 percent toward a drainage ditch. Three culvert pipes cross under the paved runway and capture surface water flows from drainage ditches along the east side of the runway and convey this water to the lower wetland area located west of the runway. The southeastern portion of the Project Site consists of an area of fill; as noted previously, this is the highest point of the property, with elevations ranging from 719 to 749 feet above MSL.

A topographic survey was completed on a large portion of the Project Site and is included as Appendix A.

Additional investigations of topography will be necessary as development occurs within the undeveloped wooded areas of the Project Site to support final engineering. In general, the slopes on the Project Site do not represent an impediment to development.

3.1.1.2 Soils

The soils within the approximate boundaries of the Project Site were surveyed using the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) website. Based on this online survey, the 242-acre Project site contains the soils described in Table 3-1.

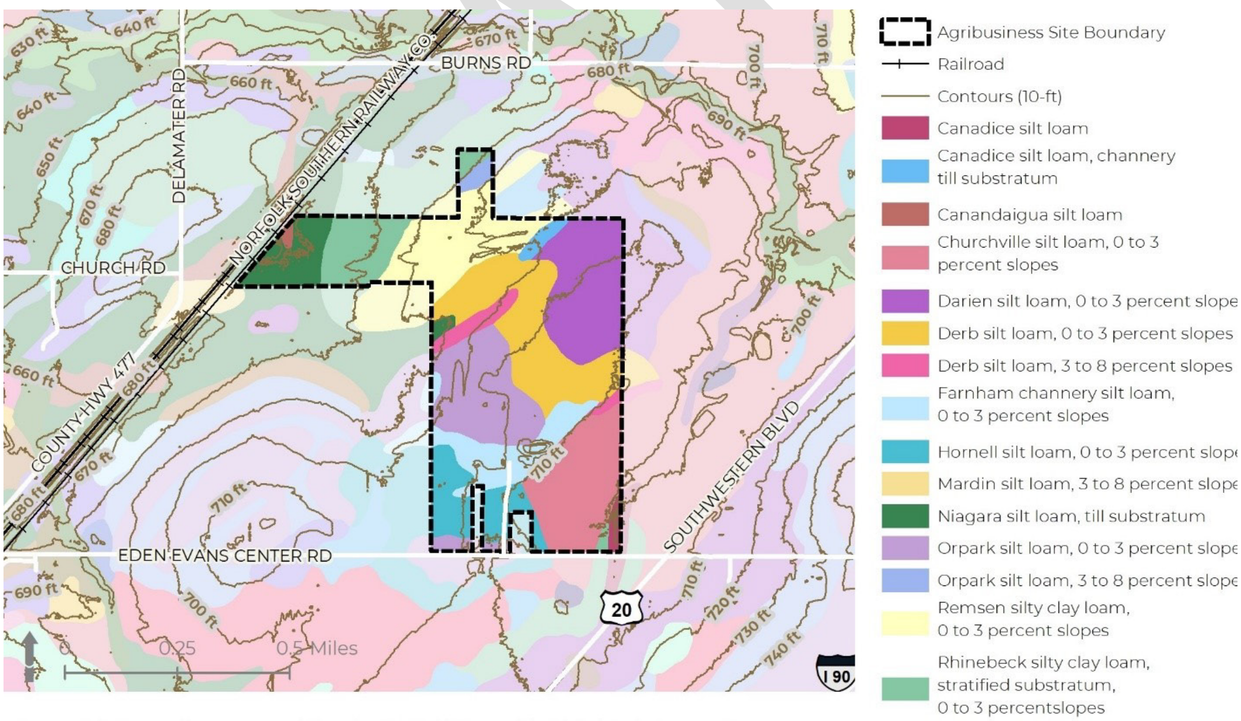
Table 3-1 Description of Soils at Project Site

Map Unit Symbol	Map Unit Name	Area (Ac)	Area (%)
Ca	Canadice silt loam	2.03	0.84%
Cb	Canadice silt loam, channery till substratum	2.63	1.09%
Cc	Canandaigua silt loam	0.72	0.30%
CoA	Churchville silt loam, 0 to 3 percent slopes	31.56	13.04%
DbA	Darien silt loam, 0 to 3 percent slopes	31.92	13.19%
DdA	Derb silt loam, 0 to 3 percent slopes	37.77	15.61%
DdB	Derb silt loam, 3 to 8 percent slopes	6.01	2.48%
FbA	Farnham channery silt loam, 0 to 3 percent slopes	17.19	7.10%
HrA	Hornell silt loam, 0 to 3 percent slopes	17.51	7.24%
Nh	Niagara silt loam, till substratum	13.38	5.53%
OrA	Orpark silt loam, 0 to 3 percent slopes	32.66	13.49%
OrB	Orpark silt loam, 3 to 8 percent slopes	2.27	0.94%
RfA	Remsen silty clay loam, 0 to 3 percent slopes	27.45	11.34%
RmA	Rhinebeck silty clay loam, stratified substratum, 0 to 3 percent slopes	18.93	7.82%
TOTAL		**242.03**	**100.00%**

The soils on the Project Site range in classification from Hydrologic Soil Group (HSG) A/D[1] soils to HSG D soils. For the dual hydrologic group (A/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes. HSG D soils have a very slow water infiltration rate and generally prevent the downward flow of water. In soils covering approximately 80 percent of the Project Site, the depth to restrictive features is more than 80 inches. For the remaining 20 percent of the Project Site, it is approximately 30 inches. The depth of ground water varies from 6 to 21 inches across the numerous soil types found within the Project Site. These areas of shallow depth to water table will need to be taken into consideration in final design. The existing drainage class for the Project Site is generally characterized as somewhat poorly drained.

A thorough geotechnical investigation should be performed prior to detailed design work to verify soil parameters, slope stability, benching and/or keyway requirements for fill slopes, determination of load-bearing capacities, depth to bedrock, and determination of the suitability of existing soils as fill beneath proposed structures and pavements.

Appendix B provides a detailed soils report prepared using the online NRCS WSS tool; this report includes soil descriptions, hydrologic soil group maps, and representative soil slopes. Figure 3-1, below, depicts soils on the Project Site.



Source: Erie County Department of Planning 2020; NY Statewide Digital Orthoimagery Program (NYSDOP) 2020; U.S. Department of Agriculture, NRCS 2020

Figure 3-1 Soils Map

[1] A dual hydrologic group is assigned to D soils if they contained both drained and undrained areas.

3.1.2 Environmental Consequences

3.1.2.1 Topography

There will be temporary, short-term impacts to land and soils associated with construction-related activities. Impacts will include earth-moving activities to construct and install on-site infrastructure, including access roads and utility lines. Grading may be conducted at some locations to accommodate development. Future development is expected to include the construction of new structures, parking lots, stormwater detention ponds, landscaping, and other elements of development. This construction may result in site alteration to accommodate foundations, paved areas, and other features.

Temporary construction impacts, such as dust, erosion, or sediment run-off, may occur. The contractors will be required to follow the provisions of a Stormwater Pollution Prevention Plan (SWPPP) prepared in compliance with NYSDEC regulations during the course of Project construction activities.

The Project will result in a permanent change in the use of the land and an increase in the amount of impervious surface at the Project Site. Provisions regarding maximum lot coverage and required landscaping will be in accordance with the Town of Evans' zoning code.

3.1.2.2 Soils

Temporary, short-term impacts to soils will occur, associated with construction-related activities on the property, including the construction of infrastructure. Future development is expected to include the construction of new structures, parking lots, stormwater detention ponds, landscaping, and other elements of development. This construction may result in alteration of site soils, such as new soils being brought to the Project Site as fill to accommodate foundations, paved areas, and other features.

Temporary construction impacts, such as dust, erosion, or sediment run-off, may occur. The contractors will be required to follow the provisions of a SWPPP prepared in compliance with NYSDEC regulations during the course of Project site construction activities.

A permanent change will occur in the use of the land, and the amount of impervious surface will increase at the Project Site. Provisions regarding maximum lot coverage and required landscaping will be in accordance with the Town of Evans' zoning code. Future development will need to take the poor drainage characteristics of the soils at the Project Site into consideration in design.

3.1.3 Avoidance, Minimization, and Mitigation Evaluation

3.1.2.1 Topography and Soils

Contractors will be required to follow the provisions of a SWPPP prepared in compliance with NYSDEC regulations during the course of Project site construction activities. Future developers will be required to comply with zoning regulations addressing maximum lot coverage and required landscaping. With these measures in place, no negative impacts to lands or soils are anticipated as a result of the Proposed Action.

3.2 Water Resources

3.2.1 Existing Environment

3.2.1.1 Groundwater Resources

Groundwater is water that exists below the soil surface within the interstitial spaces of soil particles or within the cracks and pores of bedrock. It is an important source of potable water in the area, and many nearby residents have private wells. Groundwater also is critical to the health of many aquatic ecosystems that depend upon its steady discharge. Presently, no groundwater wells are located on the Project Site. Groundwater is located between 6 and 24 inches below the soil surface throughout the Project Site (USDA Soil Survey).

Most groundwater, including a significant amount of our drinking water, comes from aquifers. Aquifers are a body of rock or underlying substrates that hold groundwater. According to the U.S. Geological Survey (USGS), the underlying aquifer beneath the Project Site is composed of lacustrine silt (USGS No date). NYSDEC and the U.S. Environmental Protection Agency (USEPA) have identified aquifers that provide over 50 percent of the drinking water source for communities, and these agencies provide protections for these aquifers. These aquifers are called primary, principal, and sole source aquifers. According to NYSDEC, the Project Site is not located over a primary, principal, or sole source aquifer (accessed March 17 https://www.dec.ny.gov/lands/36119.html). The area is also serviced by a public water system.

3.2.1.2 Surface Waters

Surface water resources are water features in the landscape, such as ponds and streams. Based on geographic information system data and walkover surveys, the Project Site contains several small surface water resources: two small ponds and an intermittent stream. Drainage ditches and culverts are also present within and around the existing on-site structures. The drainage ditches are contoured into the landscape on the eastern side of the main runway to promote drainage from the impervious surface of the runway. The culverts are under the runway to carry natural surface water flows from adjacent areas. Because the ditches lack a scoured channel and an ordinary high-water mark, they do not meet the federal definition of a waterway and are therefore not considered surface waters for the purposes of this section.

The two small ponds are located on the southern portion of the Project Site, to the west of the runway and to the north of the existing airplane hangar (See Figure 3-2). These ponds comprise approximately 0.6 acre.

No named streams are present on the Project Site, according to USGS topographic maps. A mapped unnamed tributary to Little Sister Creek is located in the southeastern corner of the Project Site (See Figure 3-2). An on-site wetland delineation mapped approximately 632 LF of this stream. It was also determined that this stream has intermittent flow and flows to the north, where it joins Little Sister Creek off site. This tributary is designated as a Class C stream by NYSDEC. Class C streams are not afforded protection under New York State pursuant to the Environmental Conservation Law (ECL) Article 15, Title 5, Protection of Waters Program. Class C streams are expected to have qualities to support fisheries and be suitable for non-contact activities.

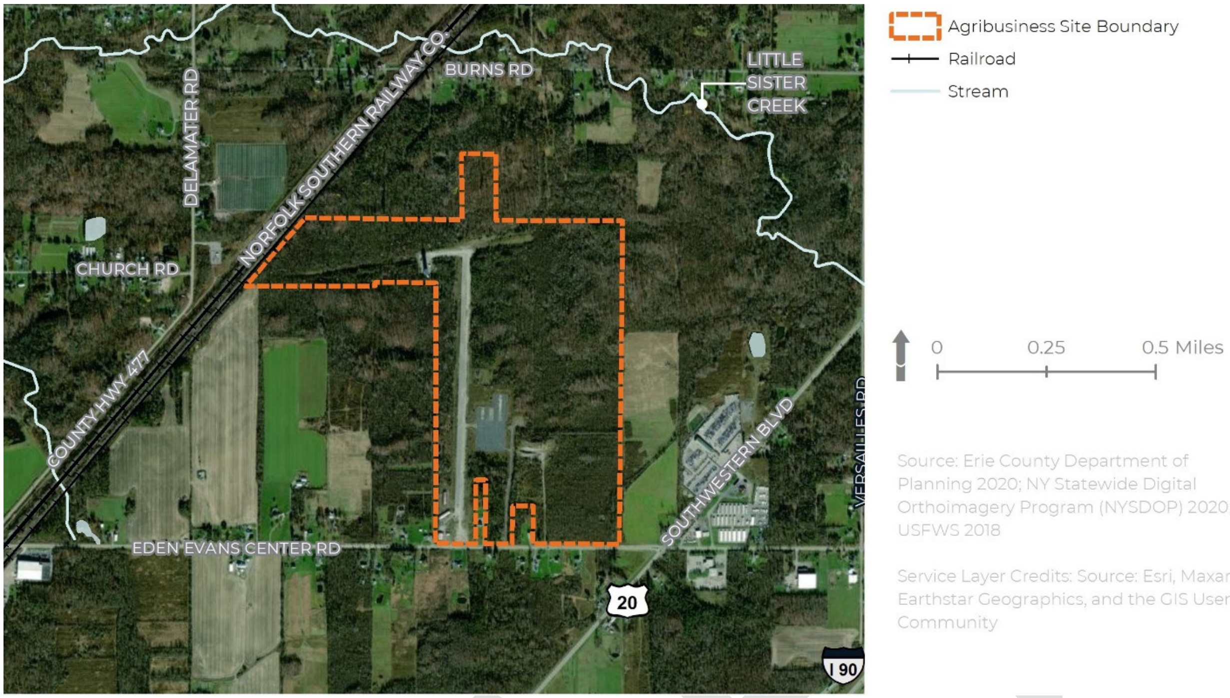


Figure 3-2 Surface Waters and Wetlands

The Project Site is located high in the Little Sister Creek–Frontal Lake Erie Watershed (Hydrologic Unit Code 041201030601). The main branch of Little Sister Creek is located approximately 1 mile to the north. The upper portion of Little Sister Creek and its tributaries are obtaining water quality standards and are not listed on the USEPA's 303(d) List of Impaired Waters. As a result, it is expected that the surface waters at the Project Site are of a reasonable quality.

The Project Site also occurs outside of a municipal separate storm sewer system (the Town of Evans is not a MS4 community).

3.2.1.3 Floodplains

The lack of surface waters adjacent to the Project Site indicates that the Project Site is not at risk for flooding from the overflow of high waters. According to Federal Emergency Management Agency (FEMA) flood maps, the Project Site is not located in an area at risk for flooding.

3.2.1.4 Wetlands

Wetlands that may be subject to federal regulation include "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33CFR 328.3). In order for a potential wetland area to be federally regulated, it must be considered part of the "waters of the United States" because of the biological, chemical, and physical effects they have on the stream networks that connect to navigable rivers and lakes. The Supreme Court's 2023 decision in *Sackett v. U.S. Environmental Protection Agency* (also known as *Sackett II*), held that only those wetlands that adjoin and/or are permanently and directly connected to navigable bodies of water such as lakes, rivers, and oceans. Those wetlands that do not have an obvious, permanent surface water connection to lakes, rivers, and streams are thus not regulated by federal laws. No definitive maps of federally regulated wetlands exist, and the actual location of wetlands at a site are determined through on-site investigation. Several sources of wetland maps exist that can be used for planning purposes, including the National Wetland Inventory (NWI) maps.

According to the NWI maps, three (3) potentially regulated wetlands are located on the Project Site. Two of these potentially regulated wetlands are described as palustrine forested wetlands (PFO1B) and palustrine forested with scrub-shrub component (PFO/SS1B), and they are located in the northwestern quadrant of the Project Site. The third wetland is located on the southeastern quadrant of the Project Site and is described as a palustrine scrub-shrub wetland (PSS1C). The total acreage of potentially regulated wetlands present on the Project Site according to the NWI maps is 13.6 acres.

Despite the NWI maps indicating that only 6 percent of the Project Site is potentially regulated wetland, the walkover survey conducted in April 2021 (see Appendix C) identified a larger portion of the Project Site as potentially regulated wetlands. In order to better guide the design process and evaluate potential impacts, a formal wetland delineation was conducted in 2022. The on-site field survey conducted as part of the delineation process mapped a total of 89.26 acres of potentially regulated wetlands (see Table 3-2).

Table 3-2 Potentially Regulated Wetlands at Project Site

Name	Wetland Type	Acres
A-North	Freshwater Forested/Shrub Wetland	26.30
A-South	Freshwater Forested/Shrub Wetland	34.56
B	Freshwater Forested/Shrub Wetland	0.97
C	Freshwater Shrub Wetland	2.48
D	Freshwater Forested/Shrub Wetland	6.25
E	Freshwater Forested/Shrub Wetland	18.70

The on-site wetland survey could not discern a permanent, obvious, and direct connection of these potentially regulated wetlands to a traditional navigable waterway. As such, the wetlands at this site are assumed to be non-regulated under the CWA. As the Project progresses, an Approved Jurisdictional Determination will be sought from the U.S. Army Corps of Engineers (USACE) to confirm this assumption prior to development of certain areas of the Project Site.

NYSDEC defines wetlands as areas dominated by plants that are typically found in wet conditions. Wetlands are protected at the state level by the Freshwater Wetlands Act, which affords protection to wetlands (as defined by NYSDEC) at least 12.4 acres in size or wetlands with special significance. NYSDEC maintains and publishes maps of wetlands that are subject to regulation pursuant to the Freshwater Wetlands Act. According to the current NYSDEC wetlands maps, no New York State regulated wetlands are present at the Project Site.

3.2.2 Environmental Consequences

3.2.2.1 Groundwater Resources

Impacts to groundwater from the Project would mainly be temporary and minor in nature. Groundwater impacts caused during construction would be attributed to excavations below the water table to install utility lines or building foundations. In such instances, groundwater would flow around the structures at that immediate location and would not result in a redirection of flow or raise or lower the water table in the area or off site.

The Project will increase the impervious surface area on site. Impervious surfaces reduce the ability of water to percolate into the soil, thereby reducing an area's contribution to recharging groundwater supplies. The quality of the water running off of impervious surfaces can also be degraded due to soluble pollutants such as nitrates and chlorides.

Nearby residents are served by municipal water supplies, and no drinking water wells are located on the Project Site or immediately adjacent to it. The underlying aquifer is large and unconfined therefore impacts to groundwater from the project will not impact the regional aquifer. The project will also require a SWPPP and drainage system designs will reduce any impacts to groundwaters. As such, no impacts to these groundwater drinking resources will occur as a result of implementing the project.

3.2.2.2 Surface Waters

The Project would not directly affect the intermittent tributary to Little Sister Creek located in the southeastern portion of the Project Site. Both Option 1 and 2 are showing all of the proposed facilities for the Project to be located in other areas, and the stream is protected in a conservation area. The existing small ponds located in the central-western area of the Project Site would be enhanced and potentially enlarged to be utilized as part of the stormwater management system at the Project Site under Option 1. These ponds would be engineered for bioretention and retention, and they would be conserved under Option 2.

The Project could indirectly affect surface waters with a decrease in groundwater recharge due to the impervious surfaces that would be created. Groundwater provides a consistent supply of water to perennial and intermittent surface waters. It is not expected that the decrease in groundwater recharge from the Project would be significant enough to have a noticeable effect on the ponds and intermittent stream.

Another indirect affect would be on the quality of the surface waters. Development of this nature has the potential to introduce contaminants, such as phosphates, chlorides, various forms of nitrogen, pesticides, herbicides, and hydrocarbons, into runoff that drains into the surface waters. Furthermore, the development can change the quantity and direction of runoff, which can in turn affect the flow of water through a stream system.

3.2.2.3 Floodplains

No FEMA-mapped floodplains are on the Project Site; therefore, no effects to floodplains will occur as a result of adopting the Master Plan for the Project.

3.2.2.4 Wetlands

Potentially regulated wetlands encompass a large area of the Project Site, and implementing the Project will have direct and indirect impacts to these potentially regulated on-site wetlands. The preferred alternative (Option 1) would have the most direct impacts to these potentially regulated wetlands, with approximately 51.30 acres of potentially regulated wetlands being disturbed, dredged, or filled. None of the 51.30 acres identified as potentially regulated wetlands should be considered subject to federal regulation since they do not have a permanent, obvious, and direct nexus or connection to a navigable body of water as that standard has not been established in *Sackett v. U.S. Environmental Protection Agency.*

Option 2 takes a more conservative approach and would result in only 4.37 acres of potentially regulated wetland being impacted. However, none of these 4.37 should be subject to federal regulations since they do not have a permanent, obvious, and direct nexus or connection to a navigable body of water (see Table 3-3).

Table 3-3 Potential Wetland Impacts

Concept	Total Direct Wetland Impact	Total Federally Non-Regulated Wetland Impact	Total State-Regulated Wetland Impact	Total Federally Regulated Wetland Impact
Option 1	51.30 acres	51.30 acres	0 acres	0 acres
Option 2	4.37 acres	4.37 acres	0 acres	0 acres

The Project may have indirect impacts to potentially regulated wetlands by changing surficial and groundwater flows to potentially regulated wetlands located adjacent to developed areas on site and off site. The amount and direction of the flows may be altered, resulting in localized changes to the hydroperiod within these potentially regulated wetlands. This may cause changes in the plant communities to species that prefer frequent ponding or drier conditions. These potentially regulated wetlands may also receive an increase in sedimentation, nutrients, and pollutants within runoff from the Project. This can also create changes in the potentially regulated wetlands that result in localized plant community shifts.

Another indirect impact that several of the potentially regulated wetlands could experience from implementing the Project is habitat fragmentation. Wetlands A–North, D, and E continue outside of the Project boundaries. Impacts to these potentially regulated wetlands would reduce the overall size of the wetland and cause fragmentation. This can cause a decrease in the ecological services the wetland provides to the watershed and allow for the introduction of invasive species.

See the wetland delineation report in Appendix C.

3.2.3 Avoidance, Minimization, and Mitigation Evaluation

3.2.2.1 Groundwater Resources

Geotechnical investigations will be conducted prior to construction to determine the exact location of groundwater levels at the Project Site. These investigations will provide more specific data to guide the engineering and design of the infrastructure to be installed at the Project Site. The design methods selected will place a priority on avoiding and minimizing groundwater effects as much as practicable.

It is anticipated that the Project Site will require permanent stormwater retention and treatment measures to mitigate the impervious surface impacts. Per the *New York State Stormwater Design Manual* (2015), green infrastructure practices such as preserving forested areas, utilizing vegetation buffers, open space design, and rain gardens will be used whenever practicable. The Project Site will be designed and built to meet state stormwater performance standards, thus minimizing impacts on groundwater quantity and quality.

3.2.2.2 Surface Waters

The location of surface water resources will be considered in the Project Site design to try to avoid and minimize impacts. The Project Site design proposes to utilize the existing ponds to aid in stormwater management. These ponds will be enhanced to expand their functionality. The Project side does not contain widespread surface waters, and it is expected that facilities can be sited to avoid traversing them. Options 1 and 2 do not propose any impacts to the unnamed tributary to Little Sister Creek. As a result, surface waters were avoided to the extent practicable. If necessary, a CWA Section 404/401 permit will be obtained prior to construction if any of these resources are to be traversed. The 404/401 permit process requires proof that avoidance of the impacts is not reasonable and construction methods will be chosen to minimize impacts.

It is expected that over 1 acre of ground disturbance will occur; therefore, a SWPPP will be prepared and implemented during construction. The SWPPP will comply with the requirements of the New York State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001). This will ensure that stormwater discharges, such as silt-laden runoff, that could occur during construction will not have an adverse impact on neighboring surface waters.

Permanent stormwater retention and treatment measures will be implemented and maintained to address runoff from impervious surfaces. As such, development in the Project Site watershed further impacting water quality is not a concern.

3.2.2.3 Floodplains

The Project Site does not contain floodplains. As a result, no floodplain management or mitigation is necessary, and no effects on flood management will occur as a result of the Project.

3.2.2.4 Wetlands

The proposed locations of facilities have been sited to avoid the location of potentially regulated wetlands. Additional formal on-site wetland delineations will be conducted during the engineering design phase once tenants and their needs have been identified. Potentially regulated wetlands will be avoided to the extent practicable. Where wetland impacts are unavoidable, a CWA Section 404/401 permit will be obtained from the USACE. Mitigation for these impacts will be performed if regulated wetlands are widespread throughout the Project Site. Avoidance of potentially regulated wetlands was not possible in order to achieve the objective of the Project. Option 1 was developed to analyze the potential impacts to resources if the Project Site underwent a full build-out. It utilized the existing runway as the main access route, and each building site is off of this large, existing corridor. The potentially regulated wetlands are located around this infrastructure. This option preserves 37.96 acres of potentially regulated wetland that is associated with the unnamed tributary to Little Sister Creek and is contributing to the health of that intermittent stream. Option 2 is a scenario that still uses the existing runway as the main transportation corridor; however, Option 2 utilizes mostly upland areas for building sites. Because the number of building sites is greatly reduced under Option 2, there is a 46.93-acre reduction in potentially regulated wetlands impacted. A total of 84.89 acres of potentially regulated wetlands would be preserved under Option 2.

A SWPPP will be developed and implemented during construction and operation of the Project to avoid changes in the surface water flow quality and quantity that reaches adjacent wetlands. Adhering to the SWPPP will prevent changes to the hydrology of the adjacent wetlands and impacts from added nutrients and pollutants that can cause degradation of the wetland community. Best management practices (BMPs) and integration of native and non-noxious plant species will prevent the spread and introduction of invasive species in the on-site and adjacent wetlands.

3.3 Air Quality and Climate/Climate Change

3.3.1 Existing Environment

3.3.1.1 Air Quality

The USEPA sets National Ambient Air Quality Standards (NAAQS) for widespread pollutants considered harmful to public health and the environment that are emitted from numerous and diverse sources. The six NAAQS criteria pollutants are carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particle pollution ($PM_{2.5}$ and PM_{10}), and sulfur dioxide (SO_2).

The NYSDEC Division of Air Resources measures air pollutants at 58 sites throughout New York State as part of the federally mandated National Air Monitoring Stations Network and the State and Local Air Monitoring Stations Network. Overall, "the objectives of New York's ambient air monitoring networks are to: (A) Provide air pollution data to the general public in a timely manner; (B) Provide data to determine compliance with ambient air quality standards and to develop emission control standards; and (C) Support air pollution research studies."

At each monitoring site, NYSDEC records real-time air pollutant levels (measured pollutants vary between monitoring sites), publishes pollutant levels recorded at each monitoring site on their website up to the hour, and summarizes results for the year in an annual New York State Ambient Air Quality Report. NYDEC also utilizes an Air Quality Index (AQI), which is "an index for reporting daily air quality. It was created as an easy way to correlate levels of different pollutants to one scale to show the public how clean or polluted the air is, and what associated health effects might be of concern. When levels of ozone and/or fine particles are expected to exceed an AQI value of 100, an Air Quality Health Advisory is issued alerting sensitive groups to take the necessary precautions."

The Project Site is located between two air monitoring sites: Buffalo, in Erie County, and Dunkirk, in Chautauqua County. The Buffalo site, established in 1969, is the main monitoring site for the Buffalo area and is located on an access road to the New York State Thruway Authority Bridge Maintenance Facility, in an urbanized area. The Buffalo site monitors for the following air pollutants: oxides of nitrogen (NO, NO_2, and NO_x), sulfur dioxide, carbon monoxide, $PM_{2.5}$ (using five different sampling methods), PM_{10}, and toxics.

The Dunkirk site, established in 1999, is located on Wright Park Drive at the Dunkirk Sewage Treatment Plant, in a trailer. The Dunkirk site is located at the western border of New York State, on the shores of Lake Erie. It is approximately 200 feet from Lake Erie in a suburban neighborhood. With the predominant wind direction from the west, this site measures the background levels of pollution entering the state. The Dunkirk site monitors for sulfur dioxide, ozone, and $PM_{2.5}$.

According to the NYDEC's New York State Ambient Air Monitoring Program 2020 Network Assessment, New York State met the NAAQS for all criteria pollutants in the state except for ozone in the New York City metropolitan area and sulfur dioxide in a small portion of northern St. Lawrence County. The Dunkirk site measures ozone, while Buffalo does not, and Dunkirk reported exceeding the ozone AQI on two days in 2016, two days in 2017, and one day in 2018. Ozone can cause a variety of detrimental health effects to humans, such as premature aging of lungs and or chronic respiratory illnesses. "Ozone also affects sensitive vegetation and ecosystems. Specifically, ozone can lead to reductions in agricultural and commercial forest yields, reduced survivability of sensitive tree seedlings, and increased susceptibility to disease, pests, and other environmental stresses such as harsh weather."

3.3.1.2 Climate/Climate Change

Western New York has a humid continental climate heavily influenced by both Lake Erie and Lake Ontario. Winters are long and cold, often lasting from around mid-November to early April. Snowfall occurs often before and after that period, as well. Spring and fall in Western New York are usually short and changeable.

Western New York is already experiencing impacts as a result of global climate change, and they are projected to increase over time. The global annual-average temperature has increased by 1.8°F from 1901 through 2016. In the Great Lakes region, the states bordering the Great Lakes have seen an overall increase in annually averaged temperature of 1.4°F for the period 1985 through 2016 (ELPC 2020). NYDEC reports that the annual average temperature statewide has risen about 2.4°F since 1970 (NYDEC 2021).

In recent decades, a number of changes in the climate of New York State and the Great Lakes region have been documented, including:

- A significant temperature warming trend;
- An increase in growing season length (which has created an opportunity to grow warmer-weather crops);
- Spring begins a week earlier than it did a few decades ago;
- An increase in extreme precipitation and other weather events;
- Changing lake and sea levels;
- Changing trends in lake-effect snows;
- Winter snow cover is decreasing;
- The distribution of precipitation is changing across seasons, with future increases predicted to be concentrated in the winter and spring months;
- Pollinating bees in the northeastern United States arrive about 10 days earlier than they did in the 1880s (NYDEC 2021).

In June 2017, the Erie County executive issued Executive Order 17, which requires the county to meet the goals of the Paris Climate Agreement: a 26- to 28-percent reduction from 2005 greenhouse gas emissions by 2025 (Erie County 2017). In 2019, the county's Environment Management Council convened a climate change task force to provide expert guidance and community input to the county as it makes decisions about its climate change mitigation, resilience, and other sustainability actions (Erie County 2021). The county is currently developing a community climate action plan, which is anticipated to be finalized and adopted by the Erie County Legislature at the end of 2023.

In 2019, the New York legislature passed the Climate Leadership and Community Protection Act (CLCPA), which requires the state to reduce its greenhouse gas emissions by 85 percent by 2050. Other targets include

100-percent zero-emission electricity by 2040, 70-percent renewable energy by 2030, 3,000 megawatts (MW) of energy storage by 2030, and 6,000 MW of solar energy generation by 2025. The New York State Climate Action Council, a 22-person body representing state agencies, communities, and various economic interests, is currently preparing a scoping plan to meet the goals of the CLCPA (New York State 2021).

The Town of Evans participates in regional climate initiatives, and in 2021 it formed a four-member Climate Smart Community Task Force. This task force will participate in NYDEC's Climate Smart Communities program, which is an initiative to support local governments as they take action to reduce greenhouse gas emissions and adapt to climate change. Benefits include leadership recognition, free technical assistance, and access to grants. Erie County also participates in the program and earned recognition as a Certified Bronze Smart Community in 2019.

3.3.2 Environmental Consequences

3.3.2.1 Air Quality

The Town of Evans Zoning Code regulates air quality by requiring that all industrial districts, which includes the Project Site (zoned LI), curb air pollution (Town of Evans 1987). Section 200-26(C)(1) of the code requires that "the emission of smoke, soot, fly ash, fumes, dust and other types of air pollution borne by the wind shall be controlled so that the rate of emission and quantity deposited shall not be detrimental to, or endanger, the public health, safety, comfort or welfare or adversely affect property values." Section 200-26(C)(8) requires that "the emission of toxic, noxious or corrosive fumes or gases which would be injurious to property, vegetation, animals or human health at or beyond the boundaries of the lot occupied by the use shall not be permitted." Therefore, future uses of the proposed lots by future tenants of the Project must adhere to all aspects of the Town of Evans zoning code and are not anticipated to significantly impact air quality.

Impacts to air quality may occur from vehicular exhausts from additional vehicles during construction as well as regular vehicular traffic once the Project Site is operational. During construction, dust may temporarily impact adjoining areas but is anticipated to be temporary in nature and will not occur over prolonged periods of time.

An increase in traffic associated with implementation of the Project could impact localized air quality, but the amount of traffic and its impact on air quality depends on the tenants that utilize the Project Site, which are unknown at this time.

3.3.2.2 Climate/Climate Change

Global climate is projected to continue to change, with impacts of this change increasing over time. The magnitude of climate change beyond the next few decades will depend primarily on the amount of greenhouse gases emitted globally and on the remaining uncertainty in the sensitivity of Earth's climate to those emissions.

Additional vehicular traffic and fossil fuel combustion due to construction and the operations of commercial tenants at the Project Site will increase greenhouse gas emissions in Erie County. The amount of fossil fuel emissions generated at the Project Site will depend on the construction practices to build the project, the particular operations of each commercial tenant, and how much traffic is generated by the Project's facilities. The Project intends to utilize renewable energy such as solar electricity and battery storage technology where possible, which has the potential to provide a positive impact on climate. The project also intends to properly utilize electricity from available resources and to a lesser extent natural gas. Availability of electric vehicle charging stations on the Project Site will further mitigate emissions generated by the Project's facilities.

3.3.3 Avoidance, Minimization, and Mitigation Evaluation

3.3.3.1 Air Quality

In order to mitigate potential air quality impacts regarding vehicle emissions, low-sulfur fuel should be used whenever possible, engine idling time should be limited, and engines should be used that comply with the applicable air quality regulations, such as the USEPA New Source Performance Standards or the engine National Emission Standards for hazardous air pollutants, as appropriate. Additionally, vehicles and equipment must be maintained per industry standards, have appropriate mufflers and air filters, and be kept in working order throughout Project construction. Dust will be controlled by utilizing appropriate BMPs, such as using mulch, water sprinkling, and wind barriers.

So long as Project tenants comply with the Town of Evans LI zoning requirements, future uses of the proposed lots are not anticipated to significantly impact air quality. In order to mitigate potential air-quality impacts from potential uses on the Project Site, natural gas or electric should be utilized when possible for the heating, ventilation, and air conditioning systems for future facilities built on the individual development sites. Mitigation measures, such as scrubbing technologies, could also be placed on exhaust systems if needed. In addition, the Project sponsors intend to utilize renewable energy such as solar electricity and battery storage technology where possible, steps that could potentially offset air quality impacts.

During the Project Site plan review/approval process for development of the individual parcels, potential air impacts should be identified through the SEQRA coordinated review process. Should applicants propose a use that requires a state or federal air permit, or if the proposed use requires air modeling and analysis, adherence to the necessary steps needed to obtain the air permit would be required, including mitigation measures or testing or modelling.

3.3.3.2 Climate/Climate Change

The Project intends to be primarily electric/renewable/battery powered, which could potentially offset the fossil fuel emissions generated from the vehicles and equipment used for Project construction. Coordination with the ECDEP to ensure that the Project and its tenants comply with the county's climate action and sustainability initiatives will help avoid, minimize, and potentially mitigate any climate change impacts associated with the Project.

3.4 Terrestrial and Ecological Resources

3.4.1 Existing Environment

3.4.1.1 Vegetation

A majority of the Project Site is in forest cover, with the exception of existing development such as buildings and paved areas. The forest cover is even-aged, meaning the trees have approximately the same height throughout the Project Site. The areas around the buildings and paved areas are mowed frequently and contain common cool-season grasses and common forbs found in yards such as bluegrasses (*Poa* spps.), orchard grass (*Dactylis glomerata*), and dandelion (*Taraxacum officinale*).

The eastern half of the property contains Maple-Basswood Rich Mesic Forest. According to *Ecological Communities of New York State* (Edinger et al 2014), this forest type is common on the Great Lakes Plain ecological zone. This terrestrial forested ecological community contains sugar maple (*Acer saccharum*), basswood (*Tilia americana*), and/or white ash (*Fraxinus americana*) as the most dominant tree species. White ash and sugar maple are the most commonly observed tree species in this area. White ash is susceptible to damage and tree death due to infestation by the emerald ash borer (*Agrilus planipennis*). The presence of the emerald ash borer on the Project Site and any tree damage is unknown at this time. Scotch pine (*Pinus sylvestris*) is common as well, particularly along the forest edge adjacent to the paved areas. Scotch pine is a non-native species introduced for landscaping purposes. It has naturalized, meaning it is naturally reproducing, its seeds find their way onto sites such as this one, and trees begin to grow. Other tree species found in this forest type, with many also being present at the Project Site, are hop hornbeam (*Ostrya virginiana*), American beech (*Fagus grandifolia*), shagbark hickory (*Carya ovata*), and American hornbeam (*Carpinus caroliniana*). This forest type also has a well-developed shrub layer, and this is also the case for the upland forest at the Project Site. Shrubs commonly found in the understory include several species of dogwood (*Cornus spps*.) and honeysuckle (*Lonicera spps*.). The ground layer in this forest type is typically rich in different species of ferns and spring wildflowers.

The western half of the Project Site is mainly Red Maple-Hardwood Swamp, a common forested wetland type (Edinger, et al. 2014). Section 3.2 and Figure 3-2 and Appendix C (Wetland Delineation Report) contain more details of the location of the potentially regulated wetlands on the Project Site. The extent and specific wetland boundaries will be located in the field when more specific site investigations are undertaken prior to construction. Red Maple-Hardwood Swamp forests have a lot of variety throughout New York State, including the tree species that are found in them. Typically, these species include ashes (*F. pennsylvanica*, *F. nigra*, and *F. americana*), American elm (*Ulmus americana*) and yellow birch (*Betula alleghaniensis*), which are all found at the Project Site (Edinger, et al. 2014). This western half of the Project Site also has a well-developed shrub layer composed of pussy willow (*Salix discolor*) and dogwoods (*Cornus sericea*, *C. racemosa*). Pit-and-mound topography is present, with small pools filled with water in the spring and higher mounds with vegetation growing on them. This is highly characteristic of this ecological community (Edinger, et al. 2014).

Several Invasive plant species have been observed on the Project Site, and more may be present. Further field studies will confirm the presence and location of invasive species. The invasive species currently known to occur at the Project Site are: phragmites (*Phragmites australis*), Tartarian and Morrow's honey suckle (*Lonicera tartarica* and *L.morrowii*), purple loosestrife (*Lythrum salicaria*), autumn olive

(*Elaeagnus umbellata*), and garlic mustard (*Alliaria petiolata*). NYSDEC under 6 NYCRR Part 575 regulates the possession, transport, importation, sale, purchase, and introduction of select invasive species. The purpose of this regulation is to help control invasive species, a form of biological pollution, by reducing new infestations and the spread of existing populations. All of these species occur on NYSDEC's regulated list (https://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf). As a result, NYSDEC recommends that BMPs be implemented to prevent the spread of these species. The BMPs commonly implemented and stated in the SWPPP to be used by contractors during construction are that all equipment and footwear is to be clear of any dirt and debris before entering and leaving the Project Site, vegetative debris are to be disposed of on site or in a sanitary landfill, and no soil is to leave the Project Site. If more appropriate BMPs are necessary, these will be determined during the development of the SWPPP or other environmental permitting and implemented to comply with the regulations.

3.4.1.2 Wildlife

The Project Site is located within a landscape where the land use is a patchwork of agricultural fields, scattered residential dwellings, and large wooded areas. This landscape lends itself well as habitat for a wide variety of wildlife, from the species that are tolerant of humans to the shy interior-forest dwellers. On site, the most widespread habitat is deciduous forest cover and forest edge habitat. The forest edge habitat is abrupt because this habitat area has been mowed up to its edge or pavement adjoins it. Appendix C contains a complete list of the wildlife species likely to be found at the Project Site.

Mammal species managed by NYSDEC as game species likely to be found at the Project Site are whitetail deer (*Odecoileus virginianus*), red fox (*Vulpes vulpes*), gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), and other fur-bearing mammals. These species are common, highly mobile, and have large home ranges. Whitetail deer in New York State have been tracked to demonstrate a home range of as much as 10 square miles (Tierseon et al 1985). They could be utilizing the Project Site for bedding or fawning areas, resting, feeding, cover, or just pass through on their way to other areas. Less-mobile species, such as the eastern cottontail rabbit (*Sylvilagus floridanus*), woodchuck (*Tamias striatus*), mice, moles, and voles are likely utilizing the Project Site for all their life needs. Reptile and amphibian species have smaller home ranges, and those individuals that utilize habitat at the Project Site are having to meet all of their life needs from the Project Site or areas directly adjacent if they are utilizing habitat on the property boundary. Only common species of reptiles and amphibians, such as the common garter snake (*Thamnophis sirtalis*) and American toad (*Bufo americanus*), are utilizing the Project Site (NYSDEC Environmental Mapper).

Birds are highly mobile, and many species are habitat specific. The Project Site is less than 4 miles from the shoreline of Lake Erie, where migratory birds follow the shoreline on their way to breeding grounds north. Hawks, vultures, and eagles are most likely to fly over the Project Site while migrating; however, a variety of migratory songbirds could be using the habitats on the Project Site for resting and feeding. The migrants are only in the area for a few hours to a few days and would comprise species that mainly prefer forested areas and edge habitats. Breeding birds breed and nest in specific habitats. The forested areas at the Project Site provide habitat for those species that prefer forested edges and interior forests. Example species likely to be nesting at the Project Site include the American robin (*Turdus rufopalliatus*), a variety of woodpeckers, the veery (*Catharus fuscenscens*), and black-capped chickadee (*Poecile atricapillus*).

Aquatic habitats at the Project Site that would support fish are limited and restricted to the small pond located on the southwestern part of the property, west of the existing runway. It is unknown whether any fishery resources are present within the pond. Given the relatively small size of the pond and its lack of connection to other waters, the fishery it would support would be a typical warm-water fishery of largemouth bass (*Micropterus salmoides*) and bluegill (*Lepomis macrochirus*). These fish would have been stocked in the pond if they are present.

3.4.1.3 Rare, Threatened, and Endangered Species

NYSDEC Environmental Resource Mapper is an interactive mapping application available to the public that can be used to determine whether any state or federally protected species, or species of conservation concern (rare), are present in the vicinity of a project. According to the NYSDEC Environmental Resource Mapper, no rare, threatened, or endangered species are within the vicinity of the Project Site. The ILDC is currently consulting with NYSDEC Region 9 to determine whether any other species of concern are potentially utilizing the Project Site.

The U.S. Fish and Wildlife Service (USFWS) Northeast Region utilizes the Information for Planning and Consultation (IPaC) system for project sponsors to use in determining whether their project sites are located within the vicinity of critical habitat or known occurrences of federally protected species. The IPaC system indicates that the northern long-eared bat (*Myotis septentrionalis*), a federally threatened endangered species, may be utilizing the Project Site. The IPaC system also indicated that the Project Site lacks critical habitat, which is defined as areas of habitat believed to be essential to this species' conservation. Critical habitat for the northern long-eared bat would be sites used to hibernate over the winter (known as hibernacula) and known locations where female bats birth and raise their young (known as maternity roosts).

Northern long-eared bats are dependent on a variety of forest types for roosting, foraging, and rearing pups. The northern long-eared bat was known to occur in all the upstate counties of New York State prior to 2006. At that time, a fungus that causes white nose syndrome (WNS) in bats was discovered near Albany. WNS causes hibernating bats to starve to death over the winter and has been the primary cause of the dramatic decline of this species that led to its listing on the federal endangered species list. Initially, this species was listed as “threatened” in 2015, but a continued decline in northern long-eared bat populations warranted a change in the status to “endangered” in early 2023.

Section 4(d) of the federal Endangered Species Act directs the USFWS to issue regulations deemed “necessary and advisable to provide for the conservation of threatened species.” It allows the USFWS to promulgate special rules for species listed as threatened (not endangered) and allow for certain activities to continue while protecting the species. For the northern long-eared bat, the 4(d) rule specifies protections to areas affected by WNS during the bat’s most sensitive life stages, which are hibernation and when young are present. The Project Site only contains trees that may be used by female bats to birth and rear pups. Despite there not being any known bat maternity roosts at the Project Site, the potential exists for an unknown northern long-eared bat to be there. The 4(d) rule applied to this Project would mean tree removal would be restricted between June 1 and July 31, during the pup season. Further consultation with the USFWS will be undertaken as the Project develops.

3.4.2 Environmental Consequences

3.4.2.1 Vegetation

Implementing the Project will result in the loss of vegetated areas and permanently convert these areas to buildings, pavement, and other miscellaneous impervious surfaces. After all the infrastructure and facilities are constructed, lawn areas and landscaping will be planted to a different vegetation community than what was there before. In essence, a natural community will be converted to a managed landscape. Managed landscapes are typically lower in diversity, have less structure, and require fertilizer and pesticides.

Forest cover will be reduced at the Project Site by implementing the Project. The majority of the Project Site is simply forested, and avoidance of tree cutting is not possible without significantly scaling back the Project and not serving the agribusinesses in the area. The preferred alternative (Option 1, Full Build-Out) would result in the removal of 132.6 acres of forested area (potentially regulated forested wetlands and forested uplands). The Potential Wetland/Conservation Area Option (Option 2, Partial Build-Out) would result in 58.2 acres of forest removal. Forest removal within the larger landscape can also allow for forest pests, such as the emerald ash borer, wooly adelgid, and beech bark disease, to penetrate deeper into the remaining forest area. The regional area has large amounts of forest cover; therefore, the reduction of forest cover as a result of implementing the Project will not have a negative effect on a regional scale. Maple-Basswood Rich Mesic Forest and Red Maple-Hardwood Swamp Forest types are common in the Erie-Ontario Great Lakes Plain Ecological Zone. A reduction of these forest types and their associated species will not put them at risk for imperiled or rare status.

The handling of all ash wood will follow all of NYSDEC's guidelines to prevent any spread of the emerald ash borer. This includes chipping ash wood into 1-inch-sized chips and disposing of the chips on site or within the local quarantine zone. The ash wood may also be cut and left on site for a minimum of 12 months before it is moved off site.

Soil disturbance and the removal of vegetation increases the risk of invasive plant species spreading into the affected areas. Construction equipment brought on site has the potential to carry seeds or propagules (i.e., other plant material capable of producing a new plant) onto and off of the Project Site. This could lead to the introduction of other invasive species to the Project Site or for other sites to become contaminated by equipment used on the Project Site. Invasive species degrade the quality of the plant community, reduce vegetative diversity, and impede the ability for wildlife to utilize the Project Site. BMPs will be utilized to prevent the further spread or introduction of invasive plant species at the Project Site in accordance with permit requirements and in consultation with regulatory agencies. The use of seed-free mulch, hydroseeding, and establishing vegetation as soon as possible will also reduce the risk of invasive plants becoming established. Native plants will be used in the landscaping around facilities whenever possible, and plants that occur on NYSDEC's regulated and prohibited plant list will not be used.

3.4.2.2 Wildlife

Temporary impacts will occur to wildlife during the construction of Project facilities at the Project Site. These impacts include the removal of all vegetation within the area under construction, rendering that construction area unsuitable to wildlife, particularly when workers are present. Indirect effects on wildlife from construction noise and increased activity will be temporary and could include abandoned reproductive efforts, displacement, and avoidance of work areas. Direct mortality to small mammals, reptiles, and amphibians that are less mobile could occur during clearing and grubbing operations. Silt fence installed around the disturbed areas after clearing tends to create a barrier, keeping reptiles and amphibians out of the work area and thereby reducing their mortality. Permanent impacts to wildlife result from the Project's reduction of forested habitat and the intrusion of its structures into the large block of forested area on site. The project would reduce habitat for the deep interior wildlife species, mainly shy nesting songbirds. The habitat for these species will be reduced by the Project because they require a buffer from the forest edge. The amount and type of foraging opportunities for all wildlife will be reduced with the removal of a natural vegetation community.

The lawn and landscaping around the facilities within the Project will provide different habitat for wildlife. Human-tolerant species such as European starlings, whitetail deer, and rodents will utilize the green space within the Project Site. This will result in a shift in the wildlife assemblage that is currently at the Project Site. Other species such as fox, coyote, and racoon will alter their patterns of use on the Project Site and will be less likely to den nearby and will utilize the Project Site at night when there tends to be less human activity. Use of native plants will benefit native pollinator species of butterflies and bees.

3.4.2.3 Rare, Threatened, and Endangered Species

The northern long-eared bat is the only federally and state-listed species that has the potential to occur at the Project Site. WNS has caused a dramatic decline in population numbers of the northern long-eared bat and is transmitted by contact from bat to bat and from humans exploring hibernacula. Both the USFWS and NYSDEC agree that habitat is not a factor contributing to the bat's low population numbers. The legal protections currently being implemented are to minimize and avoid a direct loss of individual bats. The agencies have limited data on where the remaining bats are carrying out life functions during the summer. The data suggests where many may be, and those areas are given priority for protection. The guidance affords protection around known bat hibernation sites and limits tree removal in areas around known summer roosting sites. The Project Site is not located within 5 miles of a known bat hibernation site or within 1.5 miles of a documented summer occurrence of northern long-eared bats, according to a response to a query to IPaC and NYSDEC EAF mapper. As such, the Project will not impact critical habitat for the northern long-eared bat. However, there is a potential for the northern long-eared bat to occur anywhere in upstate New York with forested habitat.

The Project Site contains forested areas that potentially could be utilized by the northern long-eared bat during its active season from spring emergence to fall hibernation and pup-rearing season. The loss of forested habitat as a result of implementing the Project would not affect this species. NYSDEC and the USFWS have concluded that the northern long-eared bat's population decline is not the result of habitat loss (NYSDEC No date). The Project's potential impact is harm to pups and the unintentional take of an individual bat roosting in a tree. Northern long-eared bats' young, referred to as pups, are not able to fly until they reach a certain age and size; therefore, they are unable to escape a falling tree. Adults may also be harassed and disturbed by tree-removal operations. As such, clearing and grubbing activities may result in unintentional taking of northern long-eared bats from April 1 through October 31. By adhering to tree-clearing restrictions between June 1 and July 31, when pups are present, the Project would not affect northern long-eared bat.

3.4.3 Avoidance, Minimization, and Mitigation Evaluation

3.4.3.1 Vegetation

Quite simply, the majority of the Project Site is forested, and avoidance of this forested area is not possible without significantly scaling back the Project and not serving the agribusinesses in the area. The preferred alternative—Option 1, Full Build-Out—would result in the most reduction of natural plant communities and establishment of lawn and landscaped areas. Option 2, Partial Build-Out (the Potential/Wetland Conservation alternative) preserves the most amount of vegetation and avoids its permanent conversion. Because the regional area has large amounts of forest cover, the reduction of forest cover as a result of implementing the Project will not have a negative effect on a regional scale. Maple-Basswood Rich Mesic Forest and Red Maple-Hardwood Swamp Forest types are common in the Erie-Ontario Great Lakes Plain Ecological Zone. A reduction of these forest types and their associated species will not put them at risk for imperiled or rare status.

The emerald ash borer is a forest pest assumed to be on site. The movement of this forest pest will be avoided by the use of BMPs. The handling of all ash wood will follow all of NYSDEC's guidelines to prevent any spread of the emerald ash borer. This includes chipping ash wood into 1-inch-size chips and disposing of these chips on site or within the local quarantine zone. The ash wood may also be cut and left on site for a minimum of 12 months before it is moved off site.

BMPs will be utilized to prevent the further spread or introduction of invasive plant species at the Project Site in accordance with permit requirements and in consultation with regulatory agencies. The use of seed-free mulch, hydroseeding, and establishing vegetation as soon as possible will also reduce the risk of invasive plants becoming established on the Project Site. Native plants will be used in the landscaping around facilities whenever possible, and no plants that occur on NYSDEC's regulated and prohibited plant list will be used.

3.4.3.2 Wildlife

The amount of available forested habitat will be reduced by the Project, and this impact is unavoidable. Option 1, Full Build-Out, would reduce the forested cover by 132.6 acres, and Option 2, Partial Build-Out, would minimize impacts to forested cover by removing 58.2 acres. Interior-forest-dwelling wildlife will experience adverse impacts from the Project's reduction of interior forested areas. These species are mainly bird species and shy mammals such as the black bear. Other forest-dependent species such as the red fox, coyote, and raccoon will experience some adverse impacts by a reduction in available quality habitat but still utilize the developed areas to a small extent at night when human activity is lower.

Locally, the greatest wildlife impacts will be to less-mobile and habitat-specific species such as moles, voles, reptiles, and amphibians. Once clearing and grubbing begins, individuals of these species typically perish as they can't get out of the way of the equipment. Silt fence installed around the disturbed areas after clearing tends to create a barrier, keeping reptiles and amphibians out of the work area and thereby reducing mortality. Development within their natural habitat would exclude most small species, particularly amphibians that depend on wetlands and aquatic habitats.

The change of natural plant communities to a developed and managed landscape reduces the diversity and quantity of flowering plants that pollinating insects depend upon. Use of native plants and integrated pest management during operation of the Project will benefit native pollinator species of butterflies and bees.

3.4.3.3 Rare, Threatened, and Endangered Species

Removal of trees has a small chance of having a negative impact on the northern long-eared bat, the sole rare, threatened, and endangered species that has the potential to be at the Project Site. Both Options 1 and 2 involve tree removal; therefore, the small risk of impacting the northern long-eared bat is present in both scenarios. NYSDEC guidance encourages the voluntary scheduling of tree removal to occur during the hibernation period, from November 1 through March 31. In other words, MYSDEC encourages that tree-clearing activities not occur from April 1 until October 31. This restriction is intended to avoid any unintentional take of a northern long-eared bat as the data of their locations is potentially incomplete. Further consultation with the USFWS and NYSDEC will be undertaken as the Project develops and if any federal or state permits are necessary. Adherence to NYSDEC's suggested clearing restriction will avoid any unintentional take of this endangered species.

3.5 Land Use, Zoning, and Agriculture

3.5.1 Existing Environment

3.5.1.1 Land Use

The Project Site is located in the Town of Evans in Erie County, New York, lying on a flat to gently sloping expanse of partially wooded land within the Western New York region. The Town of Evans is one of a handful of the City of Buffalo's second-ring suburbs that are locally referred to as "the Southtowns" because of their location south of the city. The Project Site is less than 3 miles southeast of the Lake Erie shoreline. Although the Town of Evans identifies strongly with being a lakefront community, the Project Site is located far enough away from the shore that there are no obvious lake-dependent land uses nearby.

As shown in Figure 3-3, the Project Site is identified as both Commercial (on the western half of the Project Site) and Vacant land use (on the eastern half of the Project Site) according to the Town of Evans 2019 Comprehensive Plan update. The general area surrounding the Project Site is predominantly rural, with farms, a handful of residences, and active industrial properties within a mile of the Project Site. There are occupied residential properties and Erie County-designated agricultural parcels located on either side of Project site, as well as across the street. The Project Site sat predominantly vacant for the past 20 years and contains former airport hangar buildings and a mechanic shop (and the recent addition of a water storage tank). The former runway is approximately 2,000 feet long and in fair condition, with a large paved parking area adjoining one side. As described further in the Zoning section, the Project Site is zoned LI. There is easy access to the New York State thruway, with the Project Site located approximately one mile west of the interchange, and there is potential access to the Norfolk Southern rail line, located on the western edge of the Project Site.

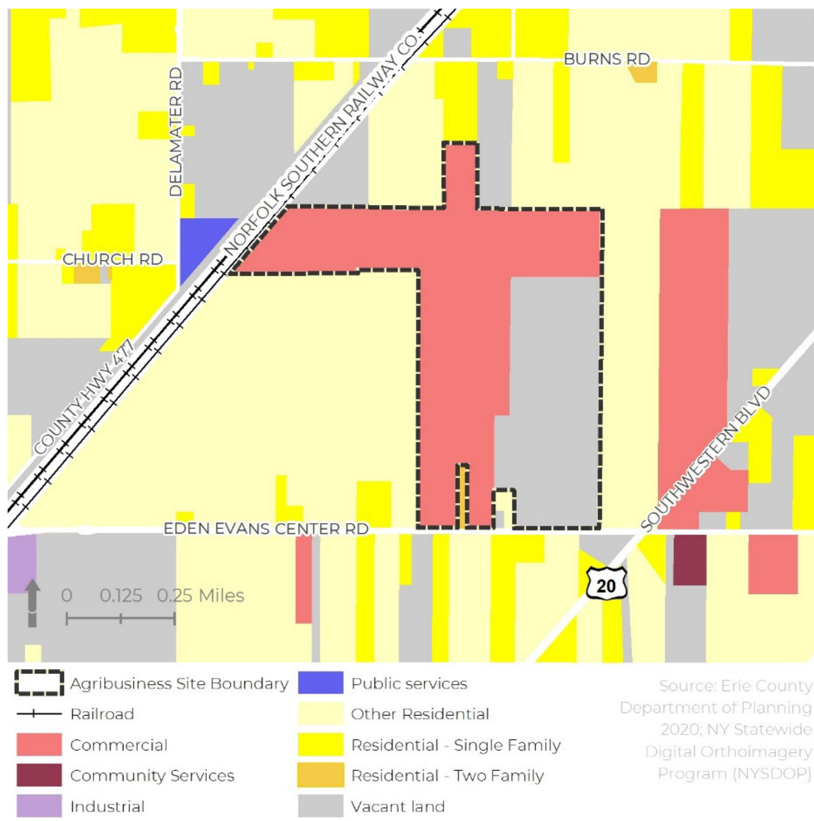


Figure 3-3 Existing Land Use

3.5.1.2 Regional and Town Land Use Patterns

Regional Land Use

Located in the westernmost part of New York State, the Western New York region encompasses Niagara, Erie, Chautauqua, Cattaraugus, and Allegheny counties. It shares its borders with Lake Erie; Ontario, Canada; Lake Ontario; Pennsylvania; and Ohio.

Native American Indian reservations are located within Erie County. The Seneca Nation, one of the Six Nations of the Iroquois Confederacy, is a federally-recognized Native American tribe that holds title to three distinct territories in Western New York, on land set aside by the 1794 Treaty of Canandaigua: Allegany, Cattaraugus, and Oil Spring. The Allegany territory is composed of 31,095 acres and includes the City of Salamanca. The Cattaraugus territory, located 35 miles north of Allegany, is composed of 22,012 acres. The Oils Spring territory is 640 acres of land (one square mile) located 43 miles southeast of the Cattaraugus territory.

The largest area of urban land use in Western New York is the City of Buffalo, located in Erie County on the eastern shore of Lake Erie, at the head of the Niagara River, 16 miles south of Niagara Falls and about 20 miles northeast from the Project Site. Buffalo was founded in 1801 and developed as an industrial trade port due to its strategic position at the western end of the Erie Canal, the eastern end of Lake Erie, and its proximity to Niagara Falls and Canada. Throughout the City of Buffalo, there are concentrations of residential, commercial, public/institutional, and industrial land uses. The first- and second-ring suburbs of Buffalo are primarily residential and commercial land uses. As the distance from Buffalo increases, more agricultural, rural, and open space land uses are found, with scattered residential areas, villages, and towns throughout.

Agricultural land uses are found throughout Western New York. In addition to growing grains and vegetables, the presence of both Lake Erie and Lake Ontario allows for fruit growing and wine production along areas adjacent to both lakes, which weaken the development of damaging spring and fall frosts, thereby extending the growing season.

Town Land Use

The Town of Evans and Village of Angola community has a long, rich history as a waterfront and railroad community. Evans-Angola today is predominantly a bedroom community in the Town of Evans and with a developed Village of Angola at its core. The Town of Evans is bordered by the Town of Hamburg to the north, Town of Eden to the east, the Town of Brant to the south, and Lake Erie to the west.

The Town of Evans contains agricultural lands and rural character to the east with a seasonal waterfront development pattern on the western portion that runs along Lake Erie. Commercial development is found predominantly along State Route 5 (Erie Road) and close to the Village of Angola. It consists of predominantly residential uses, constituting over 65 percent of the total land area. The next highest land use category in terms of acreage and overall count is vacant land. These lands constitute a wide variety of properties from unimproved residential lands to abandoned agricultural fields to utility corridors.

Commercial uses are primarily located along the major transportation corridors, namely the State Route 5 corridor in the Town of Evans. Commercial uses in the Town of Evans on Route 5 consist of typical suburban businesses that are geared toward car-centric behavior, including motels, chain restaurants with drive-throughs, auto body shops, warehousing, and banks. Table 3-4 provides an overall picture of land uses within the Town of Evans.

Industrial lands are limited to a few smaller properties mainly near the rail line and include the Project Site. The Town of Evans, like other surrounding towns, is home to significant agricultural production of vegetables and other crops that are distributed through the region and the rest of the country (Evans-Angola 2019).

Table 3-4 Land Uses within the Town of Evans

Land Use Type	No. of Parcels	% Total	Acreage	% Total
Agricultural	26	0.3%	1,362	5.7%
Residential	5,633	65.7%	11,870	50.1%
Vacant	2,374	27.7%	8,282	34.9%
Commercial	174	2.0%	896	3.8%
Recreation & Entertainment	17	0.2%	420	1.8%
Community Service	42	0.5%	-2	0.0%
Industrial	3	0.0%	26	0.1%
Public Services	10	0.1%	201	0.8%
Forest, Parks, & Conservation	1	0.0%	13	0.1%
No Data Available	296	3.5%	635	2.7%
Total	**8,576**	**100.0%**	**23,701.74**	**100.0%**

Source: Evans-Angola 2019.

3.5.1.3 Town Comprehensive Plan

In January 2019, the Town of Evans and Village of Angola adopted the *Evans-Angola New York Comprehensive Plan Update*. The Town of Evans' last comprehensive plan had been completed in 1999 and the Village of Angola's in 2003. This 2019 update gives the town and village an opportunity to work together to determine whether the community vision and action items in the old plans are completed, outdated, or are simply irrelevant to current times (Evans-Angola 2019).

The comprehensive plan, created with significant community input from the start, is a proactive document that is intended to be a tool used by local leaders and boards to implement policies and regulations, and act upon development applications that are in the best interest of the town and village. In addition to local land use regulation, this plan provides the following benefits:

- Guidance for local boards and special committees;
- Collaborative efforts for the community to work together and to build inter-municipal partnerships;
- Marketing for the town, outlining assets and opportunities for development and preservation;

- Capital improvement tool for identifying programs, initiatives, and projects that are prioritized by the community; and
- Funding support for grant opportunities, outlining a collective vision and strategy for plans and projects.

The comprehensive plan outlines action plans for development in strategic locations, as well as the appropriate expansion of public utilities to support that growth. The plan also includes a "Future Land Use" map (see Figure 3-4) that shows what types of land uses the town desires for the future. The Project and its 2016 feasibility study are described positively in the plan. The plan states that the Town of Evans intends to provide a mechanism for nonresidential growth along Eden Evans Center Road that co-exists and supports existing or expanded agricultural operations, including LI development that is directly related to or supports local agricultural operations or commodities (Evans-Angola 2019).

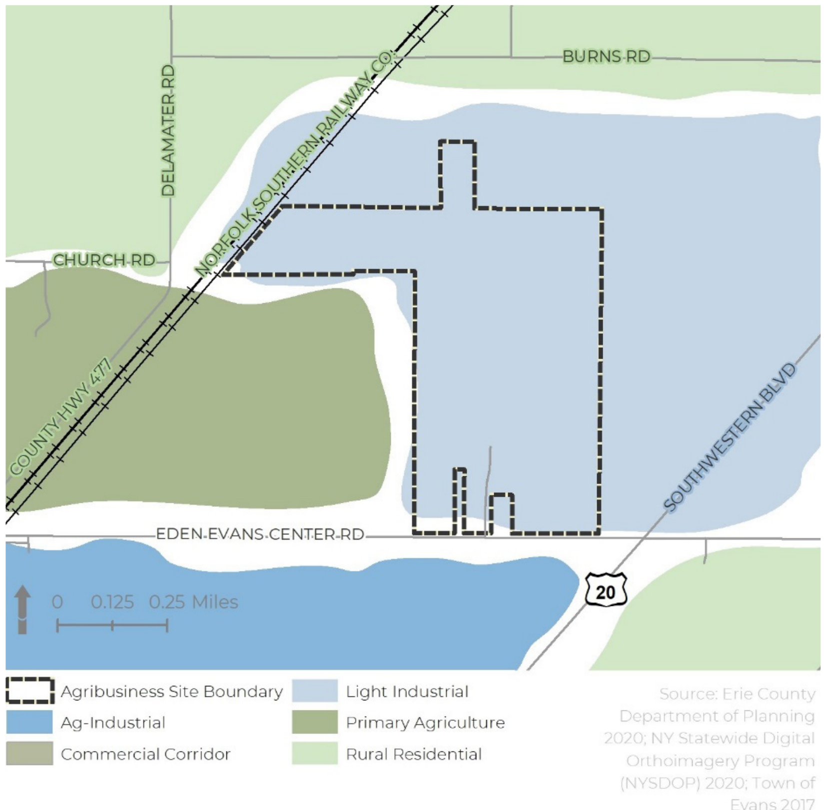


Figure 3-4 Future Land Use

3.5.1.4 Zoning

Zoning in the Town of Evans, found in Town Code Chapter 200, follows a traditional Euclidean zoning model that divides the community into specific districts dictated by a list of primary and the other compatible uses. Town of Evans Zoning districts include:

- *Agriculture/Open Space*: Agriculture and Open Space District (A-OS), Rural Agriculture District (R-A)
- *Residential*: Rural Residential District (R-R), Residential District One (R-1), Residential District One–Lakefront (R-1L), Residential District Two (R-2), Multifamily Residential District Three (MFR-3), Multifamily Residential District Four (MFR-4), Mobile Home Residential District Five (MHR-5)
- *Business*: Neighborhood Business District (NB), General Business District (GB), Motor Vehicle Service District (MS), Waterfront Mixed Use District (WMU)

- *Public Services*: Recreational Facilities District (RF), Public Facilities District (PF)
- *Industrial*: Light Industrial District (LI), General Industrial District (GI)

The Project Site is zoned LI; see Figure 3-5. The intent of the LI district is to provide areas within the town for the location of light industrial, manufacturing, assembly, compounding, processing, fabrication and packaging facilities, wholesale warehouses and storage facilities, and research, development, and laboratory facilities. Uses cannot adversely impact the environment and quality of life of the residents and property owners or create an impact that is injurious to public health, safety, or general welfare (Evans 1987).

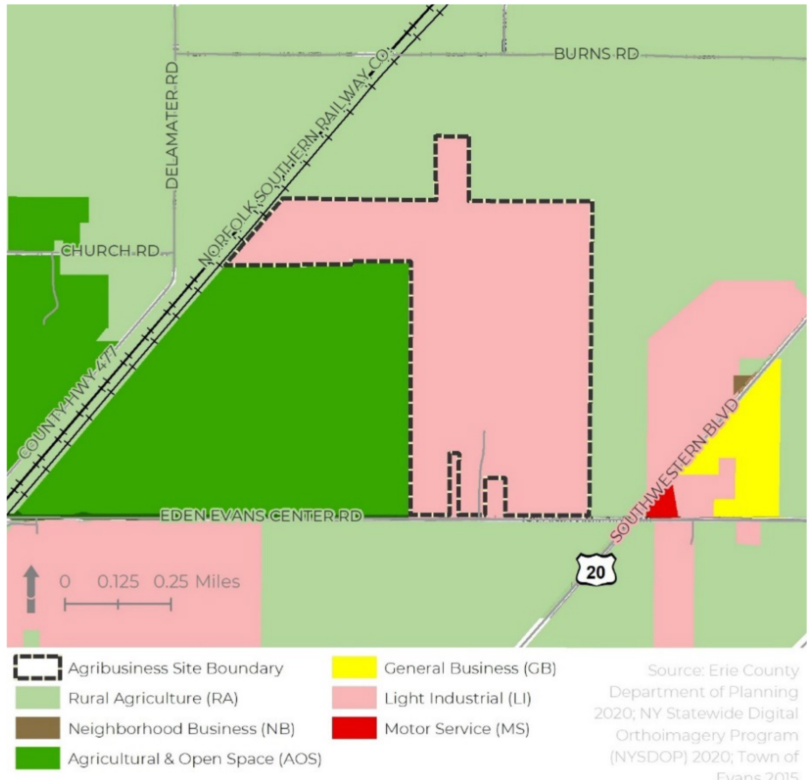


Figure 3-5 Zoning

LI Zone principal structures and uses include:

- Any structure and/or use permitted in the Motor Vehicle Service District (MS), except that gasoline service stations and truck stops; new or used automobile, farm equipment, boat and trailer sales, rental, repair, and services; and motor vehicle washing stations require a special use permit.
- Administrative and general offices.
- Research-development facilities.
- Compounding, manufacturing, and assembly of:
  - Electrical equipment and appliances.
  - Household items, furniture and furnishings; office equipment furniture and furnishings.
  - Musical, scientific, medical, dental, and photographic instruments, equipment, and supplies.
  - Recreational equipment and toys.
  - Clothing and other textile products.
  - Pharmaceutical products, cosmetics, and toiletries.
  - Panels, sheets, tubes, and rods.
  - Automobile and boating accessories from previously prepared materials.

  - Web printing and job and newspaper printing, bookbinding and engraving.
  - Food and beverage products.
  - Airport or private airstrip (special use permit required).
- Warehousing, storage services, and distribution centers.
- Public utility stations or exchanges.
- Fire stations.
- Farms and agricultural businesses and industries.
- Contracting or construction services.
- Motels and hotels.

LI Zone accessory structures and uses include:

- Uses and structures customarily incidental to the above.
- Storage of raw materials used in production and finished products.
- Retail sale of products manufactured, compounded, or assembled on the premises, occupying not more than 15 percent of the gross floor area of the principal structure.
- Signs, as permitted and regulated in compliance with § 200-29 (Sign regulations).
- Off-street parking, loading, and stacking spaces or structures, as permitted and regulated in compliance with § 200-27 (Off-street parking, loading, and stacking facilities).
- Landscaping, as regulated in compliance with § 200-28 (Landscaping regulations).

LI Zone design regulations are listed in Table 3-5 and Table 3-6.

Table 3-5 Light Industrial Zone Non-Yard Design Features

Non-Yard Design Features	Measurement
Minimum Lot Area	1 acre
Minimum Lot Width	100 feet
Interior Minimum Building Separation	30 feet
Maximum Structure Height	65 feet
Outdoor Storage Maximum Height	16 feet
Outdoor Storage Minimum Distance from Any Property Line	50 feet
Maximum Lot Coverage	See § 200-27 and 200-28

Table 3-6 Light Industrial Zone Yard Design Features

Yard Design Features	Structure Height ≤ 30 feet	Structure Height > 30 feet**	Parking, Loading, and Stacking Areas
Minimum Front Yard	40 feet	75 feet	25 feet*
Minimum Side and Rear Yard (abutting residential district)	50 feet	75 feet	50 feet*
Minimum Side and Rear Yard (abutting nonresidential district)	15 feet	25 feet	10 feet*

* The entire area must be landscaped in compliance with § 200-28.
** Special use permit required.

Other zoning sections contain regulations that affect the Project Site, including § 200-26, *Provisions applicable to all industrial districts* (Evans 1987). Performance standards from this zoning section are included in the applicable air quality, noise, odor, and light sub-sections of this DGEIS.

Another Town of Evans Zoning Code provision that has the potential to affect the Project Site is the "Solar Energy Systems Law of the Town of Evans." Recognizing that the Town of Evans did not have any regulations to deal with solar energy in the past, Section 200-68 of the Zoning Code states that the purpose of this law is "to protect land uses in the community and protect the health, safety and general welfare of citizens; preserve the overall beauty, nature and character of the Town; and promote effective and efficient use of solar energy resources."

The Town of Evans solar law differentiates between two types of solar photovoltaic systems (SPS): Type 1 is a utility (large-) scale system designed to capture solar energy, transfer it to the grid, and sell the electricity to a public utility, while Type 2 is a small-scale system designed to generate no more than 110 percent of the electricity consumed on a residential or commercial site over the previous 12 months. All roof and building-mounted SPSs require a building permit, and Type 1 SPSs require a special use permit. Type 1 SPSs are only permitted in the Utility Scale Solar Overlay District, while Type 2 SPS systems are permitted in all zoning districts, subject to specific standards. This solar zoning law also specifies design and installation standards, as well as special use permit requirements for Type 1 SPSs.

3.5.1.5 Consistency with Community Plans

Erie County Agricultural Farmland Protection Plan (2012). Recognizing that Erie County has excellent conditions for agricultural production but has lost substantial farmland since the early 1970s, the purpose of the plan is to direct Erie County's agricultural planning for the next decade. Its two major strategies are to (1) keep land in agricultural production by protecting farmland, helping a new generation to farm, and improving the viability of all farms in the county, and (2) inform the public, local leaders, and elected officials about the benefits that agriculture provides and support policy and legislative changes that will improve farm viability. Also, a corresponding "Agriculture and Farmland Protection Plan Application" is posted online that depicts Erie County agriculture characteristics on digital maps. This Project is fully consistent with the Erie County Agricultural Protection Plan because it will improve the viability of farms by providing additional capacity for agribusinesses in the Town of Evans and throughout Erie County to grow their operations and have improved access to transportation routes (Erie County 2012).

Town of Brant, Evans, and North Collins Farmland Protection Plan. In 2000, the towns of Brant, Evans, and North Collins (jointly) were the first municipalities in Erie County to develop a town-level agricultural and farmland protection plan. This three-town planning effort recognized that a regional approach to support farms could have more impact than a town-by-town planning process. This Project is consistent with the Town of Brant, Evans, and North Collins Farmland Protection Plan because it will support agricultural operations in the planning area.

2013 Western New York Regional Sustainability Plan. This plan was developed for Erie, Niagara, Chautauqua, Allegany, and Cattaraugus counties by the One Region Forward Regional Planning Consortium, with input from key stakeholders and the public. The plan was developed with a grant from the New York State Energy Research and Development Authority under the Cleaner, Greener Communities program established by Governor Andrew Cuomo in 2011. This plan addresses the issue of climate adaptation across specific sustainability focus areas. Examples include strategies to protect adequate and appropriate spaces for future use, better management of natural resources, and improvement of aging sewer, water, and transportation infrastructure to better protect and preserve water resources and coastal areas in the region. The Project is consistent with the Western New York Regional Sustainability Plan because it will improve Western New York infrastructure and intends to utilize renewable energy such as solar electricity and battery storage technology where possible (One Region Forward 2013).

3.5.1.6 Agricultural Resources

This section discusses existing agricultural land resources within and adjacent to the Project Site. As in much of Erie County, farming is an important piece of the Town of Evans community and economy presently and has been throughout its history. Farms in both the Town of Evans and Erie County are diverse and include, among other things, dairy products, vegetables, greenhouse stock, fruit, cash crops, maple syrup, poultry, a variety of livestock, Christmas trees, and aquaculture. Dairy farm sales top the list of Erie County farm sales, with nursery and greenhouse sales second and vegetables third. In total, Erie County farm sales totaled just over $117 million in 2007 (Erie County 2012). The Town of Evans is supportive of farming as well as other agribusiness ventures (tourism, recreation, value-added products, retail, lodging, events, etc.), provided they support local farms and farmers.

Presently, the Project Site is not actively farmed and has not historically been used for farming; however, it is located within 500 feet of the Southwest #8 Agricultural District (Erie County 2021). In addition, active farm operations are adjacent to and in close proximity of the Project Site. These active farms are within the Southwestern #8 Agricultural District. This is noteworthy because, according to the *New York Laws Article 25-AA - (300 - 310) Agricultural Districts 305-B - Coordination of local planning and land use decision-making with the agricultural districts program*, it is required that projects within an agricultural district or within 500 feet of a farm operation that is located in an agricultural district prepare an agricultural data statement. This is applicable for projects seeking an application for a special use permit, site plan approval, land use variance, or subdivision approval requiring municipal review and approval. The reviewing and approval board can evaluate and consider the agricultural data statement in its review of the possible impacts of the proposed project. The information required by an agricultural data statement (i.e., description of the proposed project and its location can be included as part of any other application form required by local law, ordinance, or regulation).

The Town of Evans has an agricultural advisory committee, which is made up of five residents from the agricultural community of the Town of Evans and appointed by the town board. One member of the planning board, one representative from the Erie County Farm Bureau, and one member of the town board serve as *ex-officio* members. The committee meets twice annually and as needed to review and update agricultural codes and addresses concerns of the farm community.

3.5.1.7 Open Space and Recreation

The Town of Evans contains approximately 12 miles of shoreline along Lake Erie with various beaches and parks scattered throughout providing public access. A small section of the Shoreline Trail runs along Lake Shore Road between Wendt and Bennett beaches. The Shoreline Trail is a continuous multi-use pathway along Lake Erie and the Niagara River, within both Erie and Niagara Counties. Erie County is working on Phase 2 of the trail's expansion, which will connect Bennett Beach to Evans Town Beach. Phase 3 is in design and will connect the existing northern end at Sturgeon Point Road to the border with Hamburg. Additional southern sections are proposed that will connect to Evangola State Park (Evans-Angola 2019).

No public parks are located in the vicinity of the Project Site. In addition to Evangola State Park to the south, several community parks are found throughout the Town of Evans and Village of Angola (but none in the vicinity of the Project Site), including:

- Sturgeon Point Marina
- Wendt Beach (County)
- Bennett Beach (County)
- Evans Town Beach
- Lake Erie Beach Park
- Herman Park (Angola)
- John K. Thompson (aka South Creek) Pool/Park
- Nettlecreek Playground

(Evans-Angola 2019).

3.5.2 Environmental Consequences

3.5.2.1 Land Use

The Project Site's existing land use is identified in the Town's Comprehensive Plan as both Commercial (on the western half of the Project Site) and Vacant land use (on the eastern half of the Project Site). The Project will change the land use designation to LI/Commercial and eliminate some of the Vacant land use designation. The Project Site is all zoned for light industrial uses.

There has been no recent agricultural use of the Project Site (much of the Project Site was previously used as an airport).

3.5.2.2 Regional and Town Land Use Patterns

As an agribusiness park, the Project is intended to support the local and regional agriculture industry, which is a supported land use pattern in the region and the town. So long as the Project's commercial tenants build and operate while following the Town of Evans LI and all other zoning requirements, the Project will have a positive impact on Western New York's regional and the Town of Evans' local land use patterns.

3.5.2.3 Town Comprehensive Plan

The Project is compatible with the 2019 *Evans-Angola New York Comprehensive Plan Update*. The comprehensive plan names and supports this Project and its 2016 feasibility study. The plan encourages nonresidential growth along Eden Evans Center Road that co-exists and supports existing or expanded agricultural operations, including LI development that is directly related to or supports local agricultural operations or commodities (Evans-Angola 2019).

3.5.2.4 Zoning

The Project is consistent with the current zoning of the property. So long as the Project's commercial tenants build and operate while following the Town of Evans LI and all other zoning requirements, the Project is compatible with the Town of Evans zoning requirements.

3.5.2.5 Consistency with Community Plans

The Project is consistent with the other community plans described in Section 3.5.1.5. The Project will support existing or expanded agricultural operations and utilize sustainability initiatives such as renewable energy generation and battery storage where possible.

3.5.2.6 Agricultural Resources

The Project will have a positive impact on agricultural resources in the Town of Evans and Erie County because it will support the processing and transportation of agricultural products grown throughout the region.

Presently, the Project Site is not actively farmed and has not historically been used for farming; however, it is located within 500 feet of the Southwest #8 Agricultural District, and active farm operations are adjacent to and in close proximity of the Project Site (Erie County 2021). Development and operation of the Project is not expected to impact nearby farming operations.

3.5.2.7 Open Space and Recreation

The Project is not located near any public recreational or open space areas and will therefore have no impact on open space and recreation.

3.5.3 Avoidance, Minimization, and Mitigation Evaluation

Conformance with the Town's comprehensive plan, restriction of the allowed uses in the Project Site, layout of uses, and meeting Town of Evans LI zoning requirements are all potential ways to avoid, minimize, and mitigate impacts to land use, zoning, and agricultural resources in and around the Project Site.

The Project will have no impact on open space and recreation; therefore, no avoidance or mitigation is needed.

Environmental Setting, Potential Impacts and Mitigation

3.6 Aesthetic Resources

3.6.1 Existing Environment

The Project Site is a former airport that is currently unoccupied. Near the Project Site's frontage on Eden Evans Center Road, the property is characterized by vestiges of its former use, including vacant structures that were formerly used as offices and hangars. Former runways are present, with a paved runway oriented north-south and a turf runway oriented east-west as well as a large, paved area that was used as an airplane tie-down area. Much of the remainder of the Project Site is undeveloped, with a mix of meadows and wooded areas. These undeveloped lands at the northern boundary of the Project Site are not visible from adjoining properties (see Figures 3-6 through 3-12).

Figure 3-6 Existing Buildings along Frontage on Eden Evans Center Road

Figure 3-7 Former Hangars behind Office at Front of the Project Site

Figure 3-8 View from Interior of Property, Looking South toward Road and Former Hangars

Figure 3-9 View Looking Northward Down Paved Runway with Wooded Areas on Either Side

Land uses in the vicinity of the Project Site are a mix of rural residential and open space. Some other commercial/industrial uses are located along Eden Evans Center Road, including an automobile auction facility and a self-storage facility east of the property, and Flexovit, a manufacturing facility, to the west. Land uses are primarily residential immediately adjacent to the Project Site. The most affected residential properties include 1576 and 1548 Eden Evans Center Road, which are on the north side of the road, and 1561, 1551, and 1535 Eden Evans Center Road, which are on the south side of the road, directly across from the Project Site.

Figure 3-10 Property on South Side of Eden Evans Center Toad Directly across from Project Site (1535 Eden Evans Center Road)

Figure 3-11 Property on North Side of Eden Evans Center Road as Viewed from the Westernmost Access Road into the Project Site (1548 Eden Evans Center Road)

3.6.2 Environmental Consequences

It is anticipated that at least some of the new construction for the Project will be visible from Eden Evans Center Road (see Figure 3-13). The Project will present a different character from the Project Site's existing use and from adjoining land uses, which are primarily rural, residential, and undeveloped. Future development will include new commercial/industrial/warehouse structures, parking lots, and ancillary structures in place of wooded lands. At least a portion of the Project will be visible from Eden Evans Center Road. However, the existing views are of dilapidated metal buildings that do not contribute to the visual character of the area.

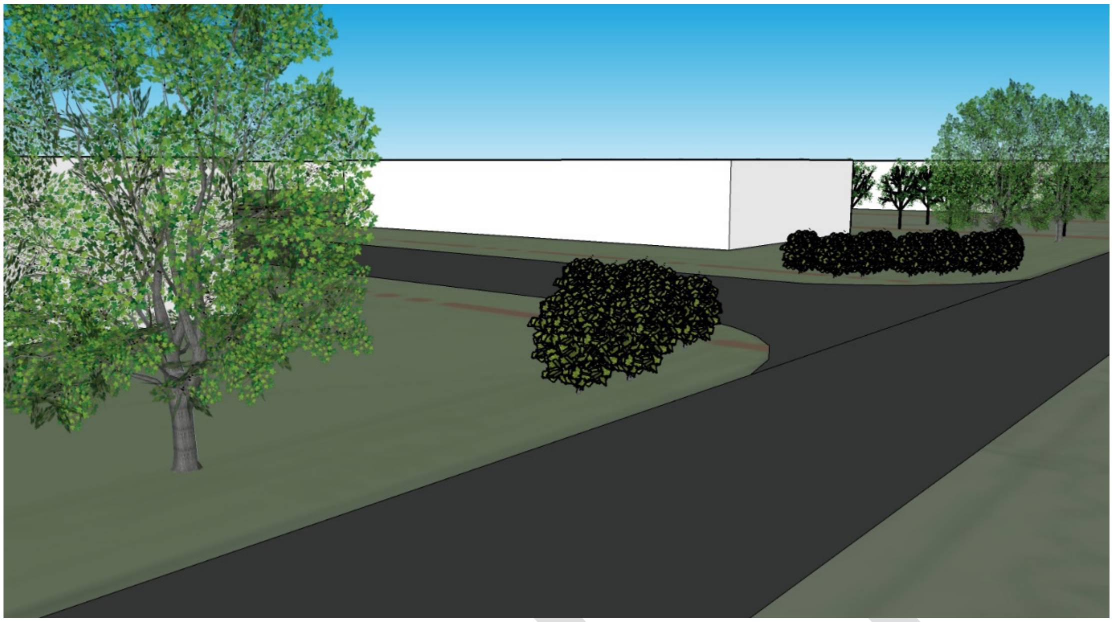


Figure 3-12 Rendering of Ground-Level View of Project from Eden Evans Center Road

Future development will be governed by the Town of Evans' Zoning Code, which addresses maximum lot coverage and landscaping requirements. The Project is consistent with the Town's comprehensive plan and its zoning, and other similar uses, such as Flexovit, are present in the vicinity.

No existing significant aesthetic resources would be affected by the Project. No significant views will be eliminated, and no officially designated scenic resources are nearby.

It is expected that the new buildings will be relatively low-profile, one- or two-story buildings, helping to mitigate their visibility and any impacts to aesthetics.

3.6.3 Avoidance, Minimization, and Mitigation Evaluation

Future development on the Project Site will be subject to site plan review by the Town of Evans planning board, and developers will be required to comply with zoning regulations. Potential mitigations could include restrictions on heights and/or implementation of architectural standards for buildings fronting on Eden Evans Center Road. Screening and landscaping will be in accordance with the Town's zoning requirements. The portion of the Project Site immediately adjacent to the residential property located at 1576 Eden Evans Center Road will serve as a visual buffer. The area to the north and east of 1576 Eden Evans Center Road will not be disturbed, as it is part of the Wetlands/Conservation Area in both alternatives. The existing vegetative buffer surrounding 1548 Eden Evans Center Road will be retained and improved.

With these measures in place, no significant negative impacts to aesthetic resources are anticipated as a result of the Proposed Action.

3.7 Historic and Cultural Resources

3.7.1 Existing Historical and Archaeological Resources

Existing historical and archaeological resources that may be present or in the vicinity of the Project Site were identified by reviewing online information from the New York State Office of Parks, Recreation and Historic Preservation State Historic Preservation Office (SHPO) and the U.S. National Park Service (NPS). SHPO offers the Cultural Resources Information System (CRIS) online to determine whether any previously discovered cultural resources are located within or adjacent to the Project Site or if the general area is culturally sensitive or rich (i.e., contains uncovered archaeological sites and artifacts). The review of CRIS resulted in a formal request in April 2021 from SHPO to prepare a Phase IA/IB archaeological investigation for the Project Site due it potentially being located within an archaeologically sensitive area. SHPO assigned it as project #21PR02647. A Phase 1A archeological investigation was therefore prepared and the results released in June 2021 (See Appendix E).

The Phase IA archaeological investigation consists of a background/literature search, a site file check, and a field reconnaissance of the Project area. The geography and history of the region was reviewed to understand the background of the Project area and provide a context for any resources that may exist within the Project's area of potential effect. The key findings from the Phase IA investigation are summarized below:

- No archaeological sites are listed inside or adjacent to the Project Site, or within 0.5 mile of it. Documented Native American sites in the region indicate a settlement pattern that favored proximity to Big Sister Creek and its confluence with Lake Erie at Bennett Beach, Angola, New York (an area between 1.5 and 3 miles west of the Project Site).
- The Project Site is not considered archaeologically sensitive for Native American sites due to its distance from regionally preferred areas of occupation and the presence of soils classified by the USDA as "poorly drained" or "somewhat poorly drained" covering 90 percent of the Project Site. Paved or disturbed soils are found largely covering portions of the Project Site where limited "moderately" drained soils are indicated.
- A portion of the Project Site is considered archaeologically sensitive for historic period cultural resources associated with an extant nineteenth century farmhouse at 1576 Eden Evans Center Road, located within the southern portion of the Project Site. Although county tax records list the house as having been built around 1880, map research shows a structure was present at that location as early as 1854. No other map-documented structures are indicated within the remaining portions of the project.

A Phase 1B cultural resources investigation was recommended for an approximately 500-foot-by-500-foot (5.7 acre) portion of the Project Site encompassing the nineteenth century farmhouse at 1576 Eden Evans Center Road. No archaeological investigations are recommended for the remainder of the 242-acre Project site, which is considered to have a low archaeological sensitively. Due to the Project's currently designed concept plans that avoid any impacts to the farmhouse at 1576 Eden Evans Center Road, the preparation of a Phase IB archaeological investigation of this location was determined, at this time, to not be needed.

The NPS maintains a database and files of the National Register of Historic Places (NRHP) that are available online at https://www.nps.gov/subjects/nationalregister/index.htm. The Phase IA investigation found that the Project is not anticipated to impact any eligible or listed state- or NRHP-listed places. The Main Office Building/Hangar, Former Angola Airport (USN 02913.000176) at 1526 Eden Evans Center Road on the Project Site is determined not eligible for listing in the New York State and NRHP (NYS OPRHP Resource Evaluation April 23, 2021). A circa 1880 farmhouse identified opposite the Project Site at 1551 Eden Evan Center Road is situated within a modern, developed residential area, already opposite a former airport.

In addition, the search of the NRHP databased identified the Pioneer Cemetery located on the west side of Main Street between Gold Street and Beach Road in Evans as a listed historic property (Reference Number 11000997). The Pioneer Cemetery is just over 2 miles to the west of the Project Site.

3.7.2 Impacts to Historical and Archaeological Resources

No archaeological sites are listed inside or adjacent to the Project Site or within 0.5 mile of it. Documented Native American sites in the region indicate a settlement pattern that favored proximity to Big Sister Creek and its confluence with Lake Erie at Bennett Beach, Angola, New York (an area between 1.5 and 3 miles west of the Project). The Project Site is not considered archaeologically sensitive for Native American sites due to its distance from regionally preferred areas of occupation and the presence of soils classified by the USDA as “poorly drained” or “somewhat poorly drained” covering 90 percent of the Project Site. Paved or disturbed soils are found largely covering portions of the Project Site where limited “moderately” drained soils are indicated.

A portion of the Project Site is considered archaeologically sensitive for historic period cultural resources associated with an extant nineteenth century farmhouse at 1576 Eden Evans Center Road, located within the south portion of the Project Site. However, because development of the Project will not occur in this area, no impacts to it are expected.

No NRHP eligible or registered buildings or places are located on the Project Site or within a 1-mile radius of it. The closest NRHP eligible or registered place, the Pioneer Cemetery, is over 2 miles away. The nature of the Project and its proposed facilities will not have an adverse effect on the historic value of the Pioneer Cemetery.

3.7.3 Mitigation to Historical and Archaeological Resources

No impacts are anticipated at this time to historical and archaeological resources. Consultation with the SHPO has been completed. At a minimum, an unanticipated discoveries plan could be developed in the unlikely event of an archaeological artifact being uncovered during construction. This plan can be included as part of the SWPPP and will direct contractors on what to do.

3.8 Transportation

3.8.1 Existing Transportation Network

3.8.1.1 Rail

There is a Class 1 Main Line Railroad that borders the western edge of the Project Site. The line is operated by Norfolk Southern Railroad.

3.8.1.2 Navigable Waterways

No navigable waterways are in the vicinity of the Project.

3.8.1.3 Pedestrian/Bicycle Accommodations

No pedestrian or bicycle accommodations are in the vicinity of the Project.

3.8.1.4 Public Transit

The Niagara Frontier Transportation Authority (NFTA) operates Bus Route 76 along Erie Road (SR 31) between Evans and Hamburg. The closest public transit stop is approximately a one mile from the Project Site. There is no public transit service along Eden Evans Center Road. Therefore, public transit service to the Project Site is not convenient.

3.8.1.5 Vehicular Networks and Traffic

Primary roadways in the vicinity of the Project include Interchange 48A of I-90 (New York State Thruway), Southwestern Boulevard (US Route 20), Erie Road (NY Route 5) and Eden Evans Center Road. These roadways are described as follows. In addition, a private access road provides access to the existing site from Eden Evans Center Road.

I-90 Interchange 48A Ramp is located approximately 1.8 miles to the east of the Project Site and provides access between I-90 and Eden Evans Center Road. The 48A Ramp consists of 60 feet of pavement width, with a posted 30 mph speed limit. I-90 Interchange 48A Ramp conveys an average of 5,243 vehicles per day (per 2014 NYSDOT AADT Count).

Southwestern Boulevard (US Route 20) is located approximately one-half mile to the east of the Project Site and intersects with Eden Evans Center Road at a 4-leg signalized intersection. US Route 20 is a northeast-southwest oriented, two-lane US Route classified as a rural principal arterial other. The roadway consists of 40 feet of pavement width near the intersection, with a posted 55 mph speed limit. Southwestern Boulevard (US Route 20) conveys an average of 6,575 vehicles per day (per 2009 NYSDOT AADT Count).

Erie Road (NY Route 5) is located approximately 2.5 miles to the west of the Project Site and intersects with Beach Road at a signalized intersection. NY Route 5 is a north-south, four-lane road classified as a principal arterial. The roadway consists of approximately 70 feet of pavement width near the intersection. The posted speed limit is 45 mph. NY Route 5 conveys an average of 11,439 vehicles per day (per 2015 NYSDOT AADT Count).

A Traffic Impact Study (TIS) for the Project was completed by Wendel Engineering to evaluate the existing local vehicular transportation network and to assess potential impacts the Project could cause on local traffic. The TIS is attached as Appendix F.

Manual turning movement counts used in the development of the Study were taken during both the morning (7:00-9:00am) and evening (4:00-6:00pm) on Thursday, April 15, 2021 and Tuesday April 20, 2021. The following intersections were counted and then modeled to evaluate traffic operations:

1. Eden Evans Center Road and I-90 Interchange 48A Ramp Drive
2. Eden Evans Center Road and Southwestern Boulevard (US Route 20)
3. Eden Evans Center Road and Erie County Agribusiness Park Drive 1
4. Beach Road and Erie Road (NY Route 5)

Level of Service (LOS) and queue analyses were prepared using SYNCHRO Traffic Modeling software to establish a baseline for existing traffic operations at these intersections, except for Eden Evans Center Road and the Project Site access road (Erie County Agribusiness Park Drive 1). Appendix B of the TIS summarizes the morning and evening peak hour LOS and 95th percentile queues for these intersections under existing conditions. LOS is split into six categories, ranging from LOS A (very low levels of delay) to LOS F (high levels of delays associated with congestion).

These existing condition traffic analyses show that the road network and accompanying intersections in the vicinity of the Project currently operate at an Unsignalized LOS (b) or Signalized LOS C or better. There is sufficient storage available at all intersection approaches to accommodate the 95th percentile queues.

3.8.2 Environmental Consequences

3.8.2.1 Rail

If needed in the future, the plan allows for an area for a rail spur and an area for unloading and loading product (identified as a Logistics Hub on the Master Plan for Option 1).

3.8.2.2 Navigable Waterways

As there are no navigable waterways in the vicinity of the Project Site, the Project is not anticipated to affect navigable waterways.

3.8.2.3 Pedestrian/Bicycle Accommodations

There are no impacts to any existing pedestrian or bicycle facilities as there are none in the area. At this time there are no plans to construct any pedestrian or bicycle facilities. On site systems for trails and pedestrians can be incorporated into the site.

3.8.2.4 Public Transit

Public transit is very limited in the area and therefore this project will not impact any public transit facilities. If in the future, the Project Site generates enough employees to warrant it, the NFTA can be contacted to consider adding this area into a bus route.

3.4.2.5 Vehicular Networks and Traffic

In order to evaluate impacts of the Project on the local vehicular transportation network, the TIS first conducted a traffic analysis of the aforementioned intersections considering only the growth of existing traffic in the area. Since development will take many years, 2030 was utilized as the year for full Project build-out. Additionally, an average annual traffic growth rate of 0.5 percent was used to determine the background traffic for the full Project build-out year of 2030. The total growth rate in background traffic for the full Project build-out year of 2030 is 3.5 percent.

The 2030 background traffic volumes were calculated by applying the 3.5 percent growth rate to the 2021 existing traffic volumes. Appendix B of the TIS summarizes the morning and evening peak hour LOS and maximum queues for the intersections under 2030 background traffic conditions.

These background condition traffic analyses show that the road network and accompanying intersections in the vicinity of the Project will operate at an Unsignalized LOS (b) or Signalized LOS C or better. There is sufficient storage available at all intersection approaches to accommodate the 95th percentile queues.

Trip generation for the full Project build-out was determined using the ITE Trip Generation Manual, 11th edition for both Option 1 and 2 (see Table 3-7 below), assuming a mix of industrial park, cold storage warehouse, and business park uses. The TIS also assumes that the western access road will be the primary entrance and exit to the Project Site and the eastern access road will only be an emergency means of egress (this could change in the future, which would necessitate an update to the TIS). Trip distribution for traffic generated by the Project generally follows existing traffic patterns. Approximately 80 percent of the traffic generated by the Project travels to and from the east along Eden Evans Center Road. Approximately 30 percent uses US Route 20, 45 percent uses I-90, and 5 percent uses Eden Evans Center Road for access to the Project Site. The remaining 20 percent of traffic generated by the Project is oriented to the west of the Project Site with 18 percent using NY Route 5 and the remaining 2 percent using Beach Road.

Table 3-7 Option 1 and 2 Trip Generation Summary

	Morning Peak Hour			Evening Peak Hour		
	Entering	Exiting	Total Trips	Entering	Exiting	Total Trips
Option 1	551	103	654	169	468	637
Option 2	373	68	441	110	311	421

This traffic that is generated by the Project was added to the 2030 background traffic to perform LOS and queue analyses for Option 1 and Option 2 (note, analysis of both options utilized the site access road as the primary access for the site – this reduced conflicting turning movements). As shown in Figure 3-13, for Option 1, results indicate that most approaches for unsignalized intersections at the I-90 Exit 57A and Site Access Road operate at LOS (c) or better during the evening peak hour. One exception is the southbound left turn movement at the Project Site Access Road which operates at LOS (f). The signalized intersection at NYS Route 5 and Beach Road operates at an overall LOS B with individual movements operating at LOS D or better. The signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS F. Therefore, the exiting left turn movement from the Project Site Access Road and the eastbound and westbound movements on Eden Evans Center Road at US Route 20 exhibit failing levels of service and may require mitigation. As demonstrated by the queue analyses presented in Appendix B of the TIS, all approaches have sufficient length to accommodate the required 95th percentile queue length.

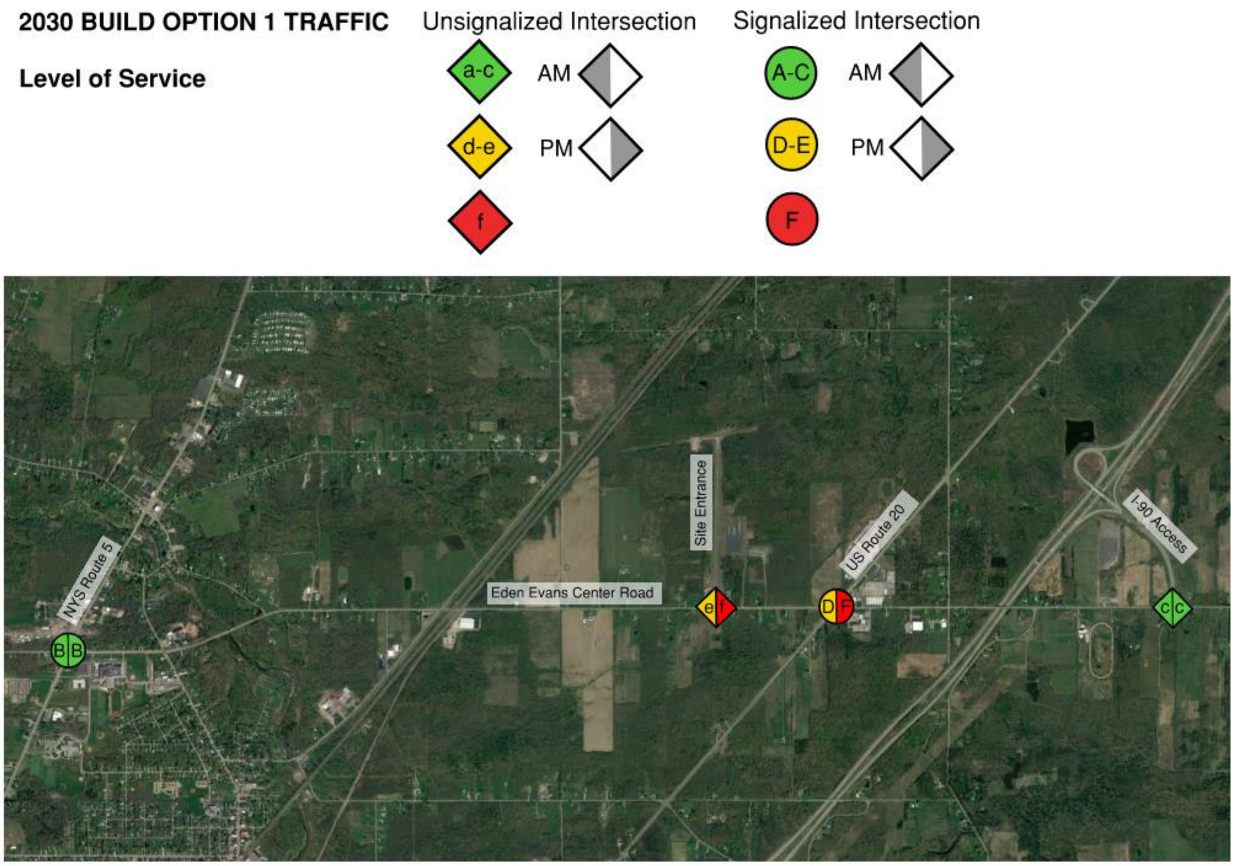


Figure 3-13 Option 1 Intersection Level of Service

As shown in Figure 3-14, for Option 2, results indicate that most approaches at the unsignalized intersection at the I-90 Exit 57A and Site Access Road operate at LOS (d) or better during the evening peak hour. The signalized intersection at NYS Route 5 and Beach Road operates at an overall LOS B with individual movements operating at LOS D or better. The signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS E with eastbound movements on Eden Evans Center Road operating at LOS E and westbound movements on Eden Evans Center Road operating at LOS F. Therefore, the eastbound and westbound movements on Eden Evans Center Road at US Route 20 exhibit failing levels of service and may require mitigation. As demonstrated by the queue analyses presented in Appendix B of the TIS, all approaches have sufficient length to accommodate the required 95th percentile queue length.

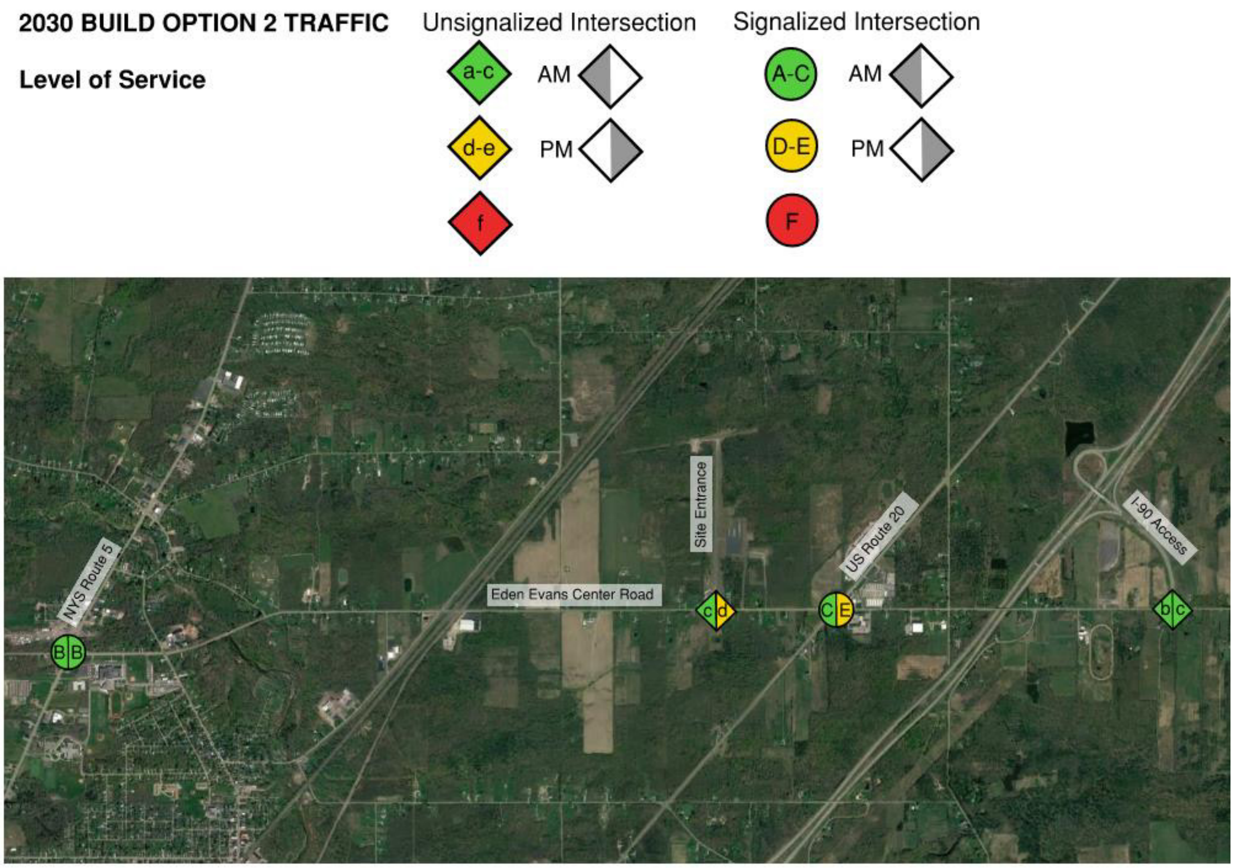


Figure 3-14 Option 2 Intersection Level of Service

3.8.3 Avoidance, Minimization, and Mitigation Evaluation

3.8.3.1 Rail

While rail service may be available for site tenants, the need for rail access to this site is not anticipated at this time. If rail access is proposed in the future, mitigation measures will be proposed.

3.8.3.2 Navigable Waterways

As the Project is not anticipated to affect navigable waterways, no mitigation measures are needed.

3.8.3.3 Pedestrian/Bicycle Accommodations

As the Project is not anticipated to affect pedestrian and bicycle accommodations, no mitigation measures are needed. If in the future, plans for pedestrian and bicycle accommodations are proposed, the Project would not impact these plans. Accommodations for internal pedestrian and bicycle movements can be incorporated to the Master Plan.

3.8.3.4 Public Transit

As the Project is not anticipated to affect public transit, no mitigation measures are needed. If in the future, access to public transit is warranted and approved by the NFTA, the Project would support these plans.

3.4.3.5 Vehicular Networks and Traffic

To mitigate traffic impacts associated with Option 2, existing signal timing at the intersection of Eden Evans Center Road and US Route 20 would need to be optimized, which would improve the overall level of service from LOS E to LOS D with all movements operating at LOS D or better.

To mitigate traffic impacts associated with Option 1, the intersection of the Project Site access road with Eden Evans Center Road would need to be signalized and the eastbound and westbound approaches on Eden Evans Center Road at the intersection with US Route 20 would need to be modified to provide a dedicated left turn lane. With these proposed mitigation measures, the level of service associated with the Project Site Access Road exit improves from unsignalized LOS (f) to a signalized overall LOS C with the exiting left turns improving to LOS D during the evening peak hour. Proposed mitigation at the Eden Evans Center Road and US Route 20 intersection will improve the overall level of service from LOS F to LOS C with all movements operating at LOS D or better.

As noted, the primary access road will be utilized for all traffic at this time. If in the future, the use of the other access road is needed, an additional traffic study will be warranted. This secondary roadway can be utilized as an emergency means of egress.

3.9 Public Utilities and Infrastructure

3.9.1 Electric

3.9.1.1 Existing Conditions

There is a new 13.2 kilovolt (kV) power line that runs along the west side of the paved runway on the Project Site, connecting the newly constructed water tank to another 13.2 kilovolt (kV) power line that runs along Eden Evans Center Road. If power for the tenants of the Project were connected to this line, the maximum customer load would be 2,500 kilovolt amperes (kVA). If any of the single potential tenants would require electric power beyond 2,500 kVA, a primary service (15 kV) would be required. National Grid has a 110 kV transmission and 34.5 kV distribution line running adjacent to the west side of the Project Site.

3.9.1.2 Environmental Consequences

National Grid Specifications for Electrical Installations 2020 Electrical System Bulletin 750 states "For areas served by 5kV class distribution, maximum Customer load shall be limited to 1,000 kVA. For areas served by 15kV class distribution, maximum Customer load shall be limited to 1,500 kVA at 208Y/120V and 2500 kVA at 480Y/277V."

3.9.1.3 Avoidance, Minimization, and Mitigation Evaluation

If a single tenant requires power above the 2,500 kVA limit, a new 15 kV substation complying with the capacity requirements listed above should be built and connected to either the 110 kV or 34.5 kV lines. A determination would need to be made by consulting with National Grid once building and tenant requirements are determined. The substation would have to be built to and coordinated with National Grid standards.

A decision on who will own, operate, and maintain the substation will need to be discussed. If the utility does not own the substation, all of the costs to run the electric utility to each of the Project's potential tenants will be ILDC's (the Owner's) responsibility. This would include duct banks or overhead wires, transformers, switching equipment, and anything else required to distribute power to the tenants. Also, since only electric utilities are allowed to sell electricity in New York State per the public service agreements, the cost of electricity would need to be included in the tenant rent. The maintenance of the substation would also need to be considered. If the utility owns the substation, the utility is responsible for its maintenance; if the utility does not own the substation, the owner would be responsible for its maintenance.

As part of the substation design, consideration should be given to the potential to create a more sustainable electric power scenario involving a micro-grid with battery storage and possible alternative energy capabilities. A microgrid is a self-sufficient energy system that serves a discrete geographic footprint; in this case, it would serve the Project. The microgrid can be made up of several types of distributed energy, such as solar panels, wind turbines, combined heat and power, hydrogen fuel cells, battery storage, and other technologies that produce and store its power. The microgrid connects to the substation at a point of common coupling that maintains voltage at the same level as the substation unless there is some sort of problem on the grid or other reason to disconnect. If desired, the microgrid can be sized to generate enough power for the Project's tenants and a surplus to deliver back to the grid. If it cannot generate enough power, then it is supplemented by power from the grid. An interconnection agreement would be required with National Grid if it is decided that a microgrid would be desired. Consideration would need to be given to the cost of the infrastructure required to install a microgrid, along with the long-term costs of its maintenance and operation. Items that will need to be considered for future design and operation of a microgrid would be:

- Which of the electrical loads are the most critical? Can the load sustain any short-term outages?
- How fast does the microgrid need to come online when grid power fails?
- Determine whether the microgrid will operate as an "island" or interconnected with the grid.
- What types of generation would be included in the microgrid?
- Determine whether the Project would want to own its generation assets or prefer to use third-party ownership.
- How much power is needed from the microgrid?
- Perform preliminary engineering studies to confirm the necessary size of generation assets.
- How do the topology and site features match up with the generation the Project requires? Is there enough available land?
- Determine how buildings would be connected to the microgrid.
- How will the microgrid be paid for (e.g., using operation and maintenance costs, capital, grants, public private partnership, etc.)?
- Receive regulatory approval.
- Determine whether the Project owner wants to maintain or outsource the microgrid maintenance.

Other options to produce renewable energy and offset usage can also be achieved by installing roof-mounted solar panels, battery storage, hydrogen fuel cells, or combined heat and power directly connected to the Project's buildings. These would not be connected like the microgrid described above to the substation but would be sized appropriately for the needs of each tenant. These would be connected at the service to each tenant building and would be used the same way as a microgrid to offset power usage. Connecting at the individual building service provides a more scalable design for renewable power sources and is a less expensive capital investment than building a microgrid. If the energy generation is oversized, battery storage could be added and used to supplement peak demands. If the amount of power generated was still greater than could be used, agreements could be entered into with National Grid to sell the excess power back to the utility.

The ILDC could also contact the New York Power Authority (NYPA) and inquire about receiving a low-cost allocation of hydro power. The ILDC would have to engage NYPA to discuss the possibility of allocation of low-cost power once the size of the allocation requested is known.

Another sustainable feature of the Project Site could be electric vehicle charging. National Grid currently has a statewide program for developing electric vehicle (EV) charging stations for cars. EV charging for commercial trucks and delivery vehicles is not the same as it would be for passenger vehicles. The ILDC would need to work with potential tenants on a study of fast-charging versus fleet-charging methods to best meet their needs. Fast charging is done with large amounts of power connected to the vehicle over a very short period of time. Fleet charging is usually done during off-peak hours with low-powered equipment over a longer period of time. Fast charging for trucks and delivery vehicles has a higher construction cost because of the large power demand and higher electricity usage charges associated with it. The tenant study would take all the factors, including but not limited to routes, travel distance, and fleet size, into consideration, and the most economical course of action can then be determined.

Thresholds for electric demand will be established as part of the Master Plan and the DGEIS once more information is available for potential tenants.

3.9.2 Public Water Supply

3.9.2.1 Existing Conditions

An existing 10-inch cast-iron water main owned and operated by the ECWA is located along the north side of Eden Evans Center Road within the right of way. The most recent fire flow test data taken December 18, 2014 was obtained from ECWA for two fire hydrants located along the roadway frontage. The test data indicates that the residual pressure in the system is 26 psi, the static pressure is 55 psi, and the available fire flow is 1,390 gallons per minute at 20 psi residual pressure.

The Project Site is located within Town of Evans Water District and is a service area of the ECWA. The Town of Evans and ECWA recently constructed a water tank improvement project located on an approximately 2-acre parcel of land at the northwest corner of the paved runway on the Project Site. The town has indicated that the tank and associated infrastructure will be owned by the Town of Evans through a lease management agreement with ECWA. The ECIDA has provided funding to the Town of Evans for a capacity expansion of the proposed water tank in order to provide 500,000 gallons of water available for the sole purpose of the Project.

Figure 3-15 Water Tank and Mains Under Construction, Summer 2023

Two 12-inch polyvinyl chloride water lines extend to and from the tank site along the east side of the paved runway. It is in the best interest of the Project to connect to the ECWA lines along the east side of the runway to provide water service to the Project. Another option is to connect into the existing 10-ich water main in Eden Evens Center Road. New flow data should be obtained now that construction is completed on the tank project to determine the new flow characteristics in the system. Water modeling should be performed utilizing the new flow data in order to assess the various demands of potential tenants of the Project.

Thresholds for water demand will be established as part of the Master Plan and FGEIS once more information is available for potential tenants and testing can take place on the new system. The design of this new water tank and waterlines will provide the project site with up to 500,000 gpd and will be able to provide fire flows (confirmed with new testing).

3.9.2.2 Environmental Consequences

The proposed connections to the water lines will have minimal environmental impact. The Project will require ECDOH and ECWA approval. No permits from the NYSDEC and/or USACE will be required.

3.9.2.3 Avoidance, Minimization, and Mitigation Evaluation

It is not possible to avoid a connection to a water source for the Project. Without a waterline connection, proposed development within the Project area would not be viable. The proposed waterline will be installed using the least minimally invasive construction methods possible. Trench disturbance will be limited to an area approximately 3 feet wide for the installation of the waterline. Each proposed tenant of the Project will be required to submit its daily demand, peak, and fire-flow usage requirements.

3.9.3 Wastewater Disposal

3.9.3.1 Existing Conditions

The Erie County Division of Sewerage Management (ECDSM) owns and operates an existing 24-inch asbestos cement pipe located along the south side of Eden Evans Center Road within the right of way. This sewer main conveys wastewater flows to the Big Sister Creek Water Resource Recovery Facility (WRRF) located in the Town of Evans.

3.9.3.2 Environmental Consequences

Over the past three years, Wendel consulted with the ECDSM to determine what sewer capacities might be available for the Project Site. A limited portion of the Project Site is within ECSD No. 2, but much of the Project Site is outside of the current sewer district boundary.

Wendel collected sewer flow data at four locations between the Project Site on Eden Evans Center Road and the Big Sister Creek WRRF to assess the downstream capacity of the sewers in this area. Using this data and estimates of potential future uses in the district, Wendel was able to demonstrate that more than 1 million gallons per day of capacity would be available in the existing sanitary sewers between the Project Site and the Big Sister Creek WRRF. Wendel also determined that installation of a sewer pump station would likely be required to serve the Project Site.

In further discussions with the ECDSM, it was determined that there is limited capacity at the Big Sister Creek WRRF. After ensuring that capacity is retained for future customers that may come into the district, 100,000 gallons per day (peak daily flow) of sewer capacity may be available for the Project without upgrades to the Big Sister Creek WRRF, based on monthly discharge limits. This amount was determined, in part, based on the southern portion of the Project Site fronting Eden Evans Center Road and being within the bounds of ECSD No. 2. Future development within the Project would be subject to reviews at the time of plan submittal, including the out-of-district customer evaluation process should a development be on the portion of the Project Site north of the sewer district boundary.

Upgrades at the Big Sister Creek WRRF are possible in the future. Some initial work has shown that additional capacity up to 1 million gallons per day may be available for various purposes, but this would only be available with a permit modification for the Big Sister Creek WRRF. Such permit modifications from NYSDEC entail a multi-year process and may not be guaranteed.

3.9.3.3 Avoidance, Minimization, and Mitigation Evaluation

Connection to a sanitary sewer collection system for the Project is unavoidable. Without a sanitary sewer connection, proposed development within the Project area would not be viable. The proposed sewer main will be designed to meet NYSDEC, ECDOH, and ECDSM requirements and installed using the most minimally invasive construction methods possible. It is likely that a pump station will be required to be located on site as a result of the lower grades at the north end of the Project Site in comparison to the grades at Eden Evens Center Road. The gravity portions of the sanitary sewer will be installed at an average depth of 8 feet, while the force main portion of the sewer will be installed at an average depth of 4 feet. Trench disturbance will be limited to an area approximately 3 to 5 feet wide for the installation of the sewer main.

3.9.4 Other Utility Services

3.9.4.1 Existing Conditions

Natural Gas. No natural gas mains are located within Eden Evans Center Road fronting the property. The nearest natural gas main is located approximately 0.5 mile to the east, at Southwestern Boulevard.

Telecommunications/Telephone/Cable Service. Available mapping indicates that Verizon is the incumbent local exchange carrier and has aerial fiberoptic cable in place within the south side of Eden Evans Center Road. Spectrum is the local cable television (CATV) provider and has aerial fiberoptic cable located within the south side of Eden Evans Center Road. Spectrum also has a considerable amount of coaxial cable on all of the roads where fiberoptic cable is present. The closest competitive local exchange carrier fiberoptic cable appears to be located within Delamater Road to the west.

3.9.4.2 Environmental Consequences

The future development of the Project Site will increase the demand for utilities such as telephone service, natural gas, and cable service/telecommunications.

In 2019, the ECIDA had a conversation with National Fuel regarding options and improvement costs to provide natural gas service to the Project Site. National Fuel prepared a rough estimate based on 65 thousand cubic feet per hour total demand and assuming pressures do not exceed 40 pounds per square inch gauge.

National Fuel indicated it would need approximately 1.5 years to complete the project and would require environmental, NYS Thruway, and NYSDOT permits to do so. The project, at this time, is not being planned for natural gas service, but if needed can be accommodated.

Development of the Project Site will increase the demand for communications services, including telephone, cable, and internet. These services would have to be extended to the Project Site; such installation would be undertaken by the local service providers, with costs borne by the users. Service is available in the area to service Project development.

3.9.4.3 Avoidance, Minimization, and Mitigation Evaluation

When tenants are proposed, reports on anticipated energy and communication requirements will need to be submitted. Based on these reports, the Town of Evans and other involved agencies will determine whether the thresholds established are exceeded and the mitigations proposed are required.

3.9.5 Solid Waste Management

3.9.5.1 Existing Conditions

No solid waste is currently being generated at the Project Site because the land is currently unoccupied.

3.9.5.2 Environmental Consequences

Increased amounts of solid waste will be generated by future tenants on the Project Site. Solid waste generation is expected to be typical of uses allowed in business parks. According to Chapter 168 of the Evans Town Code, solid waste from nonresidential generators must be collected and disposed of by licensed private collectors, and recyclable waste must be separated from nonrecyclable waste. As individual developments are built out, they will be responsible for contracting for solid waste collection. No solid waste will be disposed on site. If small quantities of regulated hazardous waste are generated, on-site users must comply with NYSDEC regulations and special provisions for waste management.

3.9.5.3 Avoidance, Minimization, and Mitigation Evaluation

Tenants will be required to meet the standards for separation of solid waste set forth in Chapter 168 of the Evans Town Code and contract for solid waste removal.

3.9.6 Stormwater Management

3.9.6.1 Existing Conditions

At present, stormwater drainage follows the topography of the Project Site. Stormwater on the central portion of the Project Site generally drains toward the northern end of the Project Site to three existing culverts that cross under the runway. Runoff is conveyed to the culvert crossing by means of existing swales located on each side of the runway. The culverts convey runoff westerly, where they discharge into the existing riparian area before leaving the Project Site. The north end of the Project Site drains from east to west toward the railroad tracks by means of drainage ditches located on each side of the old turf runway. The far south end of the Project Site drains to the south toward an existing roadside ditch along the north side of Eden Evans Center Road where it then drains easterly toward an unnamed tributary to Little Sister

Creek. The northeastern portion of the Project Site contains a highland area where runoff is directed westerly toward the runway swales or easterly toward the unnamed tributary to Little Sister Creek.

3.9.6.2 Environmental Consequences

Future site development will alter drainage patterns on the Project Site. As a result of development, the increased amount of impervious surface will increase the rate and volume of stormwater runoff. In addition, during construction, exposed soils may be subject to erosion by stormwater.

3.9.6.3 Avoidance, Minimization, and Mitigation Evaluation

Development of the Project Site will require the preparation of a SWPPP, which is a plan for controlling runoff and pollutants generated during and after construction of on-site facilities. This plan will outline appropriate erosion-control techniques that will be used during construction, standardized techniques that will be used to reduce or eliminate erosion and sediment loading to the intermittent stream and off-site water bodies, and techniques for controlling increased rates of runoff to pre-development levels. The SWPPP will comply with the requirements of the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001). Compliance with this general permit requires quantity controls (channel protection, overbank flood, and extreme storm), water quality treatment, and runoff reduction.

Future site developers will be required to follow the recent changes to the New York State Stormwater Management Design Manual (SMDM; 2015), which requires site development projects to provide a reduction of the volume of runoff generated from newly constructed impervious areas. The SMDM describes many different “green infrastructure” techniques that may be used to meet site-specific development requirements. These practices include, but are not limited to, conservation of natural areas, tree plantings, the disconnection of rooftop runoff drains, rain gardens, green roofs, and rainwater-harvesting systems. Green infrastructure practices also provide some measure of water quality treatment.

Stormwater management strategies to support the Project’s flexible conceptual site plans will propose a “regional” management approach to serve the Project. Conceptually, this may consist of a primary detention practice to cover the full build-out of the Project with an assumed proposed impervious area coverage. Storm trunk lines would be sized to convey stormwater runoff with assumed maximum discharge rates for each parcel. If a developer were to exceed these discharge rates, it would be required to implement its own supplemental stormwater detention practice on site. Water quality and runoff reduction components could be handled either regionally or left to each parcel owner to implement based on their intended development details. The regional stormwater implementation strategy would require the entire Project development to obtain coverage under the current SPDES general permit and remain open until full build-out of the Project is complete. A template SWPPP would be provided to each potential tenant looking to develop within the Project Site. The goal of the regional stormwater management approach and template SWPPP is to help market the Project to potential tenants by reducing their individual stormwater management burdens associated with full SPDES permit requirements.

The most logical location for stormwater management facilities is at the lowest elevations of the Project Site, near the culvert crossings, the northwesterly area, and southerly edge of the Project Site. The stormwater management areas would discharge off site. The elevation of the discharge points will govern how low (or deep) the stormwater management facilities can be constructed, which will, in turn, govern how much fill will be required for the development of the Project Site. The elevation of bedrock and the water table will also govern the elevations of the stormwater management facilities.

3.10 Noise, Odor, and Light

3.10.1 Existing Conditions

3.10.1.1 Noise

Currently, noise at and around the Project Site is largely related to current low-density rural residential and agricultural activities, including farm equipment operation, the times of which vary by crop and season. There is also intermittent noise from vehicles traveling along Eden Evans Center Road and trains on the Norfolk Southern rail line adjacent to the Project Site.

The Town of Evans regulates noise in its zoning code Section 200-26(C)(6), which applies to all industrial properties (the Project Site is zoned LI): *Noise. The sound-pressure level as measured at the edge of a lot and which is produced by a mechanical, electrical or vehicular operation on the lot, where said lot is adjacent to a residential area, shall not exceed the average intensity of the street traffic noise in that residential area as measured over a period of 24 hours. In any event, no sound shall have objectionable intermittence, volume, beat frequency or shrillness characteristics*.

Related to noise, the Town of Evans regulates vibration in its zoning code Section 200-26(C)(9), which applies to all industrial properties: *Vibration. Every use shall be operated so that consistent ground vibration inherently and recurrently generated by said use is not perceptible, without instruments, at any point along any property line of the lot on which the use is located*.

3.10.1.2 Odor

Currently, odors are generally nonexistent at the Project Site, but when they are present, they are consistent with those generated in rural areas and by agricultural operations, including, but not limited to, periodic manure spreading, pesticide spraying, crop harvesting, and exhaust fumes from mechanized farm equipment and vehicular traffic on Eden Evans Center Road. The amount and type of agriculture-related odors ebb and flow with the seasons and various farming activities.

The Town of Evans regulates odors in its zoning code Section 200-26(C)(7), which applies to all industrial properties: *Odorous matter. The emission of odorous matter so as to produce a public nuisance beyond the lot occupied by the use shall not be permitted*.

3.10.1.3 Light

Current light sources at the Project Site include lighting from the residential houses across the street and on either side of the Project Site. No streetlights exist on Eden Evans Center Road near the Project Site. The buildings on the Project Site are vacant and therefore do not emit any artificial light.

The Town of Evans regulates light in its Zoning Code Section 200-26(C)(5), which applies to all industrial properties: *Lighting. Lighting facilities shall be arranged so that adjoining properties and streets are protected from glare and hazardous interference of any kind. In no instance shall lighting standards exceed 25 feet in height*.

3.10.2 Environmental Consequences

3.10.2.1 Noise

So long as the Project tenants comply with all Town of Evans noise-related zoning code regulations, the Project is not anticipated to have a substantial adverse effect on existing noise levels at or near the Project Site over the long-term. Construction activities will result in temporary noise impacts, primarily due to the operation of construction-related equipment, including trucks entering and exiting the Project Site and heavy equipment being operated. However, construction is anticipated to be limited to "normal business hours," from about 8:00 AM to 6:00 PM.

Development of the Project Site will result in temporary and short-term increases in noise levels associated with operation of construction equipment, such as backhoes, compactors, bulldozers, trucks, and traffic. Noise produced by heavy equipment will vary throughout the day and during the entire construction period. During a typical work shift, construction equipment may be idling while preparing to perform a task or operating at maximum capacity. As a result, construction, operation, and hauling-vehicle sound levels will vary. Short-term impacts would cease upon completion of the Project development activities.

Long-term noise levels would likely increase in the area as development and tenants occupy the Project Site. Traffic volumes in the vicinity of the Project Site have the potential to increase as a result of new incremental site development, as well as normal growth in the surrounding area.

3.10.2.2 Odor

During construction, odors associated with the installation of utilities and asphalt pavement may temporarily impact surrounding landowners and residents. The extent of such impact will depend on wind direction, weather conditions, and the particular odor-producing activity being conducted.

The potential odor impacts of the Project during regular operation are difficult to determine because the specific tenants and their facilities that will locate on site are unknown at this time. However, it is reasonable to assume that agricultural manufacturing or processing facilities that locate on the Project Site will produce some odors during operation, and these will need to comply with the Town of Evans zoning code regulations described above and not rise to the level of a public nuisance for surrounding landowners.

3.10.2.3 Light

Project construction followed by the operation of commercial tenants on the Project Site will increase the amount of artificial light emitted throughout the Project Site. The former runway will be converted into a public street, which will most likely include streetlights that emit light throughout the night. Commercial tenants will have artificial lighting in and around their buildings for security and safety purposes.

There is currently no artificial light emitted on the Project Site except around the buildings along the Eden Evans Center Road boundary, so all additional lighting will have a noticeable impact on site at night. An increase in artificial lighting has the potential to disturb nearby residents as well as wildlife. The extent of light impacts depends on the amount and type of lighting used during construction and tenant operations.

3.10.3 Avoidance, Minimization, and Mitigation Evaluation

3.10.3.1 Noise

Operation of heavy equipment during the construction phase of development will be temporary and restricted to typical daytime work hours. Managing the hours at which the loudest of the operations can take place, especially along the Project Site boundaries, can provide additional mitigation of construction noise. Construction activities will be limited to "normal business hours" to mitigate the potential effects on noise-sensitive receptors.

Because the anticipated uses in the Project are permitted uses in the existing Town of Evans LI zoning designation and will adhere to all aspects of the applicable zoning code, a detailed noise study is not recommended, per the NYSDEC Program Policy DEP-00-1 Assessing and Mitigating Noise Impacts, revised February 2001 (NYSDEC Noise Policy). The NYSDEC guidance presumes that noise was considered when the zoning was established and that "*Any residual noise that is present following BMP implementation should be considered an inherent component of the activity that has been found acceptable in consideration of the zoning designation of the Site*."

3.10.3.2 Odor

Any potential for off-site odor is dependent on the intensity, frequency, and duration of the odor, as well as atmospheric conditions including wind speed, direction, and stability.

Compliance with Town of Evans zoning code regulations related to odor is anticipated to alleviate any odor issues emanating from the Project Site, but in the event that a malodorous odor from commercial tenant operations is detected, potential citations will be issued.

3.10.3.3 Light

All Project construction activities and commercial tenant operations must adhere to the Town of Evans zoning code light requirements. Although adding artificial lights to the buildings, roadways, and parking lots is needed for safety, lighting should be reduced as much as possible to avoid disturbance to nearby wildlife and other natural processes occurring in and around the Project Site boundaries. Installing "softer" and "warmer" lighting that minimizes blue light emissions and includes a shield on the light source to minimize glare and light trespass will also reduce impacts to nearby residents and wildlife.

The International Dark-Sky Association (IDA) has been providing information, standards, and policy to protect and preserve the nighttime environment and minimize light pollution using high-quality outdoor lighting since 1988. In order to minimize the harmful effects of light pollution, the IDA recommends that lighting should:

- Only be on when needed;
- Only light the area that needs it;
- Be no brighter than necessary;

- Minimize blue light emissions; and
- Be fully shielded (pointing downward)

(IDA 2021).

3.11 Public Health and Safety

3.11.1 Existing Conditions

The Project Site is an abandoned airport with some restricted access to the existing facilities. It contains several abandoned buildings and large paved areas, including an abandoned 0.6-mile-long runway. The buildings are in good structural condition and are securely locked. A gate off of Eden Evans Center Road restricts motor vehicles from entering the runway. A Phase I environmental site assessment was conducted in 2019 and did not identify any significant environmental contaminants associated with the Project Site. As a result of the building and grounds conditions and restricted access, the Project Site currently does not pose any significant public health and safety threat.

Abandoned facilities can present attractive nuisances to vandals and trespassers. Vacant land with an absentee landowner in a rural setting can also have unauthorized all-terrain vehicle (ATV) and snowmobile traffic. ATV paths and tree stands used for hunting have been observed in the northern part of the Project Site. Users of these path and stands are doing so unauthorized and at their own risk.

The demand for public safety services such as police, medical, and fire protection are consistent with any vacant property at this time, and the level of demand is minimal.

3.11.2 Potential Impacts

The potential impacts to public health and safety associated with the Project are difficult to identify at this time because they are dependent upon the final mix of uses and occupants of the Project. The significance and potential for the release of hazardous substances into the air, soil, or groundwater in the area is dependent upon the nature of the manufacturing and industrial processes conducted at the facilities at the Project Site. All storage, handling, and disposal of hazardous materials will comply with all federal, state, and town regulations, thereby minimizing any potential public health and safety threats.

The demand for public safety services (police, medical, and fire protection) will increase as Project facilities are constructed and employment increases on site, but this demand is not anticipated to increase significantly above a level where additional public safety resources would be necessary.

3.11.3 Potential Mitigation

No potential mitigation is proposed or necessary at this time. Common areas and shared facilities such as access roads will be maintained to allow for the safe passage of all vehicles, including those of first responders to the Project Site. Each tenant/business of the Project will be responsible for coordinating its own public health and safety needs. It is anticipated that the tenants will be reputable organizations that follow Occupational Safety and Health Administration standards and provide adequate training for their employees. It is also anticipated that the tenants will practice good housekeeping and secure their facilities daily.

3.12 Socioeconomics

3.12.1 Existing Environment

3.12.1.1 Population and Housing

The Project Site does not contain any residential properties and, therefore, has a population of zero. Residential properties are in close proximity to the Project Site, as indicated in Section 3.5, and include houses both immediately adjacent to the Project Site and across the street on the south side of Eden Evans Center Road. Because the Project build-out does not include any residential development, no increase in residential population will occur on the Project Site.

The U.S. Census Bureau estimated the 2019 population of the Town of Evans as 16,091 people (see Table 3-8). There has been a very slow but steady decline in the Town of Evans population since 1980, when the population was at a high of 17,651 people. The Village of Angola, with a 2015 population of 1,858 persons, has experienced a similar trend, although it is estimated to have had a slight population increase in recent years (a 2019 estimate for the Village of Angola is not available). Over the same period of time, from 2010 to 2019, the population of Erie County has fluctuated slightly but remained fairly steady at around 920,000 people.

Table 3-8 Population Trends

Year	Town of Evans	Village of Angola	Erie County
2010	16,356	2,217	919,220
2015	16,318	1,858	921,958
2019	16,091	n/a	918,702

Source: U.S. Census Bureau.

3.12.1.2 Employment and Income

A portion of the Project Site was formerly used as an airport; however, the front (southern) portion of the Project Site has more recently been used as an auto body shop and towing company. However, with the ILDC's purchase of the property, these businesses are no longer active. The balance of the Project Site was vacant and not utilized. Development of the Project Site as an agribusiness park will improve the economic opportunities for the community as well as the region.

In 2019, the median household income in the Town of Evans was $61,833, which is an increase from previous years. The Town of Evans has a well-educated workforce, with over 91.5 percent of residents over 25 years of age earning a high school diploma according to 2019 Census data, and 24.2 percent earning a bachelor's degree or higher. In 2019, approximately 61.2 percent of the town's population was reported to be in the civilian workforce, which has remained relatively stable (U.S. Census 2019).

3.12.1.3 Municipal Revenues and Budgets

The Town of Evans adopted its 2021 budget in December 2020. The total 2021 budget is $19,101,938, which was a slight decrease from the 2020 adopted budget (Town of Evans 2020). The majority of revenues are deposited in the general fund, which is primarily raised by real property taxes.

Table 3-9 2021 Preliminary Budget, Town of Evans, New York

Current Year Summary				
Fund	**Appropriations ($)**	**Estimated Revenues ($)**	**Appropriated Fund Balance ($)**	**Amount to Be Raised by Taxation ($)**
General Fund	9,948,620	1,315,439	—	8,633,181
General – Part-Town Fund	529,097	403,700	125,397	—
Highway – Part-Town Fund	2,914,599	2,163,567	150,000	601,032
Angola Fire Protection District	864,550	—	20,000	844,550
Street Lighting District #1	170,000	—	—	170,000
Street Lighting District #2	93,000	—	—	93,000
Garbage District	1,457,172	—	—	1,457,172
Water District 5 – Independence and Peppertree Drives	9,049	—	—	9,049
Water District 5 – Newcomb Road	9,315	—	—	9,315
Water District 5 – McKinley and Woodcliff	7,225	—	—	7,225
Water District 5 – Gowans and Southwestern	30,383	—	—	30,383
Water Fund	1,663,867	1,663,867	—	—
Debt Service Fund	1,405,061	1,405,061	—	—
TOTAL	**19,101,938**	**6,951,634**	**295,397**	**11,854,907**

3.12.1.4 Environmental Justice

NYSDEC's *Commissioner's Policy 29* (CP-29) defines environmental justice as "the fair treatment and meaningful involvement of all people, regardless of race, income, national origin or color, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies." NYDEC's Environmental Justice (EJ) program allows for disproportionately impacted residents to access the tools to address environmental concerns in their communities.

NYSDEC has created mapping tools to identify potential EJ areas throughout New York State. Potential EJ areas are defined as U.S. Census block groups of 250 to 500 households each that, in the Census, had populations that met or exceeded at least one of the following statistical thresholds:

- At least 51.1 percent of the population in an urban area reported themselves to be members of minority groups; or

- At least 33.8 percent of the population in a rural area reported themselves to be members of minority groups; or
- At least 23.59 percent of the population in an urban or rural area had household incomes below the federal poverty level.

NYDEC has mapped an area within the Village of Angola as a potential EJ area; it is located approximately 2 miles from the Project Site.

3.12.2 Environmental Consequences

3.12.2.1 Population and Housing

As discussed above, the rate of decline in population in the Town of Evans has been decreasing in recent years, and the overall population of the town is expected to increase in upcoming years. While construction and operation of the Project will not increase population within the Project Site, depending on the tenants that utilize the Project Site, the Project is a potential catalyst for population growth in the Town of Evans and the surrounding municipalities in Erie County.

3.12.2.2 Employment and Income

Construction and operation of the Project and build-out of its individual development sites is anticipated to provide local and regional employment opportunities and have a positive economic impact on surrounding municipalities. The Project Site is zoned for light industrial activity and is expected to be developed with a mix of agribusiness uses, such as dry-goods manufacturing, fresh fruit processing, hydroponic vegetables, distribution centers, and more. This new development has the potential to offer a wide range of agricultural and food production-related job opportunities that will benefit Erie County as a whole.

According to the ECIDA Agribusiness Park Employment Impact Statement, the preferred alternative (maximum build-out of the individual development lots) may add a total of approximately 5,849 one-time construction jobs (assuming a three-year construction timeframe, the estimated annual impact is approximately 1,950 jobs per year.). In addition, according to order-of-magnitude employment yields published by National Association for Industrial and Office Parks (NAIOP), the Project may add approximately 803 permanent jobs upon achieving stabilized operations in Year 3 to Year 5 (Wildan Financial Services). The jobs created by development of the Project will vary greatly in terms of their required skill, experience, and education levels depending on the final mix of uses/occupants. As a result, the wages and salaries for individual jobs will vary greatly. The availability of a mix of temporary and permanent jobs has the potential to improve income levels and overall economic conditions in the Town of Evans and surrounding municipalities throughout Erie County.

3.12.2.3 Municipal Revenues and Budgets

Construction and operation of the Project and build-out of its individual development sites will increase tax revenue streams in the Town of Evans and Erie County.

3.12.2.4 Environmental Justice

Construction and operation of the Project and build-out of its individual development sites will have no impact on the one local potential EJ area in the Village of Angola, which is located approximately 2 miles from the Project Site.

3.12.3 Avoidance, Minimization, and Mitigation Evaluation

Socioeconomic impacts from construction and operation of the Project and development of its individual parcels on site are expected to be positive for the Town of Evans and Erie County. Therefore, no mitigation is deemed necessary.

3.13 Community Facilities and Services

3.13.1 Existing Environment

3.13.1.1 Educational Facilities

Three school districts cover the Town of Evans and Village of Angola. The Lake Shore (Evans-Brant) Central District covers the area west of Route 20, while the Eden Central School District covers most of the eastern portion. The North Collins Central School District covers a small section of the southeastern corner of the Town of Evans (Evans-Angola 2019).

Lake Shore Senior High School, Lake Shore Middle School, William T. Hoag Elementary School, John T. Waugh Elementary School, and an Erie 2-Chautaqua Cattaraugus Board of Cooperative Educational Services school are all located in a clustered area off Beach Road, about 2.5 miles west of the Project Site.

3.13.1.2 Medical and Emergency Services

Erie County Medical Services serves the county's emergency dispatch center, dispatching ambulances for the City of Buffalo, NYS Thruway, and the Buffalo-Niagara Regional Airport. It also provides medical interrogation and pre-arrival instructions for 911 calls in the Town of Evans. The Town of Evans Fire Department provides emergency medical services to the town and village as well.

The closest medical emergency service facility to the Project Site is the Mercy Ambulatory Center of Buffalo, located on Southwestern Boulevard in the Town of Orchard Park, and it is approximately 15 miles from the Project Site. This facility is not a full hospital, but it does have a fully operational emergency room. The closest full-service hospital is Mercy Hospital of Buffalo, located on Abbott Road in the City of Buffalo, approximately 20 miles from the Project Site.

3.13.1.3 Healthcare Facilities

Although many residents travel throughout Erie County for their healthcare services, several healthcare facilities are located in the Village of Angola and the adjacent hamlet of Derby. Healthcare facilities include:

- Chautauqua Medical Services, 826 Lake Street, Angola
- Lakeshore Family Medicine Associates, 7060 Erie Road, Derby
- Buffalo Medical Group PC, 7060 Erie Road, Derby
- Dr. Henna M. Sheikh, MD, 7060 Erie Road, Derby
- TLC Health Network – Derby Chemical Dependency Clinic, 7060 Erie Road, Derby
- Western New York Urology Associates, LLC, 7060 Erie Road, Derby
- Morris M. Cavalieri, MD, 7060 Erie Road, Derby
- Caro Medical Center, 6970 Erie Road, Derby

- Hearing Health Center, 6970 Erie Road, Derby
- WNY Medical, PC, 6970 Erie Road, Derby

3.13.1.4 Police Services

Primary police services are provided to the Project Site by the Town of Evans Police Department, located at 8787 Erie Road, Angola.

3.13.1.5 Fire Protection

Fire protection to the Project Site is provided by the Evans Center Volunteer Fire Company, located at 8298 Erie Road, Angola.

The Angola Volunteer Fire Department is located nearby at 51 Commercial Street, Angola.

The Lake Erie Beach Volunteer Fire Company is located at 9483 Lake Shore Road, Angola, and provides fire response, emergency medical technician response, water rescues, and ice rescues in the Town of Evans.

The North Evans Fire District has two locations. The Highland Hose Volunteer Fire Co. is located at 1 George Noble Parkway in Derby, and the North Evans Volunteer Fire Co. is located at 6988 Versailles Road in North Evans.

3.13.2 Environmental Consequences

3.13.2.1 Educational Facilities

Site development at the Project Site will have minimal to no impact on educational facilities in the Town of Evans or Erie County.

3.13.2.2 Medical and Emergency Services

Site development at the Project Site will create some additional demand for medical and emergency services, but this demand is anticipated to be minimal.

3.13.2.3 Health Care Facilities

Site development at the Project Site will have minimal to no impact on health care facilities.

3.13.2.4 Police Services

Site development at the Project Site will create some additional demand for police services, but this demand is anticipated to be minimal.

3.13.2.5 Fire Protection

Site development at the Project Site will create some additional demand for fire protection services, but this demand is anticipated to be minimal. The project will also include a new public water system, including hydrants, capable of being utilized to fight fires. It will be the responsibility of the individual Project tenant to coordinate with local emergency services agencies for any special needs they would anticipate in regard to fire protection.

3.13.3 Avoidance, Minimization, and Mitigation Evaluation

Impacts to community facilities and services from construction and operation of the Project and from development of the individual parcels on the Project Site are expected to be minimal for the Town of Evans and Erie County. Therefore, no mitigation is deemed necessary.

4 Thresholds for Future Environmental Review

The Project's Master Plan is intended to lead to an eventual build-out of the individual development lots located on the Project Site. Those future development projects will require site plan review and special use permits, both of which are subject to SEQRA. This DGEIS has evaluated the potential generic impacts associated with the Project as it is currently defined, as well as the potential long-term impacts associated with the future build-out of the proposed infrastructure and development lots. As Project build-out progresses, changes may occur as site-specific developments are proposed. It is anticipated that lot sizes and lot coverages may vary from what is shown in the Erie County Agribusiness Park Master Plan, including increases or decreases in net building areas and specific uses on each lot.

This section outlines the conditions or criteria and procedures to be followed in evaluating future proposals pursuant to the requirements of SEQRA. Any exceedance of the thresholds outlined below will result in the triggering of additional SEQRA requirements for the development of certain lots.

4.1 SEQRA Procedures and Compliance for Future Related Actions (Business and Residential)

According to the provisions of 6 NYCRR 617.10:

> *(d) When a final generic EIS has been filed under this Part:*
>
> *(1) no further SEQR compliance is required if a subsequent proposed action will be carried out in conformance with the conditions and thresholds established for such actions in the generic EIS or its findings statement;*
>
> *(2) an amended findings statement must be prepared if the subsequent proposed action was adequately addressed in the generic EIS but was not addressed or was not adequately addressed in the findings statement for the generic EIS;*
>
> *(3) a negative declaration must be prepared if a subsequent proposed action was not addressed or was not adequately addressed in the generic EIS and the subsequent action will not result in any significant environmental impacts; and*
>
> *(4) a supplement to the final generic EIS must be prepared if the subsequent proposed action was not addressed or was not adequately addressed in the generic EIS and the subsequent action may have one or more significant adverse environmental impacts.*

Any significant changes to the Project's Master Plan and future development projects will require further evaluation pursuant to the SEQRA procedures. The Town of Evans Planning Board, as the agency responsible for the approval of site plans for future development projects, will be responsible for making a SEQRA determination as to whether those projects are consistent with the FGEIS and the Findings Statement before taking action to approve those projects. When the first project appears before the Planning

Board, the Planning Board will need to issue their own Findings for the overall project. Through coordination with the Town during this DGEIS and then through the ILDC's issuance of their Findings, the Evans Planning Board should issue a Positive Findings utilizing the information in the DGEIS, FGEIS and the ILDC Findings.

Upon submission of applications for site plan approval of future development projects on the Project Site, the Planning Board must determine whether the potential environmental impacts associated with the development of each proposed project has been adequately addressed in the FGEIS and their Findings Statement. The Planning Board must take into account whether the proposed projects exceed any of the thresholds and conditions set forth in the GEIS and their Findings.

If the ILDC has future actions, such as construction of infrastructure or the issuance of funding, they will need to review the project against their SEQR Findings and make one of the 4 decisions listed in 6 NYCRR § 617.10.

Based on the analysis contained in the DGEIS, the thresholds and conditions contained within Section 4.2 must be met, and, if they are met, development as contemplated herein will be allowed without the need for further SEQRA compliance.

4.2 Thresholds for Development of the Project Site (Layouts, Access, Etc.)

Future development projects on the Project Site that do not exceed, or that conform to, the following conditions or thresholds shall be considered to have been adequately addressed in the GEIS and would not require any further review pursuant to SEQRA:

4.2.1 Zoning and Land Cover Thresholds

- Maximum lot coverage for full build-out of each development lot, as established by the zoning regulations and the preferred alternative concept design, which is estimated to be approximately 99 and 48 acres of building and parking coverage (impervious surfaces) cumulatively for the Project Site for option 1 and 2 respectively.
- Maximum build-out of the individual development lots is expected to create approximately 1.89 million square feet of office, controlled growth facility, and cold storage facility space.
- Conformance with all applicable zoning requirements for the LI District for lot coverage and building setbacks, parking, and other design standards.

4.2.2 Transportation Thresholds

As proposals are submitted to the Town of Evans to develop individual lots on the Project Site, traffic counts for each proposed use will have to be provided.

The results of the TIS indicate that development of Option 2 would result in 441 morning peak hour and 421 evening peak hour trips. Any development proposal that would result in cumulative morning or evening peak hour trips above these amounts will require signalization of the intersection of Eden Evans Center

Road and the Project Site access road, and the addition of dedicated left turn lanes to the eastbound and westbound approaches of the intersection of Eden Evans Center Road and US Route 20, in accordance with the recommendations of the TIS.

The results of the TIS indicate that development of the preferred alternative (Option 1) would result in 654 morning peak hour and 637 evening peak hour trips. Any development proposal that would result in cumulative morning or evening peak hour trips above these amounts will require an updated TIS. This new study will be reviewed against the findings of the GEIS and approved by the NYS Thruway Authority, NYSDOT, and ECDPW.

A secondary full connection to Eden Evans Center Road will require a new TIS and evaluation of mitigations.

4.2.3 Utility Thresholds

For each proposed development project on the Project Site, the applicant will need to submit an engineer's report documenting information concerning domestic water demand, sewage generation figures, electric power demand, and natural gas demand. Based on the engineer's report, the following cumulative thresholds are established for each proposed development project that is part of the build-out of the Project:

- Average daily water use, peak water demand and fire-flow needs will need to be submitted for each development proposal, and will be evaluated to determine if mitigation is needed.
- Cumulative peak sewage generation exceeding 100,000 gallons per day will require further evaluation and potential mitigations, including upgrades to the Big Sister Creek WRRF.
- Electric power demand for each development proposal will be submitted to National Grid and, if the demand exceeds 2,500 kVA, further evaluation and potential mitigations will be required, including construction of a new 15kV substation.
- Any proposal that requires natural gas will need to be reviewed by National Fuel and if the proposed development's demand cannot be met by available facilities, further evaluation and potential mitigations will be required. It is not the intent for this Project site to be serviced by natural gas, due to the State's electrification mandates.

4.2.4 Water Resources Thresholds

- Site-specific SWPPPs will be required for each individual development lot during the site plan review process. Soil erosion and sediment control plans for site clearing and grading must be included in the Project Site-specific SWPPPs.
- Maximum wetland impacts will not exceed the 51.3 acres of potentially regulated wetlands proposed in Option 1 (the preferred alternative). Disturbance of any wetland areas unknown at the time of this DGEIS will be avoided.

4.2.5 Visual Thresholds

- Any proposed development on the Project Site that does not meet the Town of Evans' applicable zoning requirements for height, building and parking orientation, building spacing and façade length, general building design, outdoor storage, landscaping, lighting, and signage will require further evaluation and potential mitigations. Any development outside the areas illustrated for development, especially relating to the areas adjoining the residential uses near the front of the Project Site.

4.2.6 Noise Thresholds

- All construction and operations shall comply with the Town of Evans' Noise Ordinance (Chapter 137 of the Town Code) and Section 200-26(C)(9) of the Town of Evans's zoning code, which regulates noise for industrial districts. Per Section 137-7, construction activities will be conducted between 7:00 AM and 10 PM. Per Section 200-26(C)(9), "the sound-pressure level as measured at the edge of a lot and which is produced by a mechanical, electrical or vehicular operation on the lot, where said lot is adjacent to a residential area, shall not exceed the average intensity of the street traffic noise in that residential area as measured over a period of 24 hours. In any event, no sound shall have objectionable intermittence, volume, beat frequency or shrillness characteristics."
- Any proposed development that differs from the uses allowed by zoning, or that does not meet the zoning design guidelines, will be subject to further evaluation, including review in accordance with NYSDEC Program Policy DEP-00-1, *Assessing and Mitigating Noise Impacts*, and potential mitigations.

4.2.7 Air Thresholds

- Based upon the anticipated uses at the Project Site, it is assumed that air quality permits will not be needed.
- Should any development project at the Project Site include a use that requires a state or federal air quality permit, or if the proposed use requires air modeling and analysis, that development project's sponsor will obtain the permit prior to receiving final site plan approval from the Town of Evans planning board. The town planning board will also consider the results of the air modeling and analysis in their determination of whether the development project is in conformance with their findings.
- During construction operations for new facilities at the Project Site, all vehicles are required to observe limited engine idling times and use only engines that comply with the applicable air quality regulations.

4.2.8 Community Facilities and Services Thresholds

Each development proposal will be required to submit an emergency services impact assessment, which will be reviewed and approved by the emergency service providers.

5 Unavoidable Adverse Impacts

Certain environmental impacts associated with the Proposed Action are unavoidable. Unavoidable adverse impacts have been reduced to the extent practicable through the design of the Master Plan and, where appropriate, through the identification of mitigation measures and use of BMPs. Unavoidable environmental impacts associated with the Proposed Action include:

- Conversion of 99 or 48 acres of land to impervious land cover will occur from Option 1 (Full Build-Out) or Option 2 (Partial Build-Out), respectively (i.e., buildings, parking lots, roads).
- The impervious land cover will decrease the time of concentration of flows leaving the Project Site, which will increase the peak runoff and volume of stormwater. Uncontrolled, the increase in peak runoff and volume may have negative impacts to properties, soils, and water bodies that are downstream and adjacent to the Project Site. Increases in impervious areas are unavoidable; however, impacts to surface waters (off site) can be minimized by the proper design and construction of stormwater management facilities for developed lots on the Project Site.
- Short-term, temporary impacts will occur related to construction activities, including noise from construction vehicles and equipment, and short-term impacts will occur to air quality from dust and exhaust. In addition, construction activities may increase the potential for limited drainage problems, although implementation of BMPs will ensure that these problems are minimized.
- Construction and operation of the developed Project site will result in short-term and long-term impacts to existing noise levels in the area. These impacts are not considered to be significantly adverse and would be reduced or mitigated by operating construction equipment during typical daytime work hours. Increases in ambient noise may also be generated by on-site activities and traffic.
- While the Project will result in a significant and unavoidable change in land use, that change is in compliance with the Town of Evans zoning code, which allows LI uses on the Project Site. Land use changes in the Project Site will not result in adverse impacts to the surrounding community.
- Development of the Project Site will change its visual setting. This impact is unavoidable and has been anticipated through the zoning and development policies of the Town of Evans.
- Development of the Project will result in some limited, unavoidable increases in local traffic. These adverse traffic impacts can be reduced through the mitigation measures detailed in Section 3.8.3 but not totally avoided.
- An increase in the amount of energy resources used in association with the construction and operation of the Project Site is unavoidable. These adverse impacts can be reduced through the mitigation measures detailed in Section 7 but not totally avoided.

6 Irreversible and Irretrievable Commitment of Resources

The Project will require the irreversible and irretrievable commitment of certain material, natural, and financial resources, as described below. For the most part, the commitment of these resources will be offset by the benefits generated by the Project. Although a full range of site design features and environmentally sound mitigation measures will be implemented to minimize these commitments, some resources will become unavailable for future use.

6.1 Natural Resources

The project will result in the conversion of 99 or 48 acres of land to impervious land cover will occur from Option 1 (Full Build-Out) or Option 2 (Partial Build-Out), respectively (i.e., buildings, parking lots, roads). Impervious land cover decreases the time of concentration of flows leaving the Project Site, which will increase the peak runoff and volume of stormwater. Uncontrolled, the increase in peak runoff and volume may have negative impacts to site natural resources

Additionally, the visual character of the Project Site will be altered. The replacement of vacant land and forest with buildings will change the visual character of the Project Site. No artificial light has been emitted on the Project Site for many years, and therefore implementation of the Project will add street and building lighting to a previously dark area of land.

Plant and wildlife communities on the Project Site have not been identified as rare, threatened, or endangered or as part of a significant natural community; therefore, no significant loss of irreplaceable plant and wildlife species will occur as a result of Project site development. However, open space and existing vegetation will be replaced with development. The preferred alternative (Option 1, Full Build-Out) would result in the removal of 132.6 acres of forested area (forested wetlands and forested uplands). The Potential Wetland/Conservation Area Option (Option 2, Partial Build-Out) would result in 58.2 acres of forest removal.

6.2 Energy and Material Consumption

Energy resources will be irretrievably committed to future Project development, during both the construction and the operation of new land uses. Fuel and electricity will be required during site preparation and construction activities for the operation of various types of construction equipment and vehicles, and for the transportation of workers and materials to and from the Project Site. It is anticipated that energy demand will be typical of that of an agribusiness park.

Various types of construction materials and building supplies will also be committed to the future build-out, either full or partial, of the individual development lots. The use of materials, such as gravel, concrete, steel, etc., will represent a long-term commitment of these resources, which will not be available for other projects.

6.3 Financial Resources

Financial resources have already been, and will continue to be, expended by various New York State agencies, Erie County, and the Town of Evans for the planning and review of the Project. The expenditure of funds will continue to be required throughout the process for environmental review, site and building design, permitting, site plan approval, and construction phases of the Project.

Development capital expenditures refers to the costs associated with construction, including engineering, financial, legal, and other professional services; labor and materials; and financing. Included in these costs are the premiums for insurance and other risks that are part of any type of construction/development venture. The commitment of these financial resources makes them unavailable for other uses.

Costs will also be associated with the daily operation of the Project's facilities. The commitment of these monetary resources to operate and maintain the Project Site facilities makes them unavailable for other uses.

6.4 Growth-Inducing Impacts

The existing zoning of the Project Site allows for LI uses. Development of the Project Site is not likely to result in a greater level of development than the existing zoning otherwise allows. Any secondary development pressure can be absorbed by vacant lands, underdeveloped properties, and redevelopment of existing structures and lands within the Town of Evans and surrounding communities. Therefore, the Project is not anticipated to result in significant negative impacts to the surrounding area or the Town of Evans as the result of further growth in the community.

Implementation of the Master Plan by installing some or all of the Project's infrastructure will facilitate the sale and buildout of the proposed development lots. These actions are anticipated to induce economic growth both locally and in the region, as follows.

- The Project will generate new job opportunities that will potentially be filled by residents in the town and throughout Erie County and the Western New York region as a whole. According to the Agribusiness Park Employment Impact Statement, job growth could be as high as 1,950 permanent jobs and 5,849 temporary jobs. The creation of new jobs will help to create a positive employment environment in the region.
- The Project will provide secondary economic benefits to local vendors and suppliers used by employees working at the Project Site (i.e., grocery and other retail sales, restaurant patronage, banking, etc.).
- An increase in local and county property tax revenue generated by Project site development may help keep local property tax rates lower.
  - New businesses can have a multiplier effect in the local economy. An illustration of this economic "ripple effect" might include a new employee who spends his or her wages locally on goods or services provided by a local vendor who, in turn, spends his or her earnings on goods and services provided by another local vendor. While the value of a multiplier associated

with the Project has not been calculated, considerable economic value is expected to be created and distributed as a result of bringing one or more new businesses into the area.

7 Effects on Use and Conservation of Energy Resources

The construction and operation of the Project would have both short-term and long-term impacts on the use and conservation of energy resources. In the short term, construction of the Project would require the use of nonrenewable energy resources including gasoline, diesel fuel, and electricity by construction equipment on site. Furthermore, the indirect use of energy would also occur due to construction workers commuting to and from the construction site. During construction, all vehicles will be required to observe limited engine idling times to reduce fuel usage.

In the long term, the day-to-day operations of the Project, such as heating, cooling, powering various commercial and industrial equipment, lighting buildings, and Project-generated traffic, would require the use of nonrenewable energy resources. New buildings will be designed to meet the most recent Energy Conservation Construction Code of New York State at time of construction and will incorporate measures to reduce energy usage. Furthermore, the Project intends to generate renewable energy on site, including with rooftop or ground-mounted photovoltaic solar arrays, and utilize battery energy storage technology where possible to further offset the Project's impact to the electrical grid. It is possible that these technologies will be used as part of a microgrid.

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Appendix A
Topographical Survey

1 ERIE COUNTY AGRIBUSINESS PARK
SCALE: 1" = 200'

GENERAL NOTES:

1. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83), WESTERN ZONE, US SURVEY FEET. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88) AS ESTABLISHED BY THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) REAL TIME NETWORK (NYSNET RTN)
2. THIS PROPERTY IS LOCATED WITHIN THE AREA HAVING A ZONE DESIGNATION "X" BY FEDERAL EMERGENCY AGENCY (FEMA) OF FLOOD INSURANCE RATE MAP NO. 36029C0461H WITH AN EFFECTIVE DATE JUNE 7, 2019 FOR COMMUNITY NO. 360240 IN THE TOWN OF EVANS & FLOOD INSURANCE RATE MAP NO. 36029C0463H WITH AN EFFECTIVE DATE JUNE 7, 2019 FOR COMMUNITY NO. 360240 IN THE TOWN OF EVANS, ERIE COUNTY AND THE STATE OF NEW YORK.
3. CONTOUR INTERVAL IS 1 FOOT. CONTOUR DATA REFLECTS A COMBINATION OF GROUND TOPOGRAPHY WITHIN THE CLEARED, DEVELOPED AREAS AND 2008 LIDAR DATA WITHIN THE WOODED, UNDEVELOPED AREAS.
4. THE SITE IS ZONED AS LIGHT INDUSTRIAL (LI) ACCORDING TO THE TOWN OF EVANS ZONING MAP.
5. WETLAND LOCATION INFORMATION PROVIDED BY RAVI ENGINEERING & LAND SURVEYING, P.C..
6. DIG SAFE 811 DESIGN TICKET CALLED IN # 03111-001-787-00.
7. BOUNDARY AND OWNER INFORMATION DEPICTED ON THIS MAP IS BASED ON PRELIMINARY BOUNDARY SURVEY PREPARED BY WENDEL DATED, 12/18/2019.
8. TOPOGRAPHIC FIELD WORK PERFORMED MARCH, APRIL, MAY, 2021 BY RAVI ENGINEERING & LAND SURVEYING, P.C.
9. EXISTING UTILITIES SHOWN ARE BASED ON VISIBLE SURFACE FEATURES IN ADDITION TO AVAILABLE DOCUMENTS PROVIDED BY OTHERS. ACTUAL LOCATIONS MAY VARY AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION.

LEGEND:

AICRAFT MOORING EYE		SIGN	
CATCH BASIN	CB	TELEPHONE JUNCTION BOX	TJB
DRAINAGE STRUCTURE MANHOLE	DSM	TELEPHONE MANHOLE	TMH
DRAINAGE STRUCTURE ROUND	DSR	UNKNOWN MANHOLE	UMH
END OF PIPE UNKNOWN		UNKNOWN VENT	UVT
ELECTRIC PULL BOX	EPB	UNKNOWN PULL BOX	
ELECTRIC MANHOLE	EMH	UTILITY POLE	UP
GAS LINE MARKER		UTILITY POLE WITH LIGHT	
GAS METER		WATER LINE MARKER	
GAS VALVE	GV	WATER VALVE	WV
GUY WIRE		WATER SERVICE BOX	WSB
HYDRANT	HYD.	STUMP W/ DIAMETER	3'
IRON PIPE	IP.	CONIFEROUS BUSH W/ DIAMETER	12"
REBAR		CONIFEROUS TREE W/ DIAMETER	3'
LIGHT POLE		DECIDUOUS BUSH W/ DIAMETER	12"
MAILBOX	MB	DECIDUOUS TREE W/ DIAMETER	12"
MONITORING WELL	MON. WELL	CURB CUT ELEVATION	CC:785.00
MONUMENT – TYPE NOTED		BOTTOM OF CURB ELEVATION	BC:785.00
PAPER BOX	PB	EDGE OF PAVEMENT ELEVATION	PE:785.00
SEWER CLEAN OUT	CO	EXISTING SPOT ELEVATION	785.00
SANITARY SEWER MANHOLE	SMH	TOP OF CURB ELEVATION	TC:785.00

BIT.	BITUMINOUS
BLDG.	BUILDING
BOT.	BOTTOM
(C)	CONCRETE (POLE)
CH.	CHAIN
CONC.	CONCRETE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
DIA.	DIAMETER
ELEC.	ELECTRIC
ELEV.	ELEVATION
FFE	FIRST FLOOR ELEVATION
FNC.	FENCE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
INV.	HORIZONTAL
HORIZ.	INVERT
(M)	METAL (POLE)
MTL.	METAL
PVC	POLYVINYL CHLORIDE PIPE
RCMP	ROUND CORRUGATED METAL PIPE
STL.	STEEL
STN.	STONE
STY.	STORY
TRANS.	TRANSITION
TYP.	TYPICAL
UNK.	UNKNOWN
(W)	WOOD (POLE)
W/	WITH
WD.	WOOD
W.F.	WOOD FRAME
N.	NORTH
E.	EAST
S.	SOUTH
W.	WEST

MAJOR CONTOUR LINE	575
MINOR CONTOUR LINE	574
GAS LINE	G
PROPERTY LINE	
OVERHEAD ELECTRIC LINE	OE
ROAD CROWN	
SANITARY SEWER LINE	SA
STORM SEWER LINE	ST
UNDERGROUND ELECTRIC LINE	UE
WATER LINE	W
DRAINAGE DITCH	
WATER EDGE	
APPROXIMATE WETLAND BOUNDARY BASED ON FIELD OBSERVATIONS	
PARK BOUNDARY	

BENCHMARK DESCRIPTIONS:

- BENCHMARK #5539 IS A LAG BOLT IN A METAL POST LOCATED IN A STONE DRIVEWAY ±138' NORTH OF THE CENTER OF EDEN EVANS CENTER ROAD. ELEV.=710.02
- BENCHMARK #5546 IS A LAG BOLT IN A 6" PINE TREE ±44' EAST OF THE EASTERN EDGE OF THE RUNWAY PAVEMENT AND ±542' NORTH OF THE SOUTHERN MOST EDGE OF THE PAVED RUNWAY. ELEV.=705.40
- BENCHMARK #5550 IS A LAG BOLT IN A 12" COTTONWOOD TREE LOCATED ±73' WEST OF THE WESTERN PAVEMENT EDGE OF THE RUNWAY AND ±514' NORTH OF THE CENTER OF THE TAXIWAY STUB OFF THE RUNWAY. ELEV.=698.68
- BENCHMARK #5554 IS A LAG BOLT IN AN 8" PINE TREE LOCATED ±52' EAST OF THE EASTERN PAVEMENT EDGE OF THE RUNWAY AND ±102' SOUTH OF THE NORTHERN MOST PART OF THE PAVED RUNWAY. ELEV.=697.55

ECIDA
THE ECONOMIC DEVELOPMENT CORPORATION FOR ERIE COUNTY

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PROGRESS PRINT
06-29-2021
NOT FOR CONSTRUCTION

NO.	REVISIONS	DATE

DWG. TITLE

TOPOGRAPHIC SURVEY OF ERIE COUNTY AGRIBUSINESS PARK

0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	06-11-2021		
SCALE	AS SHOWN		
DWN.	AMR	CHK.	TAR/GJK
PROJ. No.	283214		

DWG. No.

V101

Appendix B
Site Soils Report

United States Department of Agriculture

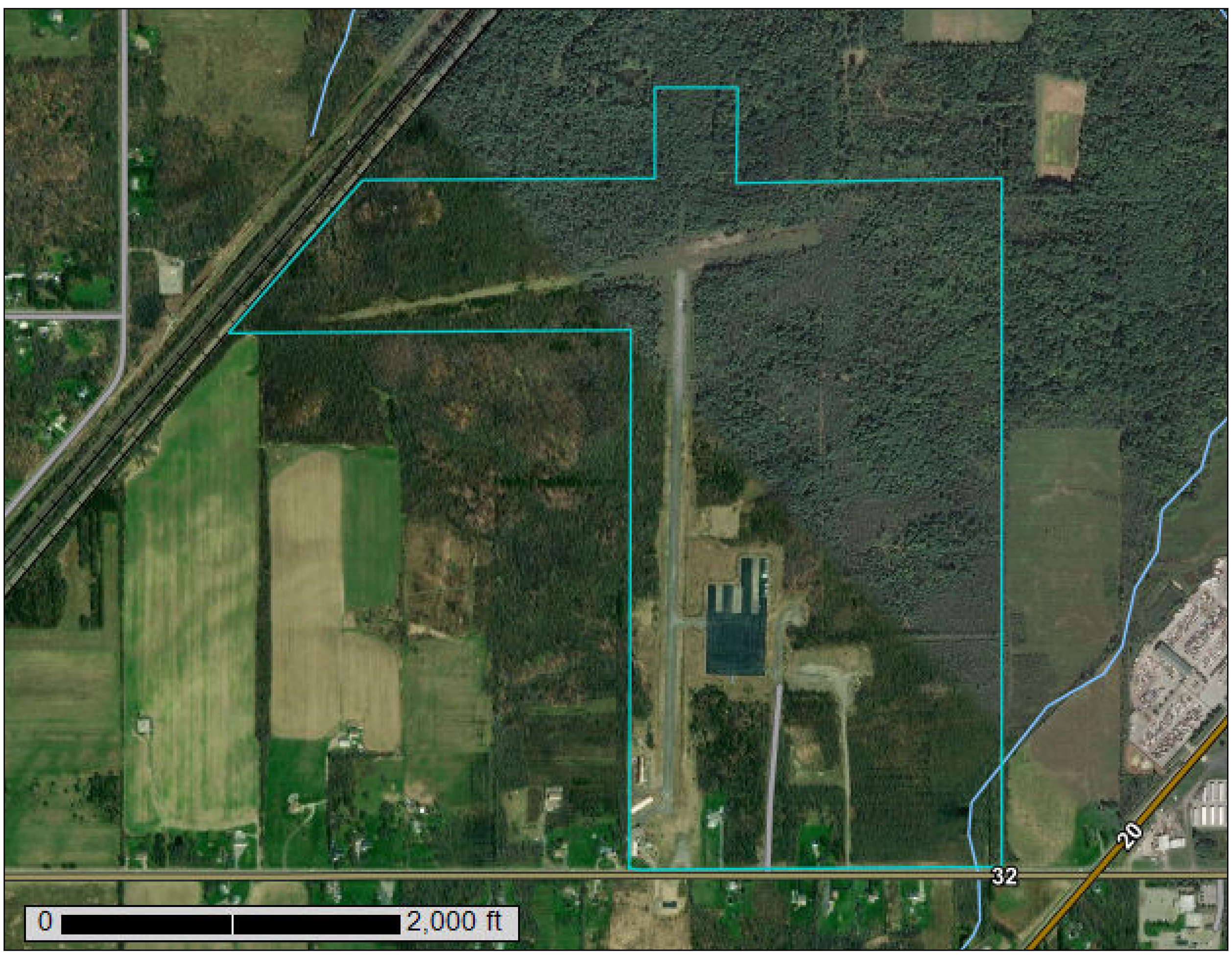
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

Erie County, New York



May 4, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

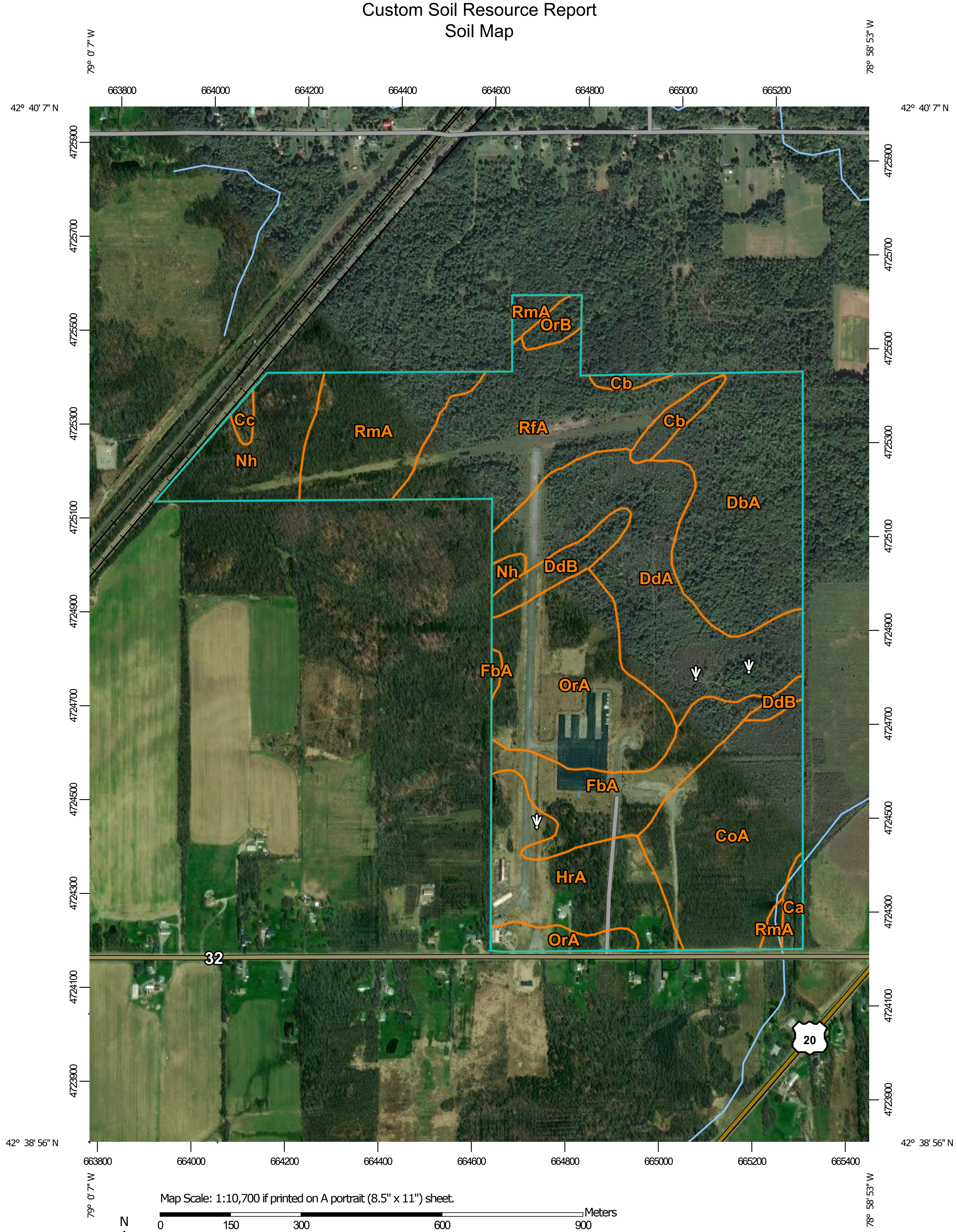
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map



Map Scale: 1:10,700 if printed on A portrait (8.5" x 11") sheet.

Meters: 0, 150, 300, 600, 900

Feet: 0, 500, 1000, 2000, 3000

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 20, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 27, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ca	Canadice silt loam	1.8	0.7%
Cb	Canadice silt loam, channery till substratum	3.7	1.5%
Cc	Canandaigua silt loam	0.9	0.4%
CoA	Churchville silt loam, 0 to 3 percent slopes	30.9	12.4%
DbA	Darien silt loam, 0 to 3 percent slopes	32.9	13.2%
DdA	Derb silt loam, 0 to 3 percent slopes	37.6	15.1%
DdB	Derb silt loam, 3 to 8 percent slopes	5.9	2.4%
FbA	Farnham channery silt loam, 0 to 3 percent slopes	17.1	6.8%
HrA	Hornell silt loam, 0 to 3 percent slopes	20.5	8.2%
Nh	Niagara silt loam, till substratum	14.3	5.7%
OrA	Orpark silt loam, 0 to 3 percent slopes	32.3	12.9%
OrB	Orpark silt loam, 3 to 8 percent slopes	2.1	0.8%
RfA	Remsen silty clay loam, 0 to 3 percent slopes	29.4	11.8%
RmA	Rhinebeck silty clay loam, stratified substratum, 0 to 3 percentslopes	20.2	8.1%
Totals for Area of Interest		**249.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Erie County, New York

Ca—Canadice silt loam

Map Unit Setting

National map unit symbol: 9rkb
Elevation: 570 to 1,610 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Canadice and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canadice

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 53 inches: silty clay
H3 - 53 to 65 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Lakemont

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Canandaigua

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Lamson

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Wayland

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Rhinebeck

Percent of map unit: 5 percent
Hydric soil rating: No

Cb—Canadice silt loam, channery till substratum

Map Unit Setting

National map unit symbol: 9rkc
Elevation: 570 to 1,840 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Canadice, till substratum, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canadice, Till Substratum

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 44 inches: silty clay
H3 - 44 to 60 inches: channery silty clay loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Moderate (about 8.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Remsen
Percent of map unit: 5 percent
Hydric soil rating: No

Canandaigua
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Rhinebeck
Percent of map unit: 5 percent
Hydric soil rating: No

Lakemont
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Cc—Canandaigua silt loam

Map Unit Setting
National map unit symbol: 9rkd
Elevation: 100 to 1,000 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Canandaigua and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canandaigua

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty and clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 37 inches: silt loam
H3 - 37 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water capacity: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY010NY - Wet Lake Plain Depression
Hydric soil rating: Yes

Minor Components

Lamson

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Canadice

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Lyons

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Niagara

Percent of map unit: 5 percent
Hydric soil rating: No

Lakemont

Percent of map unit: 5 percent
Landform: Depressions

Hydric soil rating: Yes

CoA—Churchville silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9rky
Elevation: 560 to 1,480 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Churchville and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Churchville

Setting

Landform: Lake plains, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey glaciolacustrine deposits over loamy till

Typical profile

H1 - 0 to 11 inches: silt loam
H2 - 11 to 26 inches: silty clay
H3 - 26 to 60 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Odessa

Percent of map unit: 5 percent
Hydric soil rating: No

Remsen

Percent of map unit: 5 percent
Hydric soil rating: No

Ovid

Percent of map unit: 5 percent
Hydric soil rating: No

Darien

Percent of map unit: 5 percent
Hydric soil rating: No

Lakemont

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

DbA—Darien silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9rld
Elevation: 570 to 1,720 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Darien and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Darien

Setting

Landform: Drumlinoid ridges, hills, till plains
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till derived predominantly from calcareous gray shale

Typical profile

H1 - 0 to 13 inches: silt loam
H2 - 13 to 34 inches: silty clay loam

H3 - 34 to 60 inches: channery silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Erie

Percent of map unit: 5 percent
Hydric soil rating: No

Angola

Percent of map unit: 5 percent
Hydric soil rating: No

Ilion

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Danley

Percent of map unit: 5 percent
Hydric soil rating: No

Derb

Percent of map unit: 5 percent
Hydric soil rating: No

DdA—Derb silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9rlj
Elevation: 610 to 1,710 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Derb and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Derb

Setting

Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Silty till derived from soft shale and siltstone

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 38 inches: silty clay loam
H3 - 38 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Ilion

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Unnamed soils

Percent of map unit: 5 percent
Hydric soil rating: No

Orpark

Percent of map unit: 5 percent
Hydric soil rating: No

Hornell

Percent of map unit: 5 percent
Hydric soil rating: No

Schuyler

Percent of map unit: 5 percent
Hydric soil rating: No

DdB—Derb silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9rlk
Elevation: 610 to 1,900 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Derb and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Derb

Setting

Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Silty till derived from soft shale and siltstone

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 38 inches: silty clay loam
H3 - 38 to 60 inches: silty clay loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Orpark

Percent of map unit: 5 percent
Hydric soil rating: No

Schuyler

Percent of map unit: 5 percent
Hydric soil rating: No

Hornell

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent
Hydric soil rating: No

Ilion

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

FbA—Farnham channery silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9rlx
Elevation: 590 to 1,460 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Farnham and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farnham

Setting

Landform: Alluvial fans, terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Gravelly loamy glaciofluvial deposits dominated by shale fragments

Typical profile

H1 - 0 to 7 inches: channery silt loam

H2 - 7 to 38 inches: very channery loam
H3 - 38 to 60 inches: very channery loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A/D
Hydric soil rating: No

Minor Components

Blasdell

Percent of map unit: 5 percent
Hydric soil rating: No

Chenango

Percent of map unit: 5 percent
Hydric soil rating: No

Red hook

Percent of map unit: 5 percent
Hydric soil rating: No

Scio

Percent of map unit: 5 percent
Hydric soil rating: No

Castile

Percent of map unit: 5 percent
Hydric soil rating: No

HrA—Hornell silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9rmc
Elevation: 600 to 1,800 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Hornell and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hornell

Setting

Landform: Ridges, till plains, benches
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey till, or till and residuum, derived from acid shale and siltstone

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 29 inches: silty clay loam
H3 - 29 to 40 inches: channery silty clay
H4 - 40 to 44 inches: weathered bedrock

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Chippewa

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Schuyler

Percent of map unit: 5 percent
Hydric soil rating: No

Derb

Percent of map unit: 5 percent
Hydric soil rating: No

Marilla

Percent of map unit: 5 percent
Hydric soil rating: No

Orpark

Percent of map unit: 5 percent
Hydric soil rating: No

Nh—Niagara silt loam, till substratum

Map Unit Setting

National map unit symbol: 9rnt
Elevation: 570 to 1,530 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Niagara, till substratum, and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Niagara, Till Substratum

Setting

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Silty and clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 26 inches: silt loam
H3 - 26 to 40 inches: silt loam
H4 - 40 to 60 inches: channery silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Canandaigua

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Raynham

Percent of map unit: 5 percent
Hydric soil rating: No

Collamer

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent
Hydric soil rating: No

Odessa

Percent of map unit: 5 percent
Hydric soil rating: No

OrA—Orpark silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9rnx
Elevation: 570 to 1,510 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Orpark and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orpark

Setting

Landform: Benches, ridges, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till derived mainly from shale, siltstone, and sandstone

Typical profile

H1 - 0 to 9 inches: silty clay loam
H2 - 9 to 22 inches: silty clay loam
H3 - 22 to 27 inches: silty clay loam
H4 - 27 to 31 inches: weathered bedrock

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F140XY028NY - Moist Till Uplands
Hydric soil rating: No

Minor Components

Derb

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Volusia

Percent of map unit: 5 percent
Hydric soil rating: No

Angola

Percent of map unit: 5 percent
Hydric soil rating: No

Hornell

Percent of map unit: 5 percent
Hydric soil rating: No

OrB—Orpark silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9rny
Elevation: 570 to 1,640 feet

Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Orpark and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orpark

Setting

Landform: Till plains, benches, ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till derived mainly from shale, siltstone, and sandstone

Typical profile

H1 - 0 to 9 inches: silty clay loam
H2 - 9 to 22 inches: silty clay loam
H3 - 22 to 27 inches: silty clay loam
H4 - 27 to 31 inches: weathered bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F140XY028NY - Moist Till Uplands
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Angola

Percent of map unit: 5 percent
Hydric soil rating: No

Derb

Percent of map unit: 5 percent
Hydric soil rating: No

Volusia

Percent of map unit: 5 percent
Hydric soil rating: No

Hornell

Percent of map unit: 5 percent
Hydric soil rating: No

RfA—Remsen silty clay loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9rpg
Elevation: 590 to 1,230 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Remsen and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Remsen

Setting

Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey till derived predominantly from calcareous or neutral shale

Typical profile

H1 - 0 to 9 inches: silty clay loam
H2 - 9 to 36 inches: clay
H3 - 36 to 60 inches: clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Darien

Percent of map unit: 5 percent
Hydric soil rating: No

Brockport

Percent of map unit: 5 percent
Hydric soil rating: No

Derb

Percent of map unit: 5 percent
Hydric soil rating: No

Canadice

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Churchville

Percent of map unit: 5 percent
Hydric soil rating: No

RmA—Rhinebeck silty clay loam, stratified substratum, 0 to 3 percentslopes

Map Unit Setting

National map unit symbol: 9rpq
Elevation: 570 to 1,310 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Rhinebeck, stratified substratum, and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rhinebeck, Stratified Substratum

Setting

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey and silty glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: silty clay loam
H2 - 8 to 38 inches: silty clay
H3 - 38 to 46 inches: silty clay
H4 - 46 to 60 inches: stratified channery loamy sand
H5 - 60 to 80 inches: channery loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Niagara

Percent of map unit: 5 percent
Hydric soil rating: No

Canadice

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Remsen

Percent of map unit: 5 percent
Hydric soil rating: No

Churchville

Percent of map unit: 5 percent
Hydric soil rating: No

Hudson

Percent of map unit: 5 percent
Hydric soil rating: No

Soil Information for Urban Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

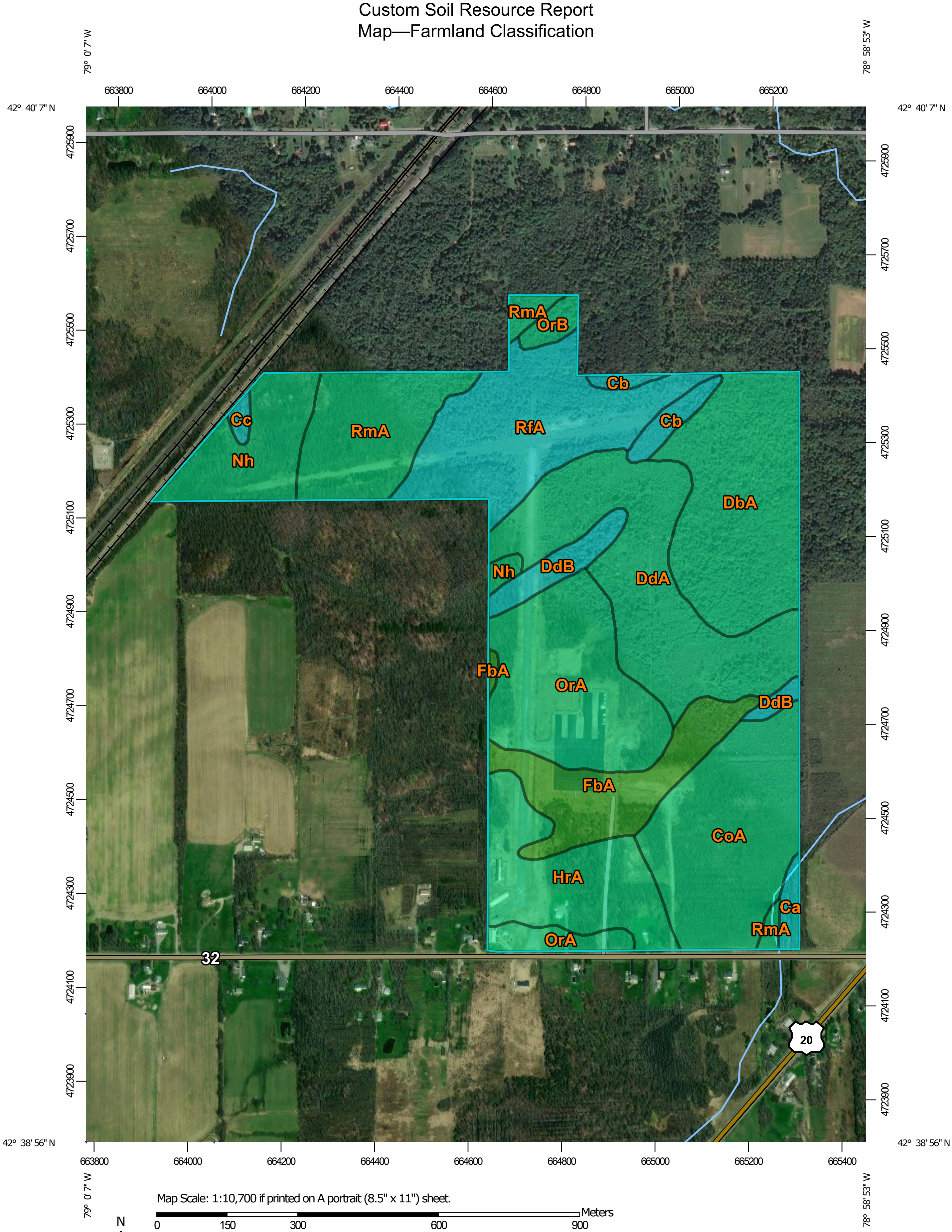
Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Map—Farmland Classification



Map Scale: 1:10,700 if printed on A portrait (8.5" x 11") sheet.

Meters: 0, 150, 300, 600, 900

Feet: 0, 500, 1000, 2000, 3000

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Points

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 20, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 27, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ca	Canadice silt loam	Farmland of statewide importance	1.8	0.7%
Cb	Canadice silt loam, channery till substratum	Farmland of statewide importance	3.7	1.5%
Cc	Canandaigua silt loam	Farmland of statewide importance	0.9	0.4%
CoA	Churchville silt loam, 0 to 3 percent slopes	Prime farmland if drained	30.9	12.4%
DbA	Darien silt loam, 0 to 3 percent slopes	Prime farmland if drained	32.9	13.2%
DdA	Derb silt loam, 0 to 3 percent slopes	Prime farmland if drained	37.6	15.1%
DdB	Derb silt loam, 3 to 8 percent slopes	Farmland of statewide importance	5.9	2.4%
FbA	Farnham channery silt loam, 0 to 3 percent slopes	All areas are prime farmland	17.1	6.8%
HrA	Hornell silt loam, 0 to 3 percent slopes	Prime farmland if drained	20.5	8.2%
Nh	Niagara silt loam, till substratum	Prime farmland if drained	14.3	5.7%
OrA	Orpark silt loam, 0 to 3 percent slopes	Prime farmland if drained	32.3	12.9%
OrB	Orpark silt loam, 3 to 8 percent slopes	Prime farmland if drained	2.1	0.8%
RfA	Remsen silty clay loam, 0 to 3 percent slopes	Farmland of statewide importance	29.4	11.8%
RmA	Rhinebeck silty clay loam, stratified substratum, 0 to 3 percentslopes	Prime farmland if drained	20.2	8.1%
Totals for Area of Interest			**249.7**	**100.0%**

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Water Management

Water Management interpretations are tools for evaluating the potential of the soil in the application of various water management practices. Example interpretations include pond reservoir area, embankments, dikes, levees, and excavated ponds.

Stormwater Management - Infiltration (NY)

Proper management of stormwater runoff from construction sites and developed areas is an issue of growing importance in New York State. During construction, exposed soil is subject to a greater risk of erosion, resulting in a greater potential for sedimentation in waterways. Stormwater runoff increases on the rooftops of buildings, paved parking lots, and other impervious surfaces, and thus increases the potential for flooding and discharge of polluted runoff into open water. Management of stormwater runoff can prevent or reduce the availability, release, or transport of substances that can degrade surface and ground waters. Guidelines and design criteria for stormwater management practices have been established by the New York State Department of Environmental Conservation (2008).

This interpretation is designed to evaluate the limitations of soils for stormwater management practices. The purpose of the interpretation is to help decision makers use soil survey information in the selection and implementation of the stormwater management practices best suited to a particular location. The information in the interpretations is intended for planning purposes and does not eliminate the need for on-site investigation of the soil.

Rating class terms indicate the extent to which the soils are limited by the soil features that influence the design, construction, and performance of stormwater management practices. "Least limited" indicates that the soil has features that are very favorable for this practice. Good performance and low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the practice. The limitations can be overcome or minimized by special planning, design, or construction. Fair performance and moderate maintenance can be expected. "Most limited" indicates that the soil has one or more features that are unfavorable for the practice. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive construction procedures. Poor performance and high maintenance can be expected.

The rating class is based on the maximum value of the rating indices generated for each soil feature considered. Where the rating value is:

equal to 0.0, the rating class is "least limited."

greater than 0 and less than 1.0, the rating class is "somewhat limited."

equal to 1.0, the rating class is "most limited."

Design criteria in the "New York State Stormwater Management Design Manual" (New York State Department of Environmental Conservation, 2008) were used to guide the selection of potentially limiting soil properties. Additional limiting features incorporated into the interpretations are based on soil function for the specific practice.

Infiltration Practices

This interpretation evaluates the limitations of soils for stormwater management infiltration practices. Infiltration practices collect stormwater runoff in basins (or trenches) for storage prior to filtration through undisturbed soil in the basin (or trench) floor and sides. Deep, well drained, and permeable soils are required for implementing infiltration practices. Following is a synopsis of the soil features considered in this interpretation.

Excessive permeability: Excessive permeability in one or more layers may allow stormwater to move rapidly through the soil without sufficient filtering, resulting in a potential for groundwater contamination. Additional pretreatment or soil amendments may be required as part of an infiltration practice. The interpretation evaluates the range (low to high) of permeability values for the most transmissive layer in the soil.

Low permeability: Low permeability restricts movement of water through the soil, impeding the infiltration function. The interpretation evaluates the range (low to high) of permeability values for the least transmissive layer in the soil.

Slope gradient: Excessive slope limits the functionality of an infiltration practice. The representative slope gradient percent for the soil component is the property evaluated.

Depth to bedrock: Limited depth to bedrock impedes excavation and restricts infiltration. The minimum depth to bedrock is the property evaluated.

Depth to manufactured layer: In urban areas, some anthropogenic (human-altered) soils have a restrictive layer, such as pavement, below the surface. Limited depth to this feature impedes excavation and restricts infiltration. The minimum depth to a manufactured layer is the property evaluated.

Depth to saturation: A seasonal high water table in the upper part of the soil limits the storage capacity of an infiltration practice. The interpretation evaluates the minimum depth to a zone of saturation.

Excessive fines: Soils with a high content of silt and clay may become plugged with sediment from stormwater, resulting in restricted infiltration. The interpretation evaluates the weighted average of the percent clay and percent silt, for depths greater than 36 inches.

In addition to soil characteristics, other attributes of the site and the surrounding area are important factors in planning and implementing stormwater management practices. For example, proximity and slope direction from the installation practice to a drinking water well are important considerations when sites for infiltration practices are selected.

The components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen, which is displayed in the report. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as the one listed for the map unit. The percent composition of these components is described. As a result, the percentage of the rating class in the map unit is indicated.

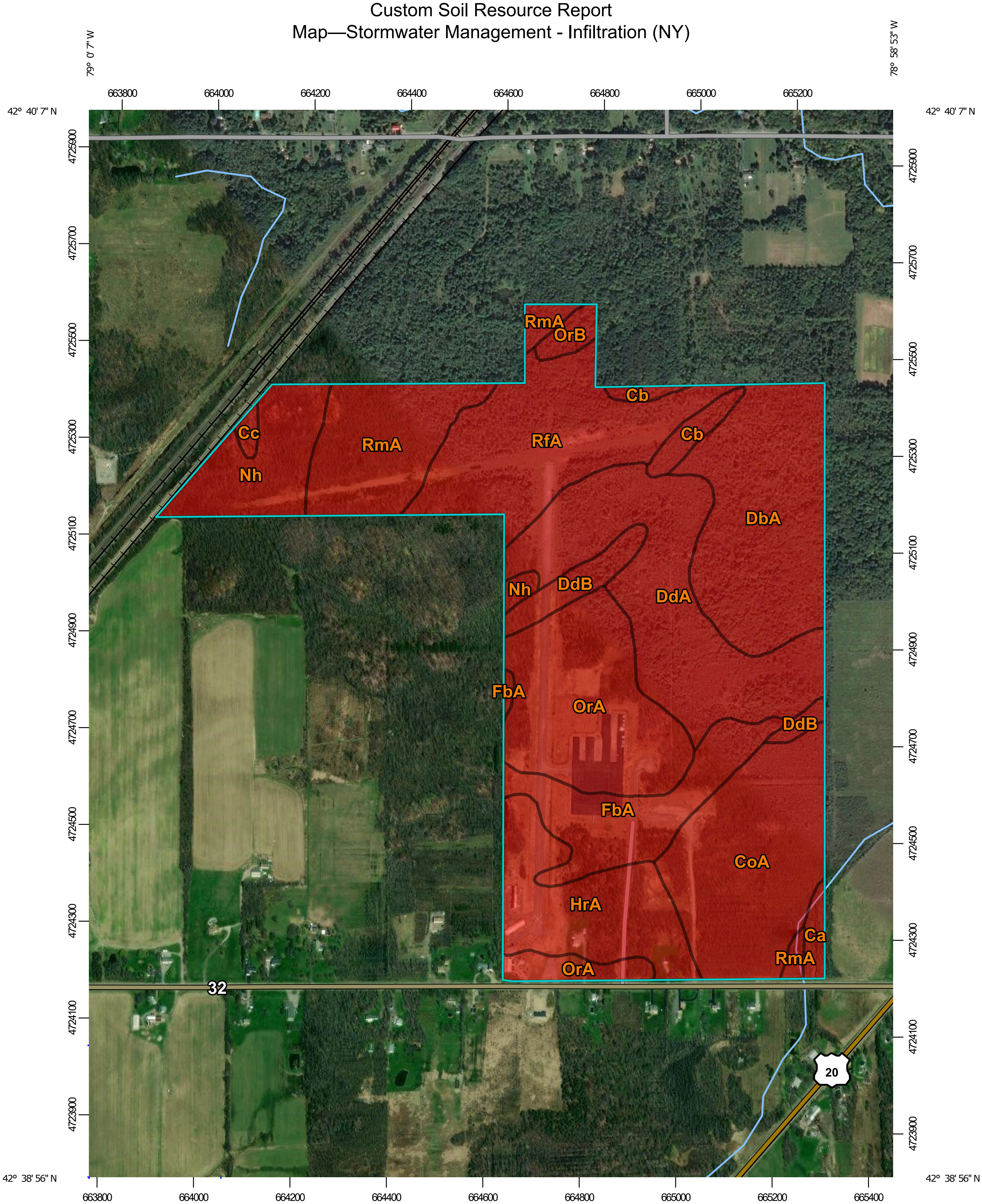
Other components with different ratings may occur in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the "Stormwater Management (NY)" report from the Soil Reports tab in Web Soil Survey.

References:

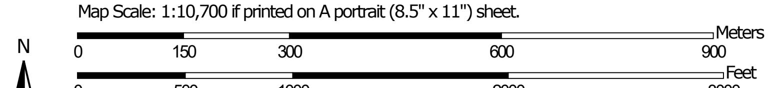
New York State Department of Environmental Conservation. April 2008. New York State Stormwater Management Design Manual.

New York State Department of Environmental Conservation. June 2000. Urban/ Stormwater Runoff Management Practices Catalogue for Nonpoint Source Pollution Prevention in New York State.

Map—Stormwater Management - Infiltration (NY)



Map Scale: 1:10,700 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

Most limited

Somewhat limited

Least limited

Not rated or not available

Soil Rating Lines

Most limited

Somewhat limited

Least limited

Not rated or not available

Soil Rating Points

Most limited

Somewhat limited

Least limited

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 20, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 27, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Stormwater Management - Infiltration (NY)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
Ca	Canadice silt loam	Most limited	Canadice (75%)	Low permeability (1.00)	1.8	0.7%
				Depth to saturation (1.00)		
				Excessive fines (1.00)		
Cb	Canadice silt loam, channery till substratum	Most limited	Canadice, till substratum (80%)	Low permeability (1.00)	3.7	1.5%
				Depth to saturation (1.00)		
				Excessive fines (1.00)		
Cc	Canandaigua silt loam	Most limited	Canandaigua (75%)	Depth to saturation (1.00)	0.9	0.4%
				Excessive fines (1.00)		
				Low permeability (0.50)		
CoA	Churchville silt loam, 0 to 3 percent slopes	Most limited	Churchville (75%)	Low permeability (1.00)	30.9	12.4%
				Depth to saturation (1.00)		
				Excessive fines (0.50)		
DbA	Darien silt loam, 0 to 3 percent slopes	Most limited	Darien (75%)	Low permeability (1.00)	32.9	13.2%
				Depth to saturation (1.00)		
				Excessive fines (1.00)		
DdA	Derb silt loam, 0 to 3 percent slopes	Most limited	Derb (75%)	Low permeability (1.00)	37.6	15.1%
				Depth to saturation (1.00)		
				Excessive fines (1.00)		
DdB	Derb silt loam, 3 to 8 percent slopes	Most limited	Derb (75%)	Low permeability (1.00)	5.9	2.4%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Depth to saturation (1.00)		
				Excessive fines (1.00)		
FbA	Farnham channery silt loam, 0 to 3 percent slopes	Most limited	Farnham (75%)	Depth to saturation (1.00)	17.1	6.8%
				Excessive fines (0.50)		
HrA	Hornell silt loam, 0 to 3 percent slopes	Most limited	Hornell (75%)	Low permeability (1.00)	20.5	8.2%
				Depth to bedrock (1.00)		
				Depth to saturation (1.00)		
				Excessive fines (1.00)		
Nh	Niagara silt loam, till substratum	Most limited	Niagara, till substratum (75%)	Low permeability (1.00)	14.3	5.7%
				Depth to saturation (1.00)		
				Excessive fines (1.00)		
OrA	Orpark silt loam, 0 to 3 percent slopes	Most limited	Orpark (75%)	Depth to bedrock (1.00)	32.3	12.9%
				Depth to saturation (1.00)		
				Low permeability (0.50)		
OrB	Orpark silt loam, 3 to 8 percent slopes	Most limited	Orpark (75%)	Depth to bedrock (1.00)	2.1	0.8%
				Depth to saturation (1.00)		
				Low permeability (0.50)		
RfA	Remsen silty clay loam, 0 to 3 percent slopes	Most limited	Remsen (75%)	Low permeability (1.00)	29.4	11.8%
				Depth to saturation (1.00)		
				Excessive fines (1.00)		
RmA	Rhinebeck silty clay loam, stratified	Most limited	Rhinebeck, stratified	Low permeability (1.00)	20.2	8.1%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
	substratum, 0 to 3 percentslopes		substratum (75%)	Depth to saturation (1.00)		
				Excessive fines (1.00)		
Totals for Area of Interest					**249.7**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Most limited	249.7	100.0%
Totals for Area of Interest	**249.7**	**100.0%**

Rating Options—Stormwater Management - Infiltration (NY)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Erosion Factors

Soil Erosion Factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

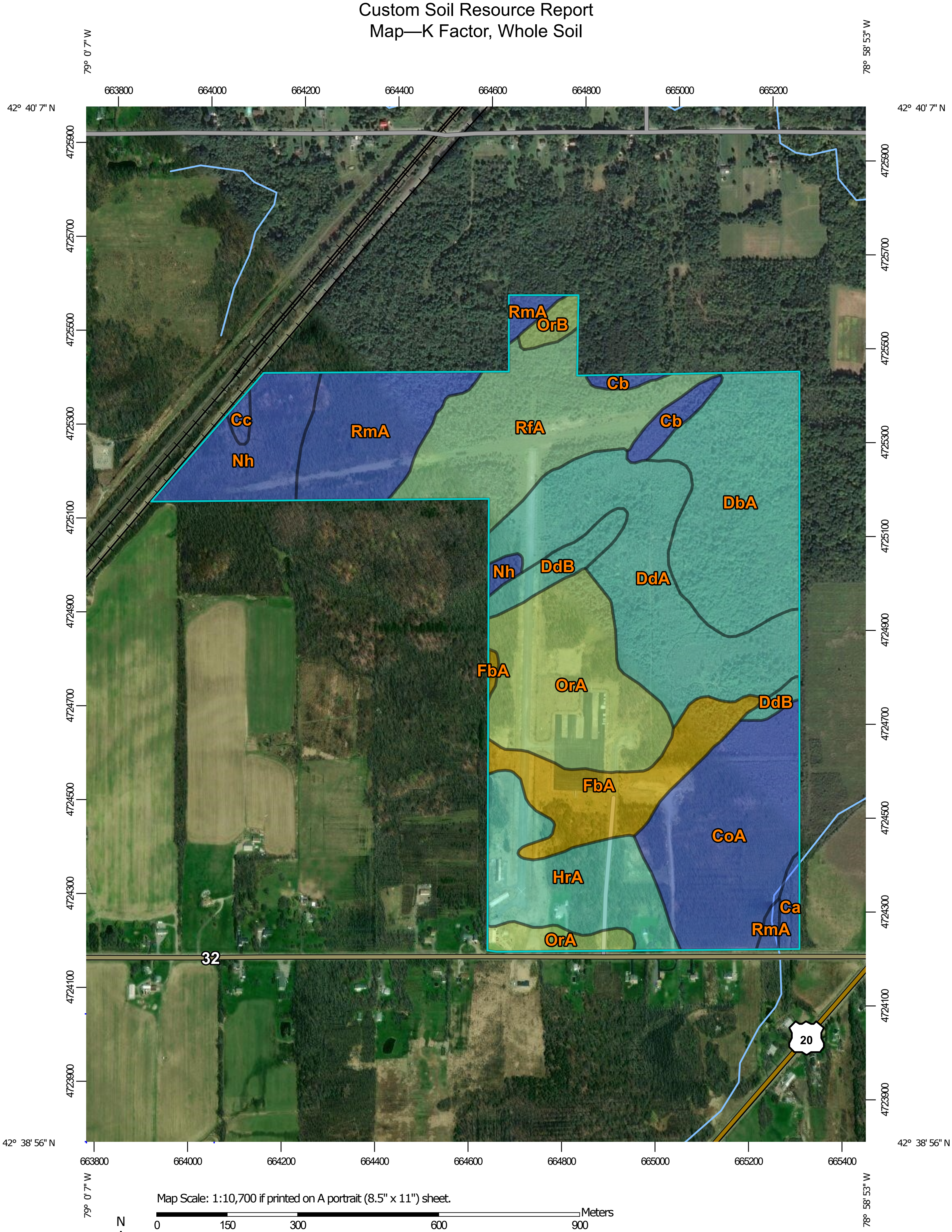
K Factor, Whole Soil

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Map—K Factor, Whole Soil



Map Scale: 1:10,700 if printed on A portrait (8.5" x 11") sheet.

Meters: 0, 150, 300, 600, 900

Feet: 0, 500, 1000, 2000, 3000

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Lines

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Points

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 20, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 27, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—K Factor, Whole Soil

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ca	Canadice silt loam	.49	1.8	0.7%
Cb	Canadice silt loam, channery till substratum	.49	3.7	1.5%
Cc	Canandaigua silt loam	.49	0.9	0.4%
CoA	Churchville silt loam, 0 to 3 percent slopes	.49	30.9	12.4%
DbA	Darien silt loam, 0 to 3 percent slopes	.32	32.9	13.2%
DdA	Derb silt loam, 0 to 3 percent slopes	.32	37.6	15.1%
DdB	Derb silt loam, 3 to 8 percent slopes	.32	5.9	2.4%
FbA	Farnham channery silt loam, 0 to 3 percent slopes	.15	17.1	6.8%
HrA	Hornell silt loam, 0 to 3 percent slopes	.32	20.5	8.2%
Nh	Niagara silt loam, till substratum	.49	14.3	5.7%
OrA	Orpark silt loam, 0 to 3 percent slopes	.24	32.3	12.9%
OrB	Orpark silt loam, 3 to 8 percent slopes	.24	2.1	0.8%
RfA	Remsen silty clay loam, 0 to 3 percent slopes	.28	29.4	11.8%
RmA	Rhinebeck silty clay loam, stratified substratum, 0 to 3 percentslopes	.49	20.2	8.1%
Totals for Area of Interest			**249.7**	**100.0%**

Rating Options—K Factor, Whole Soil

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

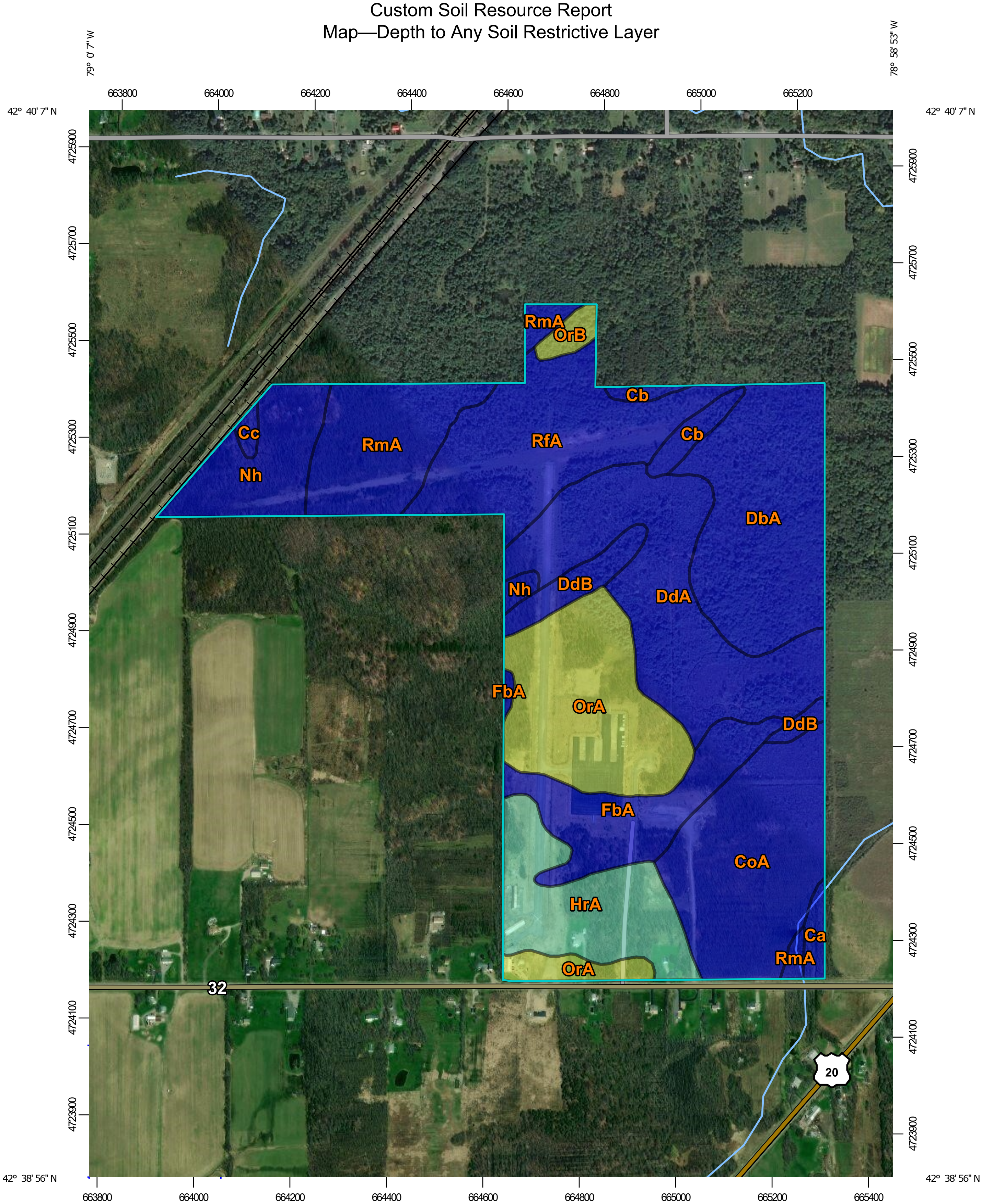
Depth to Any Soil Restrictive Layer

A "restrictive layer" is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers.

This theme presents the depth to any type of restrictive layer that is described for each map unit. If more than one type of restrictive layer is described for an individual soil type, the depth to the shallowest one is presented. If no restrictive layer is described in a map unit, it is represented by the "greater than 200" depth class.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Map—Depth to Any Soil Restrictive Layer



Map Scale: 1:10,700 if printed on A portrait (8.5" x 11") sheet.

Meters: 0, 150, 300, 600, 900

Feet: 0, 500, 1000, 2000, 3000

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 20, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 27, 2019

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Table—Depth to Any Soil Restrictive Layer

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
Ca	Canadice silt loam	>200	1.8	0.7%
Cb	Canadice silt loam, channery till substratum	>200	3.7	1.5%
Cc	Canandaigua silt loam	>200	0.9	0.4%
CoA	Churchville silt loam, 0 to 3 percent slopes	>200	30.9	12.4%
DbA	Darien silt loam, 0 to 3 percent slopes	>200	32.9	13.2%
DdA	Derb silt loam, 0 to 3 percent slopes	>200	37.6	15.1%
DdB	Derb silt loam, 3 to 8 percent slopes	>200	5.9	2.4%
FbA	Farnham channery silt loam, 0 to 3 percent slopes	>200	17.1	6.8%
HrA	Hornell silt loam, 0 to 3 percent slopes	102	20.5	8.2%
Nh	Niagara silt loam, till substratum	>200	14.3	5.7%
OrA	Orpark silt loam, 0 to 3 percent slopes	69	32.3	12.9%
OrB	Orpark silt loam, 3 to 8 percent slopes	69	2.1	0.8%
RfA	Remsen silty clay loam, 0 to 3 percent slopes	>200	29.4	11.8%
RmA	Rhinebeck silty clay loam, stratified substratum, 0 to 3 percentslopes	>200	20.2	8.1%
Totals for Area of Interest			**249.7**	**100.0%**

Rating Options—Depth to Any Soil Restrictive Layer

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

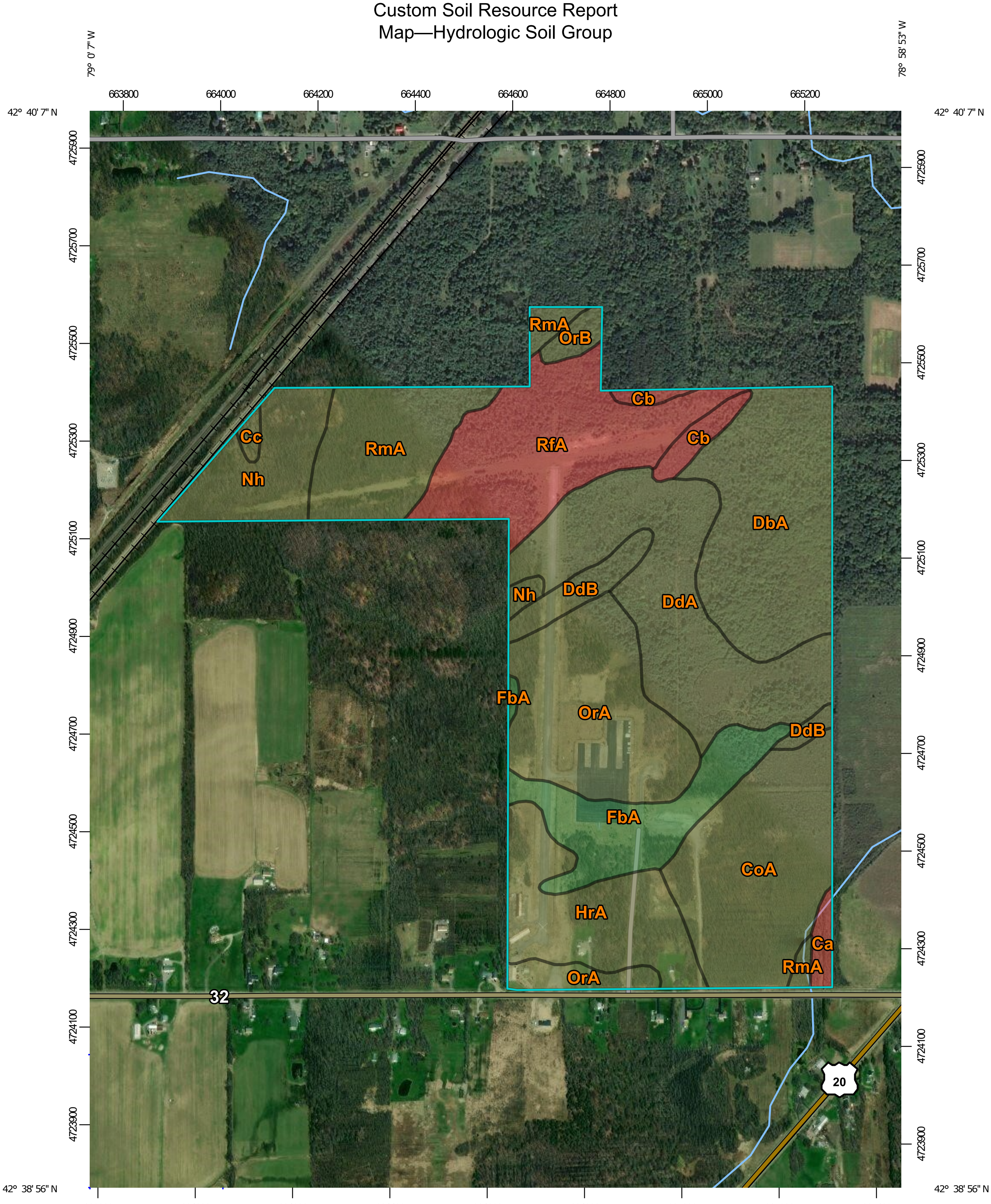
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Map—Hydrologic Soil Group



Map Scale: 1:10,700 if printed on A portrait (8.5" x 11") sheet.

Meters: 0, 150, 300, 600, 900

Feet: 0, 500, 1000, 2000, 3000

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ca	Canadice silt loam	D	1.8	0.7%
Cb	Canadice silt loam, channery till substratum	D	3.7	1.5%
Cc	Canandaigua silt loam	C/D	0.9	0.4%
CoA	Churchville silt loam, 0 to 3 percent slopes	C/D	30.9	12.4%
DbA	Darien silt loam, 0 to 3 percent slopes	C/D	32.9	13.2%
DdA	Derb silt loam, 0 to 3 percent slopes	C/D	37.6	15.1%
DdB	Derb silt loam, 3 to 8 percent slopes	C/D	5.9	2.4%
FbA	Farnham channery silt loam, 0 to 3 percent slopes	A/D	17.1	6.8%
HrA	Hornell silt loam, 0 to 3 percent slopes	C/D	20.5	8.2%
Nh	Niagara silt loam, till substratum	C/D	14.3	5.7%
OrA	Orpark silt loam, 0 to 3 percent slopes	C/D	32.3	12.9%
OrB	Orpark silt loam, 3 to 8 percent slopes	C/D	2.1	0.8%
RfA	Remsen silty clay loam, 0 to 3 percent slopes	D	29.4	11.8%
RmA	Rhinebeck silty clay loam, stratified substratum, 0 to 3 percentslopes	C/D	20.2	8.1%
Totals for Area of Interest			**249.7**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

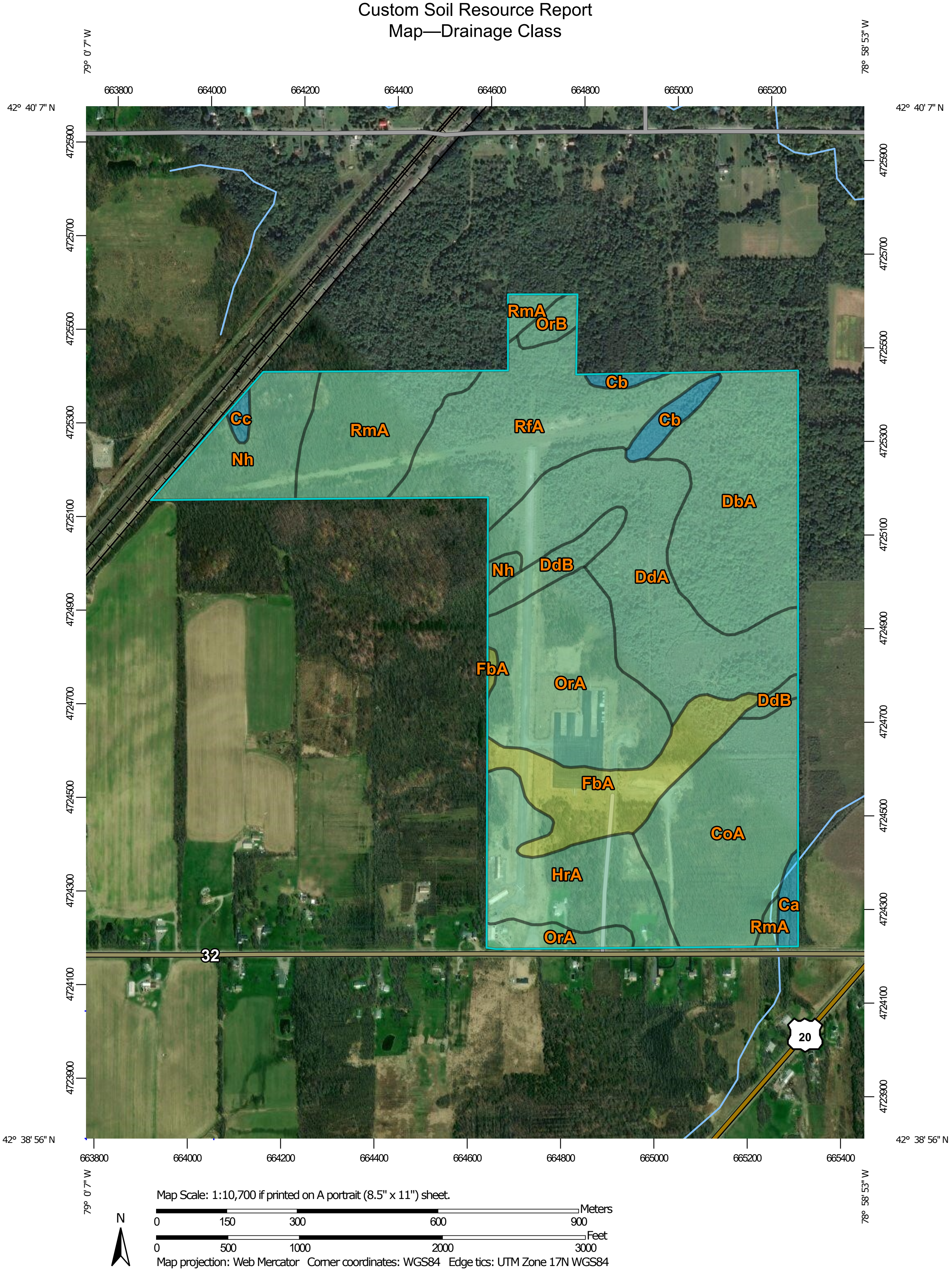
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Drainage Class

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Custom Soil Resource Report
Map—Drainage Class



Map Scale: 1:10,700 if printed on A portrait (8.5" x 11") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Lines

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Points

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

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Coordinate System: Web Mercator (EPSG:3857)

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Table—Drainage Class

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ca	Canadice silt loam	Poorly drained	1.8	0.7%
Cb	Canadice silt loam, channery till substratum	Poorly drained	3.7	1.5%
Cc	Canandaigua silt loam	Poorly drained	0.9	0.4%
CoA	Churchville silt loam, 0 to 3 percent slopes	Somewhat poorly drained	30.9	12.4%
DbA	Darien silt loam, 0 to 3 percent slopes	Somewhat poorly drained	32.9	13.2%
DdA	Derb silt loam, 0 to 3 percent slopes	Somewhat poorly drained	37.6	15.1%
DdB	Derb silt loam, 3 to 8 percent slopes	Somewhat poorly drained	5.9	2.4%
FbA	Farnham channery silt loam, 0 to 3 percent slopes	Moderately well drained	17.1	6.8%
HrA	Hornell silt loam, 0 to 3 percent slopes	Somewhat poorly drained	20.5	8.2%
Nh	Niagara silt loam, till substratum	Somewhat poorly drained	14.3	5.7%
OrA	Orpark silt loam, 0 to 3 percent slopes	Somewhat poorly drained	32.3	12.9%
OrB	Orpark silt loam, 3 to 8 percent slopes	Somewhat poorly drained	2.1	0.8%
RfA	Remsen silty clay loam, 0 to 3 percent slopes	Somewhat poorly drained	29.4	11.8%
RmA	Rhinebeck silty clay loam, stratified substratum, 0 to 3 percentslopes	Somewhat poorly drained	20.2	8.1%
Totals for Area of Interest			**249.7**	**100.0%**

Rating Options—Drainage Class

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the following National Soil Survey Handbook link: "National Soil Survey Handbook."

ABC soil

A soil having an A, a B, and a C horizon.

Ablation till

Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

AC soil

A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil

The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil

Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil

A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial cone

A semiconical type of alluvial fan having very steep slopes. It is higher, narrower, and steeper than a fan and is composed of coarser and thicker layers of material deposited by a combination of alluvial episodes and (to a much lesser degree) landslides (debris flow). The coarsest materials tend to be concentrated at the apex of the cone.

Alluvial fan

A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

Alluvium

Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl

A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM)

The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions

Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon

A subsoil horizon characterized by an accumulation of illuvial clay.

Arroyo

The flat-floored channel of an ephemeral stream, commonly with very steep to vertical banks cut in unconsolidated material. It is usually dry but can be transformed into a temporary watercourse or short-lived torrent after heavy rain within the watershed.

Aspect

The direction toward which a slope faces. Also called slope aspect.

Association, soil

A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity)

The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low: 0 to 3
Low: 3 to 6
Moderate: 6 to 9
High: 9 to 12
Very high: More than 12

Backslope

The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp

A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Badland

A landscape that is intricately dissected and characterized by a very fine drainage network with high drainage densities and short, steep slopes and narrow interfluves. Badlands develop on surfaces that have little or no vegetative cover overlying unconsolidated or poorly cemented materials (clays, silts, or sandstones) with, in some cases, soluble minerals, such as gypsum or halite.

Bajada

A broad, gently inclined alluvial piedmont slope extending from the base of a mountain range out into a basin and formed by the lateral coalescence of a series of alluvial fans. Typically, it has a broadly undulating transverse profile, parallel to the mountain front, resulting from the convexities of component fans. The term is generally restricted to constructional slopes of intermontane basins.

Basal area

The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation

The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology)

A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane

A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedding system

A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock

The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography

A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace

A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum

Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout (map symbol)

A saucer-, cup-, or trough-shaped depression formed by wind erosion on a preexisting dune or other sand deposit, especially in an area of shifting sand or loose soil or where protective vegetation is disturbed or destroyed. The adjoining accumulation of sand derived from the depression, where recognizable, is commonly included. Blowouts are commonly small.

Borrow pit (map symbol)

An open excavation from which soil and underlying material have been removed, usually for construction purposes.

Bottom land

An informal term loosely applied to various portions of a flood plain.

Boulders

Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks

A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

Breast height

An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management

Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Butte

An isolated, generally flat-topped hill or mountain with relatively steep slopes and talus or precipitous cliffs and characterized by summit width that is less than the height of bounding escarpments; commonly topped by a caprock of resistant material and representing an erosion remnant carved from flat-lying rocks.

Cable yarding

A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Calcareous soil

A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Caliche

A general term for a prominent zone of secondary carbonate accumulation in surficial materials in warm, subhumid to arid areas. Caliche is formed by both geologic and pedologic processes. Finely crystalline calcium carbonate forms a nearly continuous surface-coating and void-filling medium in geologic (parent) materials. Cementation ranges from weak in nonindurated forms to very strong in indurated forms. Other minerals (e.g., carbonates, silicate, and sulfate) may occur as accessory cements. Most petrocalcic horizons and some calcic horizons are caliche.

California bearing ratio (CBR)

The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy

The leafy crown of trees or shrubs. (See Crown.)

Canyon

A long, deep, narrow valley with high, precipitous walls in an area of high local relief.

Capillary water

Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena

A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.

Cation

An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity

The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps

See Terracettes.

Cement rock

Shaly limestone used in the manufacture of cement.

Channery soil material

Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment

Control of unwanted vegetation through the use of chemicals.

Chiseling

Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Cirque

A steep-walled, semicircular or crescent-shaped, half-bowl-like recess or hollow, commonly situated at the head of a glaciated mountain valley or high on the side of a mountain. It was produced by the erosive activity of a mountain glacier. It commonly contains a small round lake (tarn).

Clay

As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions

See Redoximorphic features.

Clay film

A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Clay spot (map symbol)

A spot where the surface texture is silty clay or clay in areas where the surface layer of the soils in the surrounding map unit is sandy loam, loam, silt loam, or coarser.

Claypan

A dense, compact subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. The layer restricts the downward movement of water through the soil. A claypan is commonly hard when dry and plastic and sticky when wet.

Climax plant community

The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil

Sand or loamy sand.

Cobble (or cobblestone)

A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material

Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility)

See Linear extensibility.

Colluvium

Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex slope

Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil

A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions

See Redoximorphic features.

Conglomerate

A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system

Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage

A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil

Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping

Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section

The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat)

A type of limnic layer composed predominantly of fecal material derived from aquatic animals.

Corrosion (geomorphology)

A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations)

Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop

A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management

Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system

Growing crops according to a planned system of rotation and management practices.

Cross-slope farming

Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown

The upper part of a tree or shrub, including the living branches and their foliage.

Cryoturbate

A mass of soil or other unconsolidated earthy material moved or disturbed by frost action. It is typically coarser than the underlying material.

Cuesta

An asymmetric ridge capped by resistant rock layers of slight or moderate dip (commonly less than 15 percent slopes); a type of homocline produced by differential erosion of interbedded resistant and weak rocks. A cuesta has a long, gentle slope on one side (dip slope) that roughly parallels the inclined beds; on the other side, it has a relatively short and steep or clifflike slope (scarp) that cuts through the tilted rocks.

Culmination of the mean annual increment (CMAI)

The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave

The walls of excavations tend to cave in or slough.

Decreasers

The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing

Postponing grazing or resting grazing land for a prescribed period.

Delta

A body of alluvium having a surface that is fan shaped and nearly flat; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer

A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depression, closed (map symbol)

A shallow, saucer-shaped area that is slightly lower on the landscape than the surrounding area and that does not have a natural outlet for surface drainage.

Depth, soil

Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Desert pavement

A natural, residual concentration or layer of wind-polished, closely packed gravel, boulders, and other rock fragments mantling a desert surface. It forms where wind action and sheetwash have removed all smaller particles or where rock fragments have migrated upward through sediments to the surface. It typically protects the finer grained underlying material from further erosion.

Diatomaceous earth

A geologic deposit of fine, grayish siliceous material composed chiefly or entirely of the remains of diatoms.

Dip slope

A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace)

A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming

A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural)

Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface

Runoff, or surface flow of water, from an area.

Drainageway

A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Draw

A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.

Drift

A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.

Drumlin

A low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift. It commonly has a blunt nose facing the direction from which the ice approached and a gentler slope tapering in the other direction. The longer axis is parallel to the general direction of glacier flow. Drumlins are products of streamline (laminar) flow of glaciers, which molded the subglacial floor through a combination of erosion and deposition.

Duff

A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Dune

A low mound, ridge, bank, or hill of loose, windblown granular material (generally sand), either barren and capable of movement from place to place or covered and stabilized with vegetation but retaining its characteristic shape.

Earthy fill

See Mine spoil.

Ecological site

An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation

The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation

A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian deposit

Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

Ephemeral stream

A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation

A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion

The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (accelerated)

Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion (geologic)

Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion pavement

A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface

A land surface shaped by the action of erosion, especially by running water.

Escarpment

A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Escarpment, bedrock (map symbol)

A relatively continuous and steep slope or cliff, produced by erosion or faulting, that breaks the general continuity of more gently sloping land surfaces. Exposed material is hard or soft bedrock.

Escarpment, nonbedrock (map symbol)

A relatively continuous and steep slope or cliff, generally produced by erosion but in some places produced by faulting, that breaks the continuity of more gently sloping land surfaces. Exposed earthy material is nonsoil or very shallow soil.

Esker

A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.

Extrusive rock

Igneous rock derived from deep-seated molten matter (magma) deposited and cooled on the earth’s surface.

Fallow

Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan remnant

A general term for landforms that are the remaining parts of older fan landforms, such as alluvial fans, that have been either dissected or partially buried.

Fertility, soil

The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat)

The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity

The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope

A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil

Sandy clay, silty clay, or clay.

Firebreak

An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom

An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flaggy soil material

Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone

A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain

The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms

A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay

A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step

An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial

Of or pertaining to rivers or streams; produced by stream or river action.

Foothills

A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope

The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb

Any herbaceous plant not a grass or a sedge.

Forest cover

All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type

A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan

A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil

The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai

Commonly, a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope. Typically, the microrelief of clayey soils that shrink and swell considerably with changes in moisture content.

Glaciofluvial deposits

Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.

Glaciolacustrine deposits

Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.

Gleyed soil

Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping

Growing crops in strips that grade toward a protected waterway.

Grassed waterway

A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel

Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravel pit (map symbol)

An open excavation from which soil and underlying material have been removed and used, without crushing, as a source of sand or gravel.

Gravelly soil material

Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Gravelly spot (map symbol)

A spot where the surface layer has more than 35 percent, by volume, rock fragments that are mostly less than 3 inches in diameter in an area that has less than 15 percent rock fragments.

Green manure crop (agronomy)

A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water

Water filling all the unblocked pores of the material below the water table.

Gully (map symbol)

A small, steep-sided channel caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage whereas a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock

Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim

Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan

A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology)

A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat)

Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops

Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill

A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope

A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil

A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon: An organic layer of fresh and decaying plant residue.

L horizon: A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon: The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon: The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon: The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon: The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon: Soft, consolidated bedrock beneath the soil.

R layer: Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

M layer: A root-limiting subsoil layer consisting of nearly continuous, horizontally oriented, human-manufactured materials.

W layer: A layer of water within or beneath the soil.

Humus

The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups

Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties include depth to a seasonal high water table, the infiltration rate, and depth to a layer that significantly restricts the downward movement of water. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock

Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation

The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil

A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers

Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration

The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity

The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate

The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate

The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Very low: Less than 0.2
Low: 0.2 to 0.4
Moderately low: 0.4 to 0.75
Moderate: 0.75 to 1.25
Moderately high: 1.25 to 1.75
High: 1.75 to 2.5
Very high: More than 2.5

Interfluve

A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology)

A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream

A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders

On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions

See Redoximorphic features.

Irrigation

Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin: Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border: Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding: Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation: Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle): Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow: Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler: Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation: Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding: Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame

A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; by a supraglacial stream in a low place or hole on the surface of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.

Karst (topography)

A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

Knoll

A small, low, rounded hill rising above adjacent landforms.

Ksat

See Saturated hydraulic conductivity.

Lacustrine deposit

Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake plain

A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace

A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Landfill (map symbol)

An area of accumulated waste products of human habitation, either above or below natural ground level.

Landslide

A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones

Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Lava flow (map symbol)

A solidified, commonly lobate body of rock formed through lateral, surface outpouring of molten lava from a vent or fissure.

Leaching

The removal of soluble material from soil or other material by percolating water.

Levee (map symbol)

An embankment that confines or controls water, especially one built along the banks of a river to prevent overflow onto lowlands.

Linear extensibility

Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit

The moisture content at which the soil passes from a plastic to a liquid state.

Loam

Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess

Material transported and deposited by wind and consisting dominantly of silt-sized particles.

Low strength

The soil is not strong enough to support loads.

Low-residue crops

Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl

An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Marsh or swamp (map symbol)

A water-saturated, very poorly drained area that is intermittently or permanently covered by water. Sedges, cattails, and rushes are the dominant vegetation in marshes, and trees or shrubs are the dominant vegetation in swamps. Not used in map units where the named soils are poorly drained or very poorly drained.

Mass movement

A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses

See Redoximorphic features.

Meander belt

The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.

Meander scar

A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.

Meander scroll

One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.

Mechanical treatment

Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil

Very fine sandy loam, loam, silt loam, or silt.

Mesa

A broad, nearly flat topped and commonly isolated landmass bounded by steep slopes or precipitous cliffs and capped by layers of resistant, nearly horizontal rocky material. The summit width is characteristically greater than the height of the bounding escarpments.

Metamorphic rock

Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth’s crust. Nearly all such rocks are crystalline.

Mine or quarry (map symbol)

An open excavation from which soil and underlying material have been removed and in which bedrock is exposed. Also denotes surface openings to underground mines.

Mine spoil

An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

Mineral soil

Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage

Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area

A kind of map unit that has little or no natural soil and supports little or no vegetation.

Miscellaneous water (map symbol)

Small, constructed bodies of water that are used for industrial, sanitary, or mining applications and that contain water most of the year.

Moderately coarse textured soil

Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil

Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon

A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine

In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, recessional, and terminal.

Morphology, soil

The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil

Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain

A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.

Muck

Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mucky peat

See Hemic soil material.

Mudstone

A blocky or massive, fine grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.

Munsell notation

A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon

A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil

A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules

See Redoximorphic features.

Nose slope (geomorphology)

A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant

Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter

Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low: Less than 0.5 percent
Low: 0.5 to 1.0 percent
Moderately low: 1.0 to 2.0 percent
Moderate: 2.0 to 4.0 percent
High: 4.0 to 8.0 percent
Very high: More than 8.0 percent

Outwash

Stratified and sorted sediments (chiefly sand and gravel) removed or “washed out” from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

Outwash plain

An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Paleoterrace

An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan

A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material

The unconsolidated organic and mineral material in which soil forms.

Peat

Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped

An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment

A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

Pedon

The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation

The movement of water through the soil.

Perennial water (map symbol)

Small, natural or constructed lakes, ponds, or pits that contain water most of the year.

Permafrost

Ground, soil, or rock that remains at or below 0 degrees C for at least 2 years. It is defined on the basis of temperature and is not necessarily frozen.

pH value

A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil

A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping

Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting

Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit

The moisture content at which a soil changes from semisolid to plastic.

Plasticity index

The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau (geomorphology)

A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Playa

The generally dry and nearly level lake plain that occupies the lowest parts of closed depressions, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff. Playa deposits are fine grained and may or may not have a high water table and saline conditions.

Plinthite

The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan

A compacted layer formed in the soil directly below the plowed layer.

Ponding

Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded

Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings

See Redoximorphic features.

Potential native plant community

See Climax plant community.

Potential rooting depth (effective rooting depth)

Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning

Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil

The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil

A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use

Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Rangeland

Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil

A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid: Less than 3.5
Extremely acid: 3.5 to 4.4
Very strongly acid: 4.5 to 5.0
Strongly acid: 5.1 to 5.5
Moderately acid: 5.6 to 6.0
Slightly acid: 6.1 to 6.5
Neutral: 6.6 to 7.3
Slightly alkaline: 7.4 to 7.8
Moderately alkaline: 7.9 to 8.4
Strongly alkaline: 8.5 to 9.0
Very strongly alkaline: 9.1 and higher

Red beds

Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations

See Redoximorphic features.

Redoximorphic depletions

See Redoximorphic features.

Redoximorphic features

Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
   A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*
   B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix

See Redoximorphic features.

Regolith

All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief

The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material)

Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill

A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Riser

The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut

A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments

Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rock outcrop (map symbol)

An exposure of bedrock at the surface of the earth. Not used where the named soils of the surrounding map unit are shallow over bedrock or where “Rock outcrop” is a named component of the map unit.

Root zone

The part of the soil that can be penetrated by plant roots.

Runoff

The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil

A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Saline spot (map symbol)

An area where the surface layer has an electrical conductivity of 8 mmhos/cm more than the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has an electrical conductivity of 2 mmhos/cm or less.

Sand

As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone

Sedimentary rock containing dominantly sand-sized particles.

Sandy spot (map symbol)

A spot where the surface layer is loamy fine sand or coarser in areas where the surface layer of the named soils in the surrounding map unit is very fine sandy loam or finer.

Sapric soil material (muck)

The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (Ksat)

The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "Ksat." Terms describing saturated hydraulic conductivity are:

Very high: 100 or more micrometers per second (14.17 or more inches per hour)

High: 10 to 100 micrometers per second (1.417 to 14.17 inches per hour)

Moderately high: 1 to 10 micrometers per second (0.1417 inch to 1.417 inches per hour)

Moderately low: 0.1 to 1 micrometer per second (0.01417 to 0.1417 inch per hour)

Low: 0.01 to 0.1 micrometer per second (0.001417 to 0.01417 inch per hour)

Very low: Less than 0.01 micrometer per second (less than 0.001417 inch per hour).

To convert inches per hour to micrometers per second, multiply inches per hour by 7.0572. To convert micrometers per second to inches per hour, multiply micrometers per second by 0.1417.

Saturation

Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification

The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock

A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum

A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil

A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Severely eroded spot (map symbol)

An area where, on the average, 75 percent or more of the original surface layer has been lost because of accelerated erosion. Not used in map units in which “severely eroded,” “very severely eroded,” or “gullied” is part of the map unit name.

Shale

Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion

The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Short, steep slope (map symbol)

A narrow area of soil having slopes that are at least two slope classes steeper than the slope class of the surrounding map unit.

Shoulder

The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell

The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Shrub-coppice dune

A small, streamlined dune that forms around brush and clump vegetation.

Side slope (geomorphology)

A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica

A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio

The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt

As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone

An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils

Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole (map symbol)

A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index

A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic)

Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slide or slip (map symbol)

A prominent landform scar or ridge caused by fairly recent mass movement or descent of earthy material resulting from failure of earth or rock under shear stress along one or several surfaces.

Slope

The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slope alluvium

Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill

The slow filling of ponds, resulting from restricted water transmission in the soil.

Slow water movement

Restricted downward movement of water through the soil. See Saturated hydraulic conductivity.

Sodic (alkali) soil

A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodic spot (map symbol)

An area where the surface layer has a sodium adsorption ratio that is at least 10 more than that of the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has a sodium adsorption ratio of 5 or less.

Sodicity

The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^{+} to Ca^{++} + Mg^{++}. The degrees of sodicity and their respective ratios are:

Slight: Less than 13:1

Moderate: 13-30:1

Strong: More than 30:1

Sodium adsorption ratio (SAR)

A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock

Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil

A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates

Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand: 2.0 to 1.0

Coarse sand: 1.0 to 0.5

Medium sand: 0.5 to 0.25

Fine sand: 0.25 to 0.10

Very fine sand: 0.10 to 0.05

Silt: 0.05 to 0.002

Clay: Less than 0.002

Solum

The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Spoil area (map symbol)

A pile of earthy materials, either smoothed or uneven, resulting from human activity.

Stone line

In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones

Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony

Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stony spot (map symbol)

A spot where 0.01 to 0.1 percent of the soil surface is covered by rock fragments that are more than 10 inches in diameter in areas where the surrounding soil has no surface stones.

Strath terrace

A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

Stream terrace

One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping

Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil

The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are:

Platy: Flat and laminated
Prismatic: Vertically elongated and having flat tops
Columnar: Vertically elongated and having rounded tops
Angular blocky: Having faces that intersect at sharp angles (planes)
Subangular blocky: Having subrounded and planar faces (no sharp angles)
Granular: Small structural units with curved or very irregular faces

Structureless soil horizons are defined as follows:

Single grained: Entirely noncoherent (each grain by itself), as in loose sand
Massive: Occurring as a coherent mass

Stubble mulch

Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil

Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling

Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum

The part of the soil below the solum.

Subsurface layer

Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow

The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit

The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer

The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

Surface soil

The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus

Rock fragments of any size or shape (commonly coarse and angular) derived from and lying at the base of a cliff or very steep rock slope. The accumulated mass of such loose broken rock formed chiefly by falling, rolling, or sliding.

Taxadjuncts

Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terminal moraine

An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.

Terrace (conservation)

An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology)

A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Terracettes

Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

Texture, soil

The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer

Otherwise suitable soil material that is too thin for the specified use.

Till

Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.

Till plain

An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.

Tilth, soil

The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope

The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil

The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements

Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread

The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Tuff

A generic term for any consolidated or cemented deposit that is 50 percent or more volcanic ash.

Upland

An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill

The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation

Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve

A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Very stony spot (map symbol)

A spot where 0.1 to 3.0 percent of the soil surface is covered by rock fragments that are more than 10 inches in diameter in areas where the surface of the surrounding soil is covered by less than 0.01 percent stones.

Water bars

Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering

All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth’s surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded

Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wet spot (map symbol)

A somewhat poorly drained to very poorly drained area that is at least two drainage classes wetter than the named soils in the surrounding map unit.

Wilting point (or permanent wilting point)

The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow

The uprooting and tipping over of trees by the wind.

Appendix C
Wetland Delineation Report

Davey Resource Group

WETLAND DELINEATION REPORT
EC ARGIBUSINESS PARK – WETLAND A
TOWN OF ANGOLA

PREPARED FOR
WENDEL COMPANIES

CLIENT:
WENDEL COMPANIES
375 ESSJAY ROAD
BUFFALO, NEW YORK 14221

PROJECT NAME:
EC ARGIBUSINESS PARK – WETLAND A

PROJECT LOCATION:
NORTH OF AND ADJACENT TO EDEN EVANS CENTER ROAD
TOWN OF ANGOLA
ERIE COUNTY, NEW YORK

ACTION:
SECTION 404 WETLAND DELINEATION REPORT

PREPARED BY:
DAVEY RESOURCE GROUP, INC.
750 ENSMINGER ROAD, SUITE 100
TONAWANDA, NEW YORK 14150
OFFICE (716) 565-3000

DATE:
10 / 26 / 2023

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EXECUTIVE SUMMARY

Davey Resource Group, Inc. (DRG) (*formerly Wilson Environmental Technologies, Inc* (WET)), has been retained by *Wendel Companies* to evaluate and define wetlands subject to jurisdiction under Section 404 of the Clean Water Act and Article 24 of the New York State Environmental Conservation Law on lands located north of adjacent to Eden Evans Center Road, in the Town of Angola, Erie County. The site was delineated by *WET* in 2021. A topographic survey (Appendix D) of the site indicated a hydrological separation within Wetland A. DRG completed a secondary delineation of Wetland A in 2023. This report is reflective of the original 2021 delineation in conjunction with the 2023 investigation which effectively separates Wetland A into individual wetlands **A-North** and **A-South**.

The delineation of State and Federal wetlands was conducted over several days in November 2021 and again in July 2023. The field investigation identified six (6) wetlands within the site. The wetland delineation results were based on the presence of hydric soils, hydrophytic vegetation and wetland hydrology found within the project boundaries. The wetlands were flagged at the time of the fieldwork and the locations of the wetlands were recorded using a Trimble R1 GNSS Receiver with sub-meter accuracy. The site wetlands are depicted on the attached Wetland Map in Appendix D.

The parcel consists of the Eden-Angola Airport, which was a privately owned public-use airport. The airport was abandoned in the early 2000s. The parcel was purchased by the Erie County Industrial Development Agency with the intention of developing an industrial agricultural park. Of the 243± acres, approximately 42± acres has been developed (buildings/pavement) or is otherwise disturbed (cut/fill).

The parcel is L-shaped and surrounded largely by undeveloped land. An intermittent tributary to Little Sister Creek flows through the southeastern corner of the site. Wetlands were observed in the undeveloped areas of the site, predominantly in the eastern woodlands.

This report is intended for the use of the property owner(s), their agents and assigns as a planning aid in the development of this parcel. Results of the Wetland Delineation are subject to review by both the New York State Department of Environmental Conservation under Article 24 of the NYS Environmental Conservation Law, and the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, along with the Town of Angola. This Wetland Delineation Report is a representation of WET's assessment of Federal and State wetlands. The review of this document by the U.S. Army Corps of Engineers and State Department of Conservation could produce alterations in the delineated boundary as determined by DRG. The wetlands, as delineated by DRG, were completed to the best of our ability and in compliance with the guidelines presented in the Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1 (U.S. Waterways Experiment Station, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, dated January 2012; accepted as the current methodology in delineation practice.

1.0 INTRODUCTION

Davey Resource Group, Inc. (DRG), formerly *Wilson Environmental Technologies, Inc*. (WET) has been retained by *Wendel Companies* to evaluate and define wetlands subject to jurisdiction under Section 404 of the Clean Water on a 243.37± acre area in the Town of Angola, Erie County, New York. (This report presents the results of the on-site field investigation which was conducted to determine if the United States Army Corps of Engineers (USACE) and New York State Department of Environmental Conservation (NYSDEC) permit relative to Section 404 of the Clean Water Act and Article 24 of the New York State Environmental Conservation Law would be required for further development of the parcel. Based on the results of the investigation, DRG determined that six (6) wetlands are located within the site. The determination was based on the presence of hydric soils, hydrophytic vegetation and wetland hydrology.

The site was delineated by WET in 2021. A topographic survey of the site indicated a hydrological separation within Wetland A. DRG completed a secondary delineation of Wetland A in 2023. This report is reflective of the original delineation conducted in 2021, in conjunction with the 2023 investigation which effectively separated Wetland A into individual wetlands **A-North** and **A-South**.

The subject parcel is located north of and adjacent to Eden Evans Center Road in the Town of Angola, New York. The parcel consists of the Eden-Angola Airport, which was a privately owned public-use airport. The airport was abandoned in the early 2000s. The parcel was purchased by the Erie County Industrial Development Agency with the intention of developing an industrial agricultural park. Of the 243± acres, approximately 42± acres has been developed (buildings/pavement) or is otherwise disturbed (cut/fill). The parcel is L-shaped and surrounded largely by undeveloped land. An intermittent tributary to Little Sister Creek flows through the southeastern corner of the site. The results of the Wetland Delineation was surveyed and contained in Appendix D of this report.

1.1 CURRENT REGULATION

The Code of Federal Regulations defines a wetland as an area having hydric soils, wetland hydrology and supporting vegetation dominated by hydrophytes. All three of these criteria must be present for an area to qualify as a wetland. Hydrophytic vegetation has been defined as species which due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. These species have been given an indicator status defining their probability of occurring in a wetland. These indicators statuses are defined as Obligate Wetland (OBL), Facultative Wetland (FACW) and Facultative (FAC). Non-hydrophytic species are assigned an indicator status of Facultative Upland (FACU) or Obligate Upland (UPL).

DRG performs wetland delineations in accordance with the 1987 *Corps of Engineers Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, dated January 2012. The development of this supplement follows the recommendations of the National Research Council to increase the regional sensitivity of wetland delineation methods.

With the issuance of the Federal Register, the U.S. Army Corps of Engineers reissued it Nationwide Permit program (NWP). The reason for the amendment was to reduce the impacts to wetland as well as reduce the regulatory effort expended in governing the activities associated with minimal environmental impacts. These amendments went into effect on March 23, 2021 when the Corps of Engineers reissued the existing NWPs.

In *Sackett Vs. U.S. Environmental Protection Agency,* the Supreme Court ruled unanimously that the CWA extends only to "wetlands with a continuous surface connection to [water]bodies that are WOTUS in their own right," so that they are "indistinguishable" from those waters. That is, wetlands that do not have a **continuous surface connection** with a navigable water are not federally jurisdictional. It is not enough that the wetland is "neighboring" to navigable waters – it must be connected.

Justice Alito made the further requirement to assert jurisdiction, stating a two-part determination, as follows: “first. That the adjacent [body of water constitutes] … water[s] of the United States,’ (i.e., a relatively permanent body of water connected to traditional interstate navigable waters); and second, that the wetland has a continuous surface connection with that body of water…”. This *may* eliminate the use of intermittent streams as a proper connection to navigable waters, but at this time the U.S. EPA has not release official field guidance to clarify the new ruling.

2.0 AGENCY RESOURCE INFORMATION

Prior to initiation of the on-site investigation, available environmental information was gathered and reviewed. The results of the review are summarized as follows.

2.1 USGS QUADRANGLE MAP (FIGURE 1)

The U.S. Geological Service has produced geological maps for every county of the United States. These maps are useful in wetland delineation for the purpose of identifying areas of concern within a parcel. In addition to civil works and boundaries, indicators of marshes, swamps, perennial and intermittent streams, and contours are depicted. The Eden, NY Quadrangle was referenced for this site.

2.2 NATIONAL WETLANDS INVENTORY MAP (FIGURE 2)

NWI maps were produced by the U.S. Department of the interior, Fish and Wildlife Service in the years 1977 to present day. These maps provide the approximate configurations and community types of suspected Federal wetlands. Although they serve as useful guidelines, they are incomplete due to compilation methods primary utilizing aerial photography which contain an inherent margin of error, only reflect conditions the year in which they were taken and some wetlands areas too small of obscured by dense forest may not be depicted. The U.S. Fish & Wildlife Services Wetland Mapper was referenced for this site. Federal wetlands are mapped within the western and southeastern regions of the site.

2.3 NYSDEC FRESHWATER WETLANDS MAP (FIGURE 3)

The New York State Department of Environmental Conservation (DEC) has developed criterion for wetland identification based on vegetation cover with minimum acreage requirements. Identified wetlands have been promulgated with the production and distribution of Freshwater Wetlands Maps (FWW). The boundaries of identified wetlands are approximations and require surveying of a field delineation performed by a DEC representative to determine exact boundaries and acreage. The NYSDEC Environmental Resource Mapper was referenced for this site. No NYS regulated wetlands are mapped within the subject site.

2.4 NRCS SOILS MAP (FIGURE 4)

The Natural Resources Conservation Service (former U.S. Soil Conservation Service) has performed a soils identification study on a county by county basis. Aerial photography plates have been utilized in conjunction with field testing to identify soil types and locations in various counties. The results have been compiled and published in county-specific Soil Surveys. Also included in the surveys is information pertaining to the various soils identified within the county which includes, but is not limited to, texture, range of chroma colors, range of mottle colors, subgroup and drainage classification. Most counties in New York State have been completed and published, though a few are still in progress. The NRCS Web Soil Survey along with the Soil Survey of Erie County was referenced to determine the likelihood of encountering soils with hydric characteristic or which may contain hydric inclusions.

The following soil series are mapped within the limits of the delineation area:

SYMBOL	SERIES	DRAINAGE
CoA	Churchville silt loam	Somewhat poor
DbA	Darien silt loam	Somewhat poor
DdA	Derb silt loam	Somewhat poor
OrA	Orpark silt loam	Somewhat poor
RfA	Remsen silt loam	Somewhat poor

The soil symbols associated with the detailed soils map indicates the soil series and the slope associated with that mapped unit. For example, Co identified the soil series as Churchville. The last capital letter of any symbol identifies the slope range for that soil unit. A represents a slope of 0 to 3 percent, B represents 3 to 8 percent slope, C represents 8 to 15 percent, D corresponds to a slope of 15 to 25 percent and E represents a slope of 25 to 35 percent. No third letter designation indicates no slope or nearly level.

The Churchville series consists of deep, somewhat poorly drained soils that formed in thin deposits of fine textured glacial lake sediments underlain by glacial-till found on glacial till plains. Slope ranges from 0 to 8 percent but is dominantly 0 to 3 percent. Soil colorations in the B Horizon are a reddish brown 5YR4/4 with common medium distinct yellowish red 5YR5/6 and light gray 10YR6/1 mottling. The B2 Horizon of these soils has a hue ranging from 5YR to 2.5YR, value of 4 through 5, and chroma of 2 through 4. Texture is silty clay loam in the B Horizon. The Ap Horizon is a very dark brown 10YR3/2 silt loam. Associated soils include Odessa, Lakemont, Remson, Darien and Rhinebeck soils.

The Darien series consists of deep, somewhat poorly drained soils found on till plains and in some valleys. This soil formed in glacial till deposits derived principally from moderately soft shale. In some areas, these soils have a silty stratum. A few areas were once part of glacial lakes. Slope ranges from 0 to 15 percent but is dominantly 0 to 3 percent. Soil colorations in the B Horizon are an olive brown 2.5Y5/3 with few faint light olive brown 2.5Y5/3 and 5/4 mottling. The B2 Horizon of these soils has a hue ranging from 10YR to 5Y value of 2 through 4, and chroma of 2 through 4. Texture is silt loam. The Ap Horizon is a very dark brown 10YR4/2 silt loam. Associated soils include Honeoye, Langford, Remson, and Rhinebeck soils.

The Derb series consists of deep and very deep, somewhat poorly drained, slowly permeable soils formed in silty glacial till containing a few soft shale or siltstone fragments. They are nearly level to sloping soils on till plains and glaciated dissected plateaus. Slopes range from 0 to 15 percent. The Ap horizon has a hue of 10YR or 2.5Y, value 3 and 4 and chroma of 2 or 3. The B horizon has hue of 10YR through 5Y, value of 4 through 6, and chroma of 2 through 4. Associated soils include Fremont, Hornell, and Orpark series.

The Orpark series consists of a moderately deep, somewhat poorly drained soils on plateau crests and summits in the uplands. These soils formed in a thin mantle of glacial till underlain by weathered soft shale bedrock. Slopes range from 0 to 15 percent. Soil colorations in the B Horizon are a dark grayish brown 2.5Y5/4, with common 2.5Y5/6 mottles and few light brownish gray 2.5Y5/2 mottles with 10 percent coarse fragments. The B2 Horizon of these soils has a hue ranging from 7.5YR to 2.5Y, value of 4 through 5, and chroma of 2 through 4. Texture is silt clay loam. The Ap Horizon is a very dark grayish brown 10YR3/2 silt loam. Associated soils include Derb, Hornell, and Angola.

The Remsen series consists of deep, somewhat poorly drained soils on till plains in the northern and western part of the county. This soil formed in clayey glacial till deposits. Slope ranges from 0 to 15 percent, but 0 to 8 percent is most common. The Ap Horizon is a dark brown 10YR4/2 silt loam. Soil colorations in the B Horizon consist of a dark grayish brown 2.5Y4/2 with common fine distinct yellowish brown 10YR4/4 and olive brown 2.5Y4/4 mottles. The B2 Horizon has a hue of 2.5Y or 5Y, values of 4 to 5, and chroma of 2 to 4. Texture in the B2 horizon is silty clay or clay. Associated soils include Darien, Derb, Erie, Brockport, and Canadice soils.

2.5 AGENCY RESOURCE CONCLUSIONS

The mapping of federal wetlands and somewhat poorly drained soils indicated the necessity to perform a field investigation at the site to ascertain the extent of any federally protected wetlands that may exist on the parcel. The wetlands delineation was performed in accordance with the 1987 *Corps of Engineers Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, dated January 2012. Procedures, results and conclusions of the wetland delineation field study are presented in the remainder of this report.

3.0 SITE DESCRIPTION

The subject site consists of 248.37± acres of land situated north of and adjacent to Eden Evans Center Road (Figure 1). The site is located in a largely rural region in the Town of Angola. The parcel is L-shaped and surrounded largely by undeveloped land. The parcel consists of the Eden-Angola Airport, which was a privately owned public-use airport. The airport was abandoned in the early 2000s. Large portions of the site consist of paved asphalt, including the main runway, which spans north/south through the central area of the site. Approximately 42± acres has been developed (buildings/pavement) or is otherwise disturbed (cut/fill).

Drainage ditches parallel the eastern side of the main runway. A culvert below the main runway carries drainage from Wetland A to Wetland D and continues off-site to the west.

An intermittent tributary to Little Sister Creek flows through the southeastern corner of the site. The tributary meets Little Sister Creek northeast of the site before the creek flows west towards Lake Erie.

The topography of the site is slightly convex, sloping slightly to the east and west. The east-central region of the site has the highest elevation, at approximately 710 feet AMSL (Above Mean Sea Level); this slope down to below 680 feet AMSL at the site's lowest point in the western region of the site, according to the USGS Eden Quadrangle (Figure 1).

3.1 SITE ECOLOGY

The parcel consists of many different natural vegetation communities, spanning from mature hardwood forest to shrubby marshlands. Wetlands found throughout the site were predominantly a mix of forested and scrub/shrub, particularly throughout the eastern and western regions of the site.

Upland areas of the site are dominated by sugar maple (*Acer saccharum*, FACU), white pine (*Pinus strobus*, FACU), and paper birch (*Betula papyrifera*, FACU) in the tree stratum; with honeysuckle (*Lonicera tartarica*, FACU), Allegheny blackberry (*Rubus allegheniensis*, FACU), rambler rose (Rosa multiflora, FACU) and American hornbeam (*Carpinus caroliniana*, FAC) dominant in the shrub /sampling stratum. Dominant species found in the herbaceous stratum include woodland grooveburr (*Agrimonia striata*, FACU), red fescue (*Festuca rubra*, FACU), Virginia strawberry (*Fragaria virginiana*, FACU), Kentucky bluegrass (*Poa pratensis*, FACU), common cinquefoil (*Potentilla simplex*, FACU), Canada goldenrod (*Solidago canadensis*, FACU), and poison ivy (*Toxicodendron radicans*, FAC).

Wetland A-North is defined by red maple (*Acer rubrum*, FAC), green ash (*Fraxinus pennsylcanica*, FACW), black gum (*Nyssa sylvatica*, FAC), and American elm (*Ulmus Americana*, FAC) in the tree stratum; with silky dogwood (*Cornus amomum*, FACW), and Common buckthorn (*Rhamnus cathartica*, FAC) in the shrub strata. Dominant species in the herbaceous stratum include cottongrass bulrush (*Scirpus cyperinus*, OBL), fox sedge (*Carex vulpinoidea*, OBL), sensitive fern (*Onoclea sensibilis*, FACW), Harvestlice (*Agroimonia parviflora*, FAC), melic manna grass (*Glyceria melicaria*, OBL), and lamp rush (*Juncus effusus*, OBL).

Wetland A-South is defined by red maple (*Acer rubrum*, FAC) and green ash (*Fraxinus pennsylcanica*, FACW) in the tree stratum; with red osier dogwood

(*Cornus alba*, FACW) in the shrub strata. Dominant species in the herbaceous stratum include white panicled aster (*Symphyotrichum lanceolatum*, FACW), fox sedge (*Carex vulpinoidea*, OBL), sensitive fern (*Onoclea sensibilis*, FACW), Purple stem aster (*Symphyotrichum puniceum*, OBL), melic manna grass (*Glyceria melicaria*, OBL), and poison ivy (*Toxicodendron radicans*, FAC).

Wetland B is defined by green ash (*Fraxinus pennsylvanica*, FACW) and silky dogwood (*Cornus amomum*, FACW) and smooth arrowwood (*Viburnum recognitum*, FAC) in the tree and shrub strata. Dominant species identified in the herbaceous stratum include hop sedge (*Carex lupulina,* OBL), rough avens (*Geum laciniatum*, FACW), and melic manna grass (*Glyceria melicaria*, OBL).

Wetland C is defined by silky dogwood (*Cornus amomum*, FACW), pussy willow (*Salix discolor*, FACW) and eastern cottonwood (*Populus deltoides*, FAC) in the shrub and sapling stratum. Dominant species identified in the herbaceous stratum include late goldenrod (*Solidago gigantea*, FACW), and reed canary grass (*Phalaris arundinacea*, FACW).

Wetland D is defined by red maple (*Acer rubrum*, FAC) in the tree stratum; with silky dogwood (*Cornus amomum*, FACW) in the shrub stratum. Dominant species identified in the herbaceous stratum include rough avens (*Geum laciniatum*, FACW), melic manna grass (*Glyceria melicaria*, OBL), wrinkleleaf goldenrod (*Solidago rugosa*, FAC), and bristly dewberry (*Rubus hispidus*, FACW).

Wetland E is defined by green ash (*Fraxinus pennsylvanica*, FACW) in the tree stratum; with silky dogwood (*Cornus amomum*, FACW) and pussy willow (*Salix discolor*, FACW) dominant in the shrub stratum. Dominant species identified in the herbaceous stratum include sweet-scented joe-pye-weed (*Eutrochium pupureum*, FAC), melic manna grass (*Glyceria melicara*, OBL), bristly dewberry (*Rubus hispidus*, FACW), and wrinkleleaf goldenred (*Solidago rugosa*, FAC).

A complete list of vegetation identified on both parcels is presented in *Table 1* of this report.

4.0 METHODS

The Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (U.S. Army Corps of Engineers 2012) were used in delineating wetlands within the study area. The water resources were delineated and surveyed in November 2021 and July, 2023. The water resources delineation fieldwork, boundary mapping, and data analysis were performed by Ryan Feickert, a professional wetland scientist, as well as Donald Wilson, and Daniel Wilson.

Streams are identified as linear, flowing water features with a defined bed and bank. Streams are classified as ephemeral, intermittent, or perennial based upon flow regime. Ephemeral streams have flowing water only during, and for a short duration after, precipitation events. Intermittent streams have flowing water during certain times of the year, when groundwater and rainfall provide water for stream flow. During dry periods, intermittent streams may not have flowing water. Perennial streams have flowing water year-round, receiving water from groundwater and rainfall runoff.

Wetlands are identified based on three criteria: vegetation, soils, and hydrology. An area must meet all three criteria to be considered a jurisdictional wetland. Three sampling points were established in the field to determine wetlands boundaries. Data sheets reporting the results of vegetation, soils, and hydrology analyses were completed for each sample point and are located in Appendix B.

Soil samples were obtained to determine the extent of hydric soils on the site. A standard Munsell soil color chart was used to determine the chroma, hue, and value of each soil sample. Soil samples were taken to a depth to adequately make a hydric soil determination. Criteria established by the National Technical Committee for Hydric Soils (1991) were used to determine hydric soils.

Wetland hydrology was characterized during this water resources delineation. Inundation and/or soil saturation were noted for each sample point. Other primary or secondary hydrological indicators, including watermarks, drift lines, sediment deposits, wetlands drainage patterns, blackened leaves, morphological indicators, iron/manganese concretions, and oxidized root zones within the upper soil layers, were documented, if observed.

Quantitative vegetation data were collected at each sampling point. Dominance was estimated by percent areal cover. Four strata were considered for each sample point—trees, saplings/shrubs, herbs, and woody vines. Trees were defined as any woody plant having a diameter at breast height (DBH) greater than 3.0 inches. Saplings and shrubs were those woody plants with a DBH of less than 3.0 inches and greater than 3.2 feet in height. For each stratum, plant species within a plot were identified and percent areal cover was estimated for each species. Thirty-foot-radius plots were used for trees and vines; 15-foot-radius plots were used for saplings and shrubs; and 5-foot-radius plots were used for herbs.

Any species within a stratum comprising 20% or more of the total plot areal cover was considered to be dominant. Dominant species within all strata were then added to determine the percentage of wetlands vegetation for each sample point. The wetlands vegetation criterion was met if greater than 50% of the dominant vegetation was indicative of wetlands conditions.

Species identifications were based on Braun (1989) and Gleason and Cronquist (1991). Lichvar et al. (2016) was used to assign indicator statuses to each identified species. Plants with an indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) were considered to be indicative of wetlands conditions. Plants with an indicator status of facultative upland (FACU) or upland (UPL) were considered to be indicative of upland conditions. Plants that could only be identified to genus were sometimes assigned an indicator status based on the professional judgment of Davey Resource Group. These plants were classified as wetlands indicator species (WIS) or upland indicator species (UIS). See Appendix H for a more detailed explanation of wetlands vegetation indicator statuses.

Marking flags were placed at necessary points around each wetland to accurately depict the wetland/upland boundary. The location of each flag was mapped using a Trimble® R1 Global Navigation Satellite System or GNSS (GPS, GLONASS, SBAS [WAAS]) receiver. It has 220 channels and runs professional TerraSync™ software capable of submeter accuracy after differential correction. Accuracy and reliability may be subject to anomalies due to multipath, obstructions, satellite geometry, and atmospheric conditions and as such a specific accuracy cannot be guaranteed in those situations.

The sample points, which support the location of the wetland/upland perimeter, were labeled with the first letter representing the wetland being sampled; the following number corresponds to the boundary flag in between the sample pair; the second letter signifies whether it is an upland (U) or wetland (W) sample; and the final number represents the order in which the samples were taken. Information on vegetation, soils, and hydrology was collected at each sample point and recorded on field data forms which are included as Appendix B of this report.

5.0 RESULTS & CONCLUSIONS

5.1 RESULTS

Fieldwork for the federal delineation was conducted over several days during November 2021 and July 2023. A total of 34 field points were sampled and recorded which support the location of the wetland/upland boundary. Based on the results of the sampling, six (6) wetlands were identified on the subject parcel.

Wetland A-North is located in the northeastern region of the site. Wetland A-North is classified as a mixed deciduous forest and shrub/scrub wetland that is seasonally flooded or saturated (PFO/SS1E). Wetland A-North is defined by red maple (*Acer rubrum*, FAC), green ash (*Fraxinus pennsylcanica*, FACW), black gum (*Nyssa sylvatica*, FAC), and American elm (*Ulmus Americana*, FAC) in the tree stratum; with silky dogwood (*Cornus amomum*, FACW), and Common buckthorn (*Rhamnus cathartica*, FAC) in the shrub strata. Dominant species in the herbaceous stratum include cottongrass bulrush (*Scirpus cyperinus*, OBL), fox sedge (*Carex vulpinoidea*, OBL), sensitive fern (*Onoclea sensibilis*, FACW), Harvestlice (*Agroimonia parviflora*, FAC), melic manna grass (*Glyceria melicaria*, OBL), and lamp rush (*Juncus effusus*, OBL). Hydrology within Wetland A-North appears to be derived from precipitation in combination with areas of hydric soils and topographical relief. Positive hydrology indicators identified in Wetland A-North include high water table, oxidized rhizospheres on living roots, and saturated soil conditions. The area of Wetland A-North totals 26.33± acres.

Wetland A-South is located in the southeastern region of the site. Wetland A-South is also classified as a mixed deciduous forest and shrub/scrub wetland that is seasonally flooded or saturated (PFO/SS1E).Wetland A-South is defined by red maple (*Acer rubrum*, FAC) and green ash (*Fraxinus pennsylcanica*, FACW) in the tree stratum; with red osier dogwood (*Cornus alba*, FACW) in the shrub strata. Dominant species in the herbaceous stratum include white panicled aster (*Symphyotrichum lanceolatum*, FACW), fox sedge (*Carex vulpinoidea*, OBL), sensitive fern (*Onoclea sensibilis*, FACW), Purple stem aster (*Symphyotrichum puniceum*, OBL), melic manna grass (*Glyceria melicaria*, OBL), and poison ivy (*Toxicodendron radicans*, FAC). Hydrology within Wetland A-South appears to be derived from precipitation in combination with areas of hydric soils and topographical relief. Positive hydrology indicators identified in Wetland A-South include high water table, oxidized rhizospheres on living roots, and saturated soil conditions. The area of Wetland A-South totals 35.65± acres.

Wetland B is located in the southern region of the site, west of Wetland B and south of Wetland C. Wetland B is classified as a mixed forested and shrub/scrub wetland that is seasonally flooded or saturated (PFO/SS1E). Wetland B is defined by green ash (*Fraxinus pennsylvanica*, FACW) and silky dogwood (*Cornus amomum*, FACW) and smooth arrowwood (*Viburnum recognitum*, FAC) in the tree and shrub strata. Dominant species identified in the herbaceous stratum include hop sedge (*Carex lupulina,* OBL), rough avens (*Geum laciniatum*, FACW), and melic manna grass (*Glyceria melicaria*, OBL). Hydrology in Wetland B appears to be derived from precipitation and poor drainage due to disturbance to the surrounding area. Positive hydrology indicators observed in Wetland B include high water table and saturated soil conditions. The area of Wetland B totals 1.24± acres.

Wetland C is located in the south-central region of the site, north of Wetland B. Wetland C is classified as a deciduous shrub/scrub wetlands with saturated soils

(PSS1B). Wetland C is defined by silky dogwood (*Cornus amomum*, FACW), pussy willow (*Salix discolor*, FACW) and eastern cottonwood (*Populus deltoides*, FAC) in the shrub and sapling stratum. Dominant species identified in the herbaceous stratum include late goldenrod (*Solidago gigantea*, FACW), and reed canary grass (*Phalaris arundinacea*, FACW). Hydrology in Wetland C appears to be derived from precipitation and poor drainage due to disturbance to the surrounding area. Positive hyrology indicators identified in Wetland C include high water table and saturated soil conditions. Total area of Wetland C totals 2.46± acres.

Wetland D is located along the western edge of the site and continues off-site to the west. Wetland D is classified as a deciduous forest wetland with saturated soils (PFO1B). Wetland D is defined by red maple (*Acer rubrum*, FAC) in the tree stratum; with silky dogwood (*Cornus amomum*, FACW) in the shrub stratum. Dominant species identified in the herbaceous stratum include rough avens (*Geum laciniatum*, FACW), melic manna grass (*Glyceria melicaria*, OBL), wrinkleleaf goldenrod (*Solidago rugosa*, FAC), and bristly dewberry (*Rubus hispidus*, FACW). Hydrology in Wetland D appears to be derived from precipitation, run-off from surrounding uplands, and poor drainage. Positive hydrology indicators observed in Wetland D include water-stained leaves, high water table, and saturated soil conditions. The on-site area of Wetland D totals 6.2± acres.

Wetland E is located in the northwestern region of the site. Wetland E is classified as a mixed deciduous forest and scrub/shrub wetland with saturated soils (PFO/SS1B). Wetland E is defined by green ash (*Fraxinus pennsylvanica*, FACW) in the tree stratum; with silky dogwood (*Cornus amomum*, FACW) and pussy willow (*Salix discolor*, FACW) dominant in the shrub stratum. Dominant species identified in the herbaceous stratum include sweet-scented joe-pye-weed (*Eutrochium pupureum*, FAC), melic manna grass (*Glyceria melicara*, OBL), bristly dewberry (*Rubus hispidus*, FACW), and wrinkleleaf goldenred (*Solidago rugosa*, FAC). Hydrology in Wetland E appears to be derived from precipitation in combination with poorly drained soils and topographical relief. Positive hydrology indicators in Wetland E include high water table, saturated and inundated soil conditions. The on-site areas of Wetland E totals 18.64± acres.

Soils sampled in upland areas of the site corresponded well with the Remsen series. The Remsen series consists of deep, somewhat poorly drained soils on till plains in the northern and western part of the county. This soil formed in clayey glacial till deposits. Slope ranges from 0 to 15 percent, but 0 to 8 percent is most common.

Soils sampled in wetland areas of the site corresponded well with the Lakemont series. The Lakemont series consists of deep, poorly to very poorly drained soils in nearly level areas or in depressional areas of the lowland lake plain in the northern part of the county. These soils formed in reddish lacustrine deposits dominated by clay and silt. Slope ranges from 0 to 3 percent but is dominantly 0 to 1 percent.

5.2 CONCLUSIONS

Based on the results of the field investigation, six (6) wetlands have been identified on the parcel. The wetland areas are best defined as:

Wetlands	Cover Type	Connectivity to Waters of the U.S.[1]	Area (Acres)	Latitude/ Longitude
A-North	Forested	unlikely	26.33	42.66134 / -78.98719
A-South	Forested/Shrubland	possibly	36.65	42.65609 / -78.98572
B	Forested	isolated	1.24	42.65316 / -78.98678
C	Forested/Shrubland	isolated	2.46	42.65457 / -78.98746
D	Forested	unlikely	6.82	42.6588 / -78.99101
E	Forested	unlikely	18.64	42.66223 / -78.9959

Wetland A-North exists within the northeastern region of the site and drains west to Wetland D via a culvert under the main runway. It is not known whether a culvert constitutes a "continued surface connection" under the *Sackett V. EPA* ruling. Therefore, it is unknown whether the culvert below the runway conveys the jurisdiction of one wetland to another. Furthermore, Wetland A-North was not observed to have a continued surface connection with a relatively permanent waterway (RPW).

Wetland A-South drains to an intermittent tributary to Little Sister Creek, which flows through the southeastern corner of the parcel. The tributary flows north to Little Sister Creek, which flows west towards Lake Erie. It is DRG's opinion that the section of Little Sister Creek within the project parcel does not meet the standard of "relatively permanent."

Wetland B & C exist in the south and south-central regions of the site and are entirely surrounded by developed or previously disturbed land. Wetland B & C were not observed draining off site or connecting with other on-site wetlands.

Wetland D is located along the western boundary of the site and continues off-site to the west for an unknown distance. Wetland D receives drainage from Wetland A via a culvert under the main runway. No RPWs are mapped in the west area of Wetland D. It is unlikely that the wetland would have a continued surface connection with a RPW.

Wetland E is located in the northwestern region of the site and continues off-site to the north and west. Further investigation is needed to ascertain the full extent of this wetland. It is suspected that Wetland E drains west, via a culvert under the adjacent railroad tracks. It is not known whether the culvert constitutes a continued surface connection, or if the channel that drains from it meets the standard of a RPW.

No New York State Freshwater wetlands are currently mapped within the site. The New York State Department of Environmental Conservation requires a wetland be 12.4 acres in order to regulate under Article 24 of the Freshwater Wetlands Act. A jurisdictional determination will be made on Wetlands A-North, A-South, and E based on their quality and size.

Stream	Flow Regime	Length (Linear Feet)	Latitude / Longitude
1	Intermittent	708	42.65344 / -78.98371

Stream 1 is a tributary to Little Sister Creek and consists of 708-linear feet of intermittent stream, which begins at the southern site boundary and flows northeast across the southeastern corner of the site. The Stream 1 flows north, to Little Sister Creek, which flows west towards Lake Erie. Stream 1 is mapped as an intermittent stream and was observed to not have flow during the investigation of the site.

Davey Resource Group is confident that all jurisdictional wetlands and drainageways were identified on this site. No unusual or problem areas were found. All water resource studies conducted by Davey Resource Group are objective and based strictly on professional judgment. Davey Resource Group and its employees have no vested interest in this property or the proposed project.

All wetland delineations must be verified by the U.S. Army Corps of Engineers and New York State Department of Environmental Conservation to be considered official. This wetlands delineation is reflective of environmental conditions at the time the fieldwork was performed. Wetlands are dynamic natural systems; therefore, boundaries may change slightly over time.

As a result of our investigation, it is our professional opinion that none of the wetlands delineated onsite have a definitive continued surface connection to a relatively permanent waterway, and therefore these wetlands should not be considered Waters of the United States. It is the responsibility of the U.S. Army Corps of Engineers to verify the wetland boundary and make a jurisdictional determination.

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Table 1

Vegetation Table

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TABLE 1
Vegetation Identified
During Wetland Delineation

Scientific Name	Common Name	Federal Status
Herbaceous		
Agrimonia striata	Woodland groovebur	FACU
Asclepias syriaca	Common milkweed	UPL
Carex lacustris	Lakebank sedge	OBL
Carex laxiflora	Brood looseflower sedge	UPL
Carex lupulina	Hop sedge	OBL
Carex lurida	Shallow sedge	OBL
Carex vulpinoidea	Fox sedge	OBL
Daucus carota	Queen anne's lace	UPL
Dipsacus fullonum	Fuller's teasel	FACU
Euthamia graminifolia	Flat top goldentop	FAC
Eutrochium purpureum	Sweet scented joe pye weed	FAC
Festuca rubra	Red fescue	FACU
Fragaria virginiana	Virginia strawberry	FACU
Geum canadense	White avens	FAC
Geum laciniatum	Rough avens	FACW
Glyceria melicaria	Melic mannagrass	OBL
Juncus effusus	Lamp rush	OBL
Onoclea sensibilis	Sensitive fern	FACW
Persicaria arifolia	Halberd leaf tearthumb	OBL
Persicaria sagittata	Arrow leaf tearthumb	OBL
Phalaris arundinacea	Reed canary grass	FACW
Phleum pratense	Common timothy	FACU
Poa compressa	Flat stem bluegrass	FACU
Poa pratensis	Kentucky bluegrass	FACU
Potentilla simplex	Oldfield cinquefoil	FACU
Solidago altissima	Tall goldenrod	FACU
Solidago canadensis	Canada goldenrod	FACU
Solidago gigantea	Late goldenrod	FACW
Solidago rugosa	Wrinkle leaf goldenrod	FAC
Symphyotrichum lateriflorum	Farewell summer	FAC
Symphyotrichum pilosum	White oldfield american aster	FACU
Symphyotrichum puniceum	Purple stem american aster	OBL
Taraxacum officinale	Common dandelion	FACU
Shrub		
Cornus amomum	Silky dogwood	FACW
Cornus racemosa	Gray dogwood	FAC
Crataegus douglasii	Black hawthorn	FAC
Frangula alnus	Glossy false buckthorn	FAC

Shrub (Cont.)

Lonicera tatarica	Twinsisters	FACU
Rhamnus cathartica	European buckthorn	FAC
Rosa multiflora	Rambler rose	FACU
Rubus allegheniensis	Allegheny blackberry	FACU
Rubus flagellaris	Whiplash dewberry	FACU
Rubus hispidus	Bristly dewberry	FACW
Salix discolor	Pussy willow	FACW

Tree

Acer rubrum	Red maple	FAC
Acer saccharinum	Silver maple	FACW
Acer saccharum	Sugar maple	FACU
Betula papyrifera	Paper birch	FACU
Carpinus caroliniana	American hornbeam	FAC
Carya ovata	Shag bark hickory	FACU
Fagus grandifolia	American beach	FACU
Fraxinus americana	White ash	FACU
Fraxinus pennsylvanica	Green ash	FACW
Nyssa sylvatica	Black tupelo	FAC
Pinus strobus	Eastern white pine	FACU
Pinus sylvestris	Scots pine	FACU
Populus deltoides	Eastern cottonwood	FAC
Populus tremuloides	Quaking aspen	FACU
Prunus serotina	Black cherry	FACU
Ulmus americana	American elm	FACW

Vine

Toxicodendron radicans	Eastern poison ivy	FAC
Vitis aestivalis	Summer grape	FACU

Appendix A

Maps & Figures

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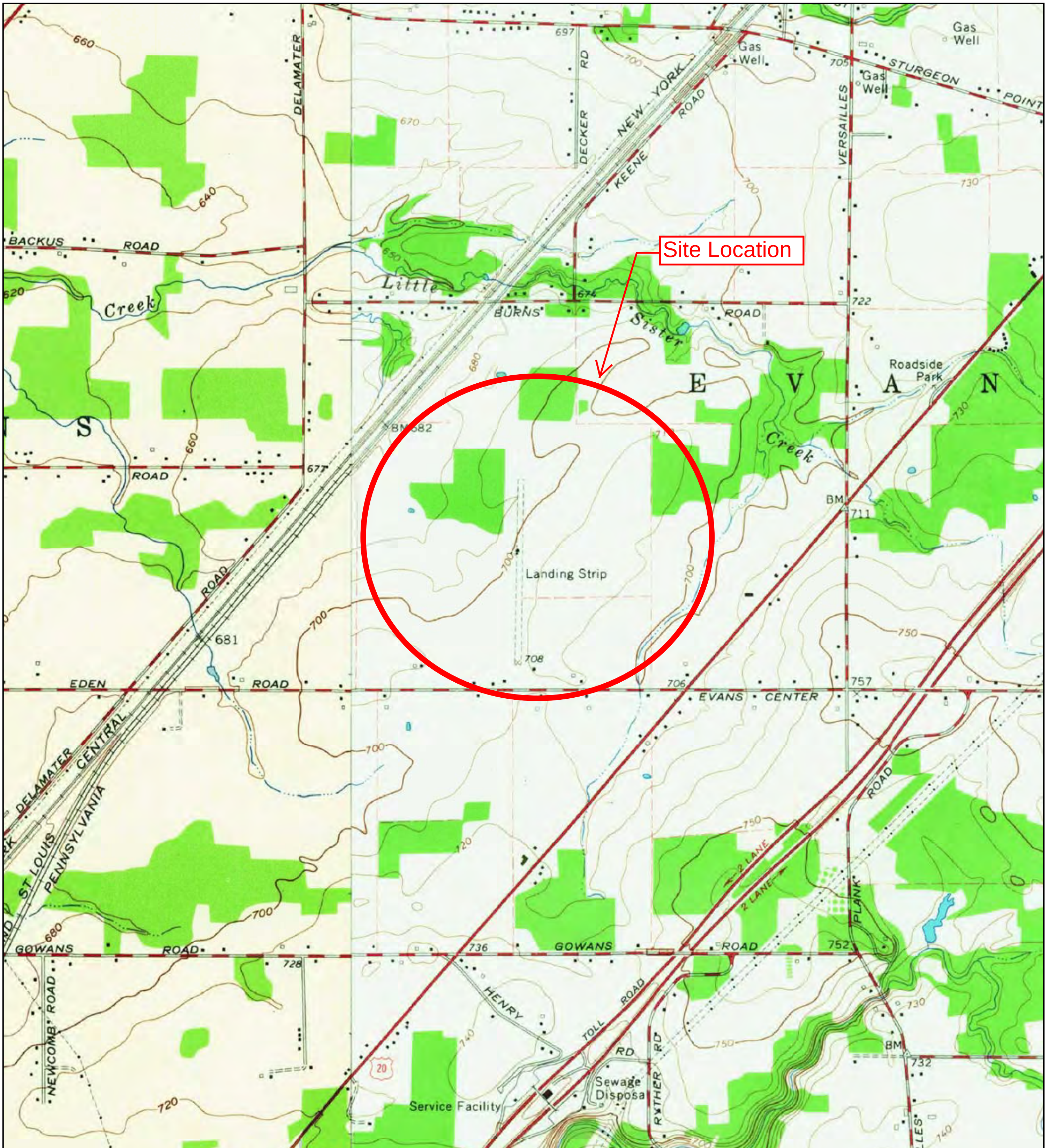


Figure 1: USGS Quadrangle Map Eden, NY Quadrangle Scale 1: 24,000	N W E S	Location: Town of Evans Erie County, New York Prepared for: Wendel Companies

U.S. Fish and Wildlife Service
National Wetlands Inventory

Figure 2: National Wetlands Inventory Map

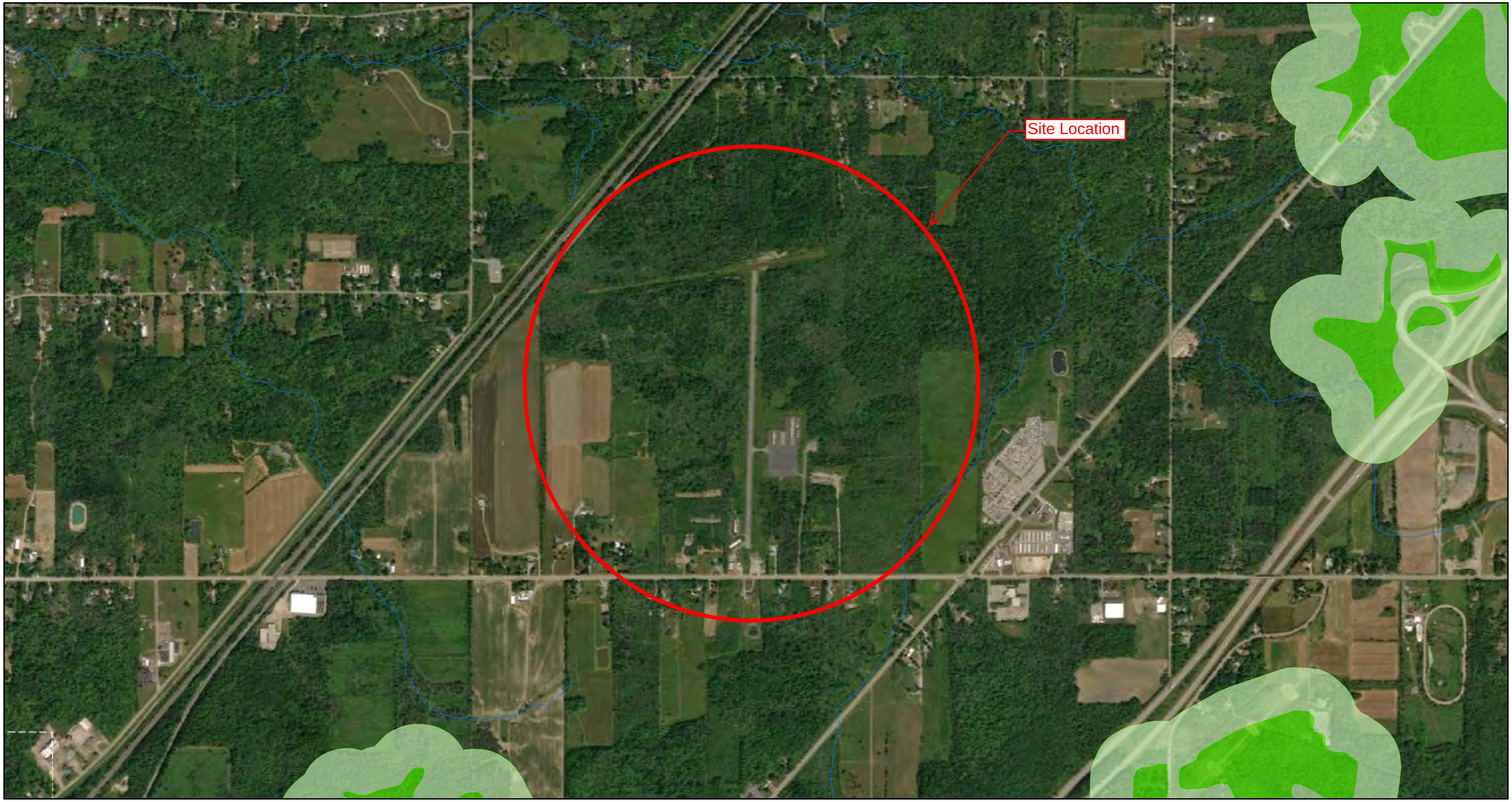
December 20, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

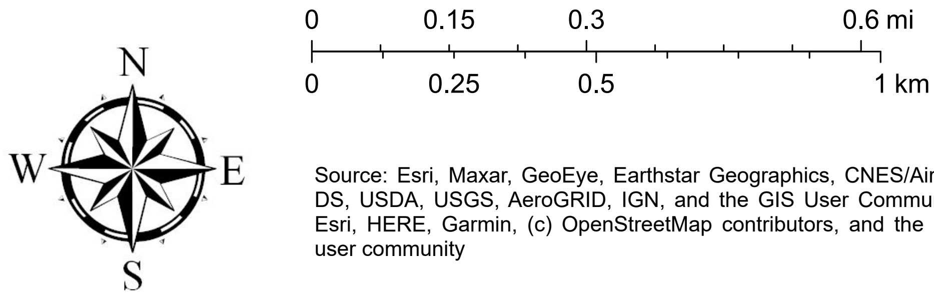
Environmental Resource Mapper



December 20, 2021

1:18,056

Figure 3: NYSDEC Freshwater Wetlands Map



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

NYS Department of Environmental Conservation
Not a legal document

Figure 4: NRCS Soil Survey Map

Map Scale: 1:10,700 if printed on A portrait (8.5" x 11") sheet.

Meters: 0, 150, 300, 600, 900

Feet: 0, 500, 1000, 2000, 3000

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
Survey Area Data: Version 21, Aug 29, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 27, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ca	Canadice silt loam	95	2.2	0.9%
Cb	Canadice silt loam, channery till substratum	90	3.8	1.6%
Cc	Canandaigua silt loam	95	1.0	0.4%
CoA	Churchville silt loam, 0 to 3 percent slopes	5	31.3	12.7%
DbA	Darien silt loam, 0 to 3 percent slopes	5	33.7	13.7%
DdA	Derb silt loam, 0 to 3 percent slopes	5	38.1	15.5%
DdB	Derb silt loam, 3 to 8 percent slopes	5	6.1	2.5%
FbA	Farnham channery silt loam, 0 to 3 percent slopes	0	17.2	7.0%
HrA	Hornell silt loam, 0 to 3 percent slopes	5	17.1	7.0%
Nh	Niagara silt loam, till substratum	5	13.9	5.6%
OrA	Orpark silt loam, 0 to 3 percent slopes	5	31.7	12.9%
OrB	Orpark silt loam, 3 to 8 percent slopes	5	2.0	0.8%
RfA	Remsen silty clay loam, 0 to 3 percent slopes	5	28.0	11.4%
RmA	Rhinebeck silty clay loam, stratified substratum, 0 to 3 percentslopes	5	20.2	8.2%
Totals for Area of Interest			**246.3**	**100.0%**

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

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Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Appendix B

Field Data Forms

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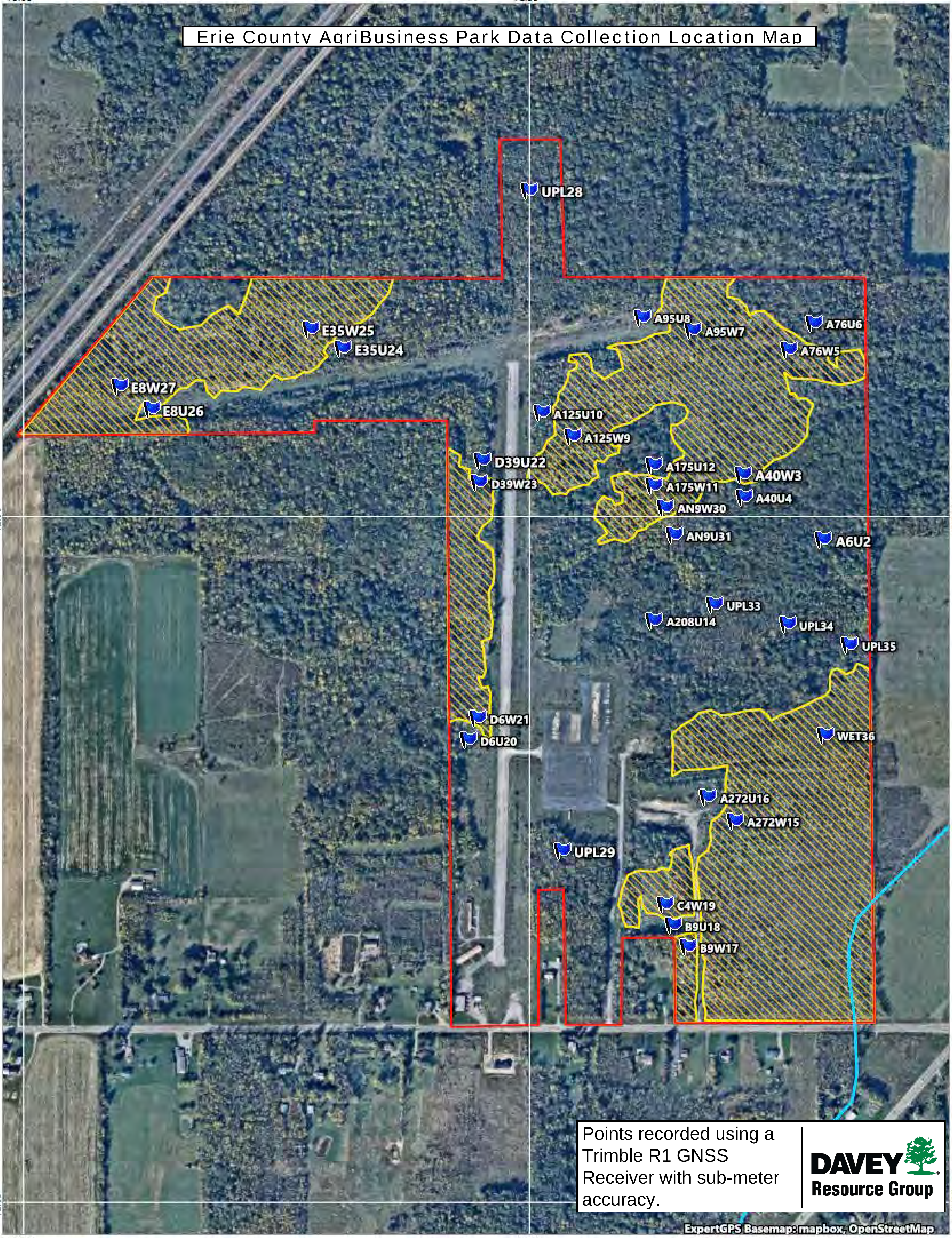

Erie County AgriBusiness Park Data Collection Location Map
79.00°
78.99°
42.66°
42.65°
UPL28
E35W25
E35U24
E8W27
E8U26
A95U8
A95W7
A76U6
A76W5
A125U10
A125W9
D39U22
D39W23
A175U12
A175W11
A40W3
A40U4
AN9W30
AN9U31
A6U2
UPL33
A208U14
UPL34
UPL35
D6W21
D6U20
WET36
A272U16
A272W15
UPL29
C4W19
B9U18
B9W17
Points recorded using a Trimble R1 GNSS Receiver with sub-meter accuracy.
DAVEY
Resource Group
ExpertGPS Basemap: mapbox, OpenStreetMap

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A6U2

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): 2

Subregion (LRR or MLRA): L 101 Lat: 42.6597296 Long: -78.9841404 Datum: WGS 84

Soil Map Unit Name: Darien 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 ✔	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** ✔
Hydric Soil Present?	Yes ___	No ✔	
Wetland Hydrology Present?	Yes ___	No ✔	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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: A6U2

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus strobus	35	✔	FACU
2. Acer rubrum	30	✔	FAC
3. Betula papyrifera	20	✔	FACU
4. Acer saccharum	10		FACU
5.			
6.			
7.			
	95%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rubus allegheniensis	20	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Carex laxiflora	10	✔	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	85	x 4 =	340
UPL species	10	x 5 =	50
Column Totals:	125 (A)		480 (B)

Prevalence Index = B/A = 3.8

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** ✔

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

SOIL

Sampling Point: A6U2

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 11	2.5Y 4/3	100					Sandy Clay Loam	
11 - 20	2.5Y 6/3	90	10YR 6/6	10	RM	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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 ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A40W3

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Palustrine Local relief (concave, convex, none): Undulating Slope (%): ____

Subregion (LRR or MLRA): L 101 Lat: 42.6605689 Long: -78.9858025 Datum: WGS 84

Soil Map Unit Name: Canandaguia NWI classification: PSS1E

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.

	Yes	No
Hydrophytic Vegetation Present?		✔
Hydric Soil Present?	✔	
Wetland Hydrology Present?	✔	

Is the Sampled Area within a Wetland? Yes ✔ No ____

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 Vis ble on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ Microtopographic Relief (D4)
- ✔ FAC-Neutral Test (D5)

Field Observations:

	Yes	No	Depth (inches)
Surface Water Present?		✔	
Water Table Present?	✔		1
Saturation Present? (includes capillary fringe)	✔		1

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: A40W3

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	20	✔	FACW
2. Nyssa sylvatica	20	✔	FAC
3.			
4.			
5.			
6.			
7.			
	40% = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Cornus amomum	30	✔	FACW
2. Rhamnus cathartica	20	✔	FAC
3. Rosa multiflora	10		FACU
4. Salix disolor	10		FACW
5.			
6.			
7.			
	70% = Total Cover		

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Onoclea sensibilis	40	✔	FACW
2. Persicaria arifolia	20	✔	OBL
3. Glyceria melicaria	15		OBL
4. Carex lurida	10		OBL
5. Fragaria virginiana	5		FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90% = Total Cover		

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	45	x 1 = 45
FACW species	100	x 2 = 200
FAC species	40	x 3 = 120
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	200 (A)	425 (B)

Prevalence Index = B/A = 2.1

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** ✔

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

SOIL

Sampling Point: A40W3

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 8	2.5Y 3/2	80	2.5Y 4/6	20	C	M	Silt Loam	
8 - 18	2.5Y 4/2	80	10YR 5/6	20	C	M		
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A40U4

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): 2

Subregion (LRR or MLRA): L 101 Lat: 42.6602427 Long: -78.9855249 Datum: WGS 84

Soil Map Unit Name: Darien 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 ✔	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** ✔
Hydric Soil Present?	Yes ___	No ✔	
Wetland Hydrology Present?	Yes ___	No ✔	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)	___ Water-Stained Leaves (B9)	
___ High Water Table (A2)	___ Aquatic Fauna (B13)	
___ Saturation (A3)	___ Marl Deposits (B15)	
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remarks)	
___ Sparsely Vegetated Concave Surface (B8)		

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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: A40U4

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	45	✔	FACU
2. Pinus strobus	15		FACU
3. Betula papyrifera	10		FACU
4. Prunus serotina	10		FACU
5.			
6.			
7.			
	80%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Frangula alnus	15	✔	FAC
2. Rubus allegheniensis	10	✔	FACU
3.			
4.			
5.			
6.			
7.			
	25%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)			
1. Poa compressa	10	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)			
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 (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	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	115 (A)		445 (B)

Prevalence Index = B/A = 3.9

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** ✔

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

SOIL

Sampling Point: A40U4

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 - 9	2.5Y 5/3	95	10YR 6/6	5	RM	M	Clay Loam	
9 - 20	2.5Y 5/3	85	10YR 5/8	15	RM	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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 ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A76W5

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Palustrine Local relief (concave, convex, none): Undulating Slope (%): ____

Subregion (LRR or MLRA): L 101 Lat: 42.6625631 Long: -78.9847038 Datum: WGS 84

Soil Map Unit Name: Canandaigua NWI classification: PFO/SS1E

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

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

Wetland depressional

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 Vis ble 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): 2	
Water Table Present?	Yes ✔ No ____	Depth (inches): 0	
Saturation Present? (includes capillary fringe)	Yes ✔ No ____	Depth (inches): 0	**Wetland Hydrology Present? Yes** ✔ **No** ____

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: A76W5

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	10	✔	FAC
2. Acer saccharinum	10	✔	FACW
3. Nyssa sylvatica	5	✔	FAC
4.			
5.			
6.			
7.			
	25% = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Cornus amomum	35	✔	FACW
2. Frangula alnus	25	✔	FAC
3. Lonicera tatarica	5		FACU
4.			
5.			
6.			
7.			
	65% = Total Cover		

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Onoclea sensibilis	25	✔	FACW
2. Rubus hispidus	25	✔	FACW
3. Solidago rugosa	20	✔	FAC
4. Glyceria melicaria	15		OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85% = Total Cover		

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	95	x 2 =	190
FAC species	60	x 3 =	180
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	175 (A)		405 (B)

Prevalence Index = B/A = 2.3

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** ___

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

SOIL

Sampling Point: A76W5

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 - 8	10YR 3/2	90	10YR 4/6	10	C	M	Silty Clay Loam	
8 - 10	2.5Y 5/2	80	10YR 5/6	20	C	M	Silty Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A76U6

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland, Flat Local relief (concave, convex, none): ______ Slope (%): ______

Subregion (LRR or MLRA): L 101 Lat: 42.6628036 Long: -78.9846783 Datum: WGS 84

Soil Map Unit Name: Darien 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 ✔	**Is the Sampled Area within a Wetland?** **Yes** ______ **No** ✔
Hydric Soil Present?	Yes ✔ No ______	
Wetland Hydrology Present?	Yes ______ No ✔	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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: A76U6

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	35	✔	FACU
2. Pinus strobus	35	✔	FACU
3. Fraxinus americana	10		FACU
4.			
5.			
6.			
7.			
	80%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus racemosa	40	✔	FAC
2. Rosa multiflora	15	✔	FACU
3. Lonicera tatarica	10		FACU
4.			
5.			
6.			
7.			
	65%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Solidago canadensis	30	✔	FACU
2. Glyceria melicaria	25	✔	OBL
3. Fragaria virginiana	20	✔	FACU
4. Solidago rugosa	5		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	0	x 2 =	0
FAC species	45	x 3 =	135
FACU species	155	x 4 =	620
UPL species	0	x 5 =	0
Column Totals:	225 (A)		780 (B)

Prevalence Index = B/A = 3.5

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** ✔

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

SOIL

Sampling Point: A76U6

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 - 5	2.5Y 5/2	100					Clay Loam	
5 - 12	2.5Y 5/2	95	2.5Y 6/6	5	RM	M	Clay Loam	
12 - 20	2.5Y 6/2	85	10YR 6/8	15	RM	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A95W7

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): ______ Local relief (concave, convex, none): ______ Slope (%): 3

Subregion (LRR or MLRA): L 101 Lat: 42.6628153 Long: -78.9871289 Datum: WGS 84

Soil Map Unit Name: Canandaguia NWI classification: PSS1E

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 ___	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ___
Hydric Soil Present?	Yes ✔ No ___	
Wetland Hydrology Present?	Yes ✔ No ___	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 Vis ble 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): 1	
Water Table Present?	Yes ✔ No ___	Depth (inches): 2	
Saturation Present? (includes capillary fringe)	Yes ✔ No ___	Depth (inches): 2	**Wetland Hydrology Present? Yes** ✔ **No** ___

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: A95W7

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Cornus amomum	60	✔	FACW
2. Fraxinus pennsylvanica	10		FACW
3.			
4.			
5.			
6.			
7.			
	70%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Glyceria melicaria	20	✔	OBL
2. Juncus effusus	20	✔	OBL
3. Onoclea sensibilis	20	✔	FACW
4. Geum laciniatum	10		FACW
5. Rubus hispidus	10		FACW
6. Solidago rugosa	10		FAC
7.			
8.			
9.			
10.			
11.			
12.			
	90%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	110	x 2 =	220
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	160 (A)		290 (B)

Prevalence Index = B/A = 1.8

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** ___

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

SOIL

Sampling Point: A95W7

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 - 10	10YR 3/2	90	10YR 4/4	20	C	M	Silty Clay Loam	
10 - 20	2.5Y 5/2	80	2.5Y 6/6	20	C	M	Silty Clay	Poorly drained
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A95U8

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): ______

Subregion (LRR or MLRA): L 101 Lat: 42.6627737 Long: -78.9873577 Datum: WGS 84

Soil Map Unit Name: Remsen 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 ✔	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** ✔
Hydric Soil Present?	Yes ___ No ✔	
Wetland Hydrology Present?	Yes ___ No ✔	If yes, optional Wetland Site ID: ______

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

Old gravel runway. That has grown-over.

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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: A95U8

Tree Stratum (Plot size: 30 ft r)

	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus strobus	20	✔	FACU
2. Acer rubrum	15	✔	FAC
3.			
4.			
5.			
6.			
7.			
	35% = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft r)

	Absolute % Cover	Dominant Species?	Indicator Status
1. Cornus amomum	10	✔	FACW
2. Rosa multiflora	10	✔	FACU
3.			
4.			
5.			
6.			
7.			
	20% = Total Cover		

Herb Stratum (Plot size: 5 ft r)

	Absolute % Cover	Dominant Species?	Indicator Status
1. Poa pratensis	50	✔	FACU
2. Festuca rubra	25	✔	FACU
3. Euthamia graminifolia	15		FAC
4. Glyceria melicaria	10		OBL
5. Solidago altissima	10		FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110% = Total Cover		

Woody Vine Stratum (Plot size: 30 ft r)

	Absolute % Cover	Dominant Species?	Indicator Status
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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	10	x 2 =	20
FAC species	30	x 3 =	90
FACU species	115	x 4 =	460
UPL species	0	x 5 =	0
Column Totals:	165 (A)		580 (B)

Prevalence Index = B/A = 3.5

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** ✔

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

SOIL

Sampling Point: A95U8

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
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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 ✔

Remarks:

Disturbed. Old gravel runway that has grown-over.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A125W9

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Palustrine Local relief (concave, convex, none): ______ Slope (%): 3

Subregion (LRR or MLRA): L 101 Lat: 42.6612605 Long: -78.9894465 Datum: WGS 84

Soil Map Unit Name: ______ NWI classification: PFO/SS1E

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 ___	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ___
Hydric Soil Present?	Yes ✔	No ___	
Wetland Hydrology Present?	Yes ✔	No ___	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)	___ Water-Stained Leaves (B9)
✔ High Water Table (A2)	___ Aquatic Fauna (B13)
✔ Saturation (A3)	___ Marl Deposits (B15)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remarks)
___ Sparsely Vegetated Concave Surface (B8)	

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 Vis ble 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): 5
Saturation Present? (includes capillary fringe)	Yes ✔	No ___	Depth (inches): 4

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: A125W9

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	20	✔	FACW
2. Ulmus americana	15	✔	FACW
3. Pinus sylvestris	5		FACU
4.			
5.			
6.			
7.			
	40%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus amomum	35	✔	FACW
2. Cornus racemosa	10	✔	FAC
3. Lonicera tatarica	5		FACU
4.			
5.			
6.			
7.			
	50%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Carex lacustris	20	✔	OBL
2. Glyceria melicaria	20	✔	OBL
3. Rubus hispidus	20	✔	FACW
4. Solidago rugosa	20	✔	FAC
5. Geum laciniatum	15		FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	105	x 2 =	210
FAC species	30	x 3 =	90
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	185 (A)		380 (B)

Prevalence Index = B/A = 2.1

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 ___

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

SOIL

Sampling Point: A125W9

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 3/2	90	10YR 5/6	10	C	M	Silty Clay Loam	
8 - 18	2.5Y 4/2	80	10YR 4/6	20	C	M	Silty Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A125U10

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): ____

Subregion (LRR or MLRA): L 101 Lat: 42.6613862 Long: -78.9896122 Datum: WGS 84

Soil Map Unit Name: Remsen 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 ✔
Hydric Soil Present?	Yes ___	No ✔
Wetland Hydrology Present?	Yes ___	No ✔

Is the Sampled Area within a Wetland? **Yes** ___ **No** ✔

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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: A125U10

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus strobus	70	✔	FACU
2. Fraxinus americana	10		FACU
3.			
4.			
5.			
6.			
7.			
	80%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Cornus racemosa	20	✔	FAC
2. Rosa multiflora	20	✔	FACU
3. Lonicera tatarica	15	✔	FACU
4. Cornus amomum	10		FACW
5.			
6.			
7.			
	65%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fragaria virginiana	15	✔	FACU
2. Geum canadense	15	✔	FAC
3. Carex laxiflora	10		UPL
4. Solidago canadensis	10		FACU
5. Potentilla simplex	5		FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	55%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	35	x 3 = 105
FACU species	145	x 4 = 580
UPL species	10	x 5 = 50
Column Totals:	200 (A)	755 (B)

Prevalence Index = B/A = 3.8

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** ✔

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

SOIL

Sampling Point: A125U10

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 - 13	10YR 4/2	100					Clay Loam	
13 - 20	2.5Y 7/2	90	10YR 5/6	10	RM	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A175W11

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): ______ Local relief (concave, convex, none): ______ Slope (%): 0

Subregion (LRR or MLRA): L 101 Lat: 42.6604087 Long: -78.9875030 Datum: WGS 84

Soil Map Unit Name: ______ NWI classification: PSS/FO1E

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 ___	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ___
Hydric Soil Present?	Yes ✔ No ___	
Wetland Hydrology Present?	Yes ✔ No ___	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)		Secondary Indicators (minimum of two required)
		___ Surface Soil Cracks (B6)
✔ Surface Water (A1)	___ Water-Stained Leaves (B9)	___ Drainage Patterns (B10)
✔ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Moss Trim Lines (B16)
✔ Saturation (A3)	___ Marl Deposits (B15)	___ Dry-Season Water Table (C2)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Crayfish Burrows (C8)
___ Sediment Deposits (B2)	✔ Oxidized Rhizospheres on Living Roots (C3)	___ Saturation Vis ble on Aerial Imagery (C9)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Stunted or Stressed Plants (D1)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Geomorphic Position (D2)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Shallow Aquitard (D3)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remarks)	___ Microtopographic Relief (D4)
___ Sparsely Vegetated Concave Surface (B8)		✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✔	No ___	Depth (inches): 2	
Water Table Present?	Yes ✔	No ___	Depth (inches): 0	
Saturation Present? (includes capillary fringe)	Yes ✔	No ___	Depth (inches): 0	**Wetland Hydrology Present? Yes** ✔ **No** ___

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: A175W11

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	10	✔	FACW
2. Fraxinus pennsylvanica	5	✔	FACW
3.			
4.			
5.			
6.			
7.			
	15%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus amomum	25	✔	FACW
2. Lonicera tatarica	15	✔	FACU
3. Rosa multiflora	10	✔	FACU
4.			
5.			
6.			
7.			
	50%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Juncus effusus	40	✔	OBL
2. Rubus hispidus	30	✔	FACW
3. Persicaria sagittata	25	✔	OBL
4. Symphyotrichum puniceum	20		OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	85	x 1 = 85
FACW species	70	x 2 = 140
FAC species	0	x 3 = 0
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	180 (A)	325 (B)

Prevalence Index = B/A = 1.8

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** ___

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

SOIL

Sampling Point: A175W11

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 - 8	10YR 3/2	90	10YR 5/4	10	C	M		
10 - 18	10YR 5/1	90	10YR 5/6	10	C	M		
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A175U12

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): ______

Subregion (LRR or MLRA): L 101 Lat: 42.6607126 Long: -78.9875754 Datum: WGS 84

Soil Map Unit Name: Derb 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 ✔	**Is the Sampled Area within a Wetland?** **Yes** ______ **No** ✔
Hydric Soil Present?	Yes ______	No ✔	
Wetland Hydrology Present?	Yes ______	No ✔	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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: A175U12

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	25	✔	FAC
2. Ulmus americana	20	✔	FACW
3.			
4.			
5.			
6.			
7.			
	45%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Lonicera tatarica	30	✔	FACU
2. Rosa multiflora	20	✔	FACU
3. Rubus allegheniensis	10		FACU
4.			
5.			
6.			
7.			
	60%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Potentilla simplex	15	✔	FACU
2. Glyceria melicaria	10	✔	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	25%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1. Vitis aestivalis	15	✔	FACU
2.			
3.			
4.			
	15%	= 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 43 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	20	x 2 =	40
FAC species	25	x 3 =	75
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	145 (A)		485 (B)

Prevalence Index = B/A = 3.3

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 ✔

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

SOIL

Sampling Point: A175U12

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 - 10	2.5Y 4/3	100					Clay Loam	
10 - 20	2.5Y 6/3	80	10YR 6/6	20	RM	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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 ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-16

Applicant/Owner: Wendel State: New York Sampling Point: A208U14

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): ____

Subregion (LRR or MLRA): L 101 Lat: 42.6583984 Long: -78.9874131 Datum: WGS 84

Soil Map Unit Name: Orpark 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.

	Yes	No
Hydrophytic Vegetation Present?		✔
Hydric Soil Present?	✔	
Wetland Hydrology Present?		✔

Is the Sampled Area within a Wetland? **Yes** ____ **No** ✔

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 Vis ble on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: A208U14

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	35	✔	FAC
2. Fraxinus americana	20	✔	FACU
3. Pinus strobus	15	✔	FACU
4.			
5.			
6.			
7.			
	70%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Lonicera tatarica	30	✔	FACU
2. Frangula alnus	25	✔	FAC
3. Rubus allegheniensis	10		FACU
4.			
5.			
6.			
7.			
	65%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fragaria virginiana	10	✔	FACU
2. Geum canadense	10	✔	FAC
3. Potentilla simplex	10	✔	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
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: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 38 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	70	x 3 =	210
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	165 (A)		590 (B)

Prevalence Index = B/A = 3.6

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** ✔

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

SOIL

Sampling Point: A208U14

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 9	2.5Y 5/2	90	10YR 5/6	10	RM	M	Clay Loam	
9 - 20	2.5Y 6/1	90	10YR 5/8	10	RM	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: A272W15

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Palustrine Local relief (concave, convex, none): Undulating Slope (%): 0

Subregion (LRR or MLRA): L 101 Lat: 42.6556775 Long: -78.9860519 Datum: WGS 84

Soil Map Unit Name: Canandaigua NWI classification: PSS1E

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 ___	**Is the Sampled Area within a Wetland?**	**Yes** ✔ **No** ___
Hydric Soil Present?	Yes ✔ No ___		
Wetland Hydrology Present?	Yes ✔ No ___	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 Vis ble 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): 6	
Saturation Present? (includes capillary fringe)	Yes ✔ No ___	Depth (inches): 4	**Wetland Hydrology Present? Yes** ✔ **No** ___

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: A272W15

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus amomum	60	✔	FACW
2. Rosa multiflora	15		FACU
3. Lonicera tatarica	10		FACU
4.			
5.			
6.			
7.			
	85%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Carex lupulina	30	✔	OBL
2. Carex vulpinoidea	20	✔	OBL
3. Solidago rugosa	15		FAC
4. Geum laciniatum	10		FACW
5. Glyceria melicaria	10		OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	70	x 2 =	140
FAC species	15	x 3 =	45
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	170 (A)		345 (B)

Prevalence Index = B/A = 2.0

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** ___

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

SOIL

Sampling Point: A272W15

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 3/2	90	10YR 4/6	10	C	M	Silty Clay Loam	
8 - 18	2.5Y 5/2	80	2.5Y 5/4	20			Silty Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: A272U16

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): 5

Subregion (LRR or MLRA): L 101 Lat: 42.6557827 Long: -78.9864410 Datum: WGS 84

Soil Map Unit Name: Orpark 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 ✔	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** ✔
Hydric Soil Present?	Yes ___	No ✔	
Wetland Hydrology Present?	Yes ___	No ✔	If yes, optional Wetland Site ID: ______

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

Fill pile.

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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: A272U16

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus deltoides	10	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rosa multiflora	15	✔	FACU
2. Cornus amomum	10	✔	FACW
3.			
4.			
5.			
6.			
7.			
	25%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Solidago canadensis	40	✔	FACU
2. Poa compressa	35	✔	FACU
3. Dipsacus fullonum	20		FACU
4. Asclepias syriaca	10		UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	10	x 3 =	30
FACU species	110	x 4 =	440
UPL species	10	x 5 =	50
Column Totals:	140 (A)		540 (B)

Prevalence Index = B/A = 3.9

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** ✔

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

SOIL

Sampling Point: A272U16

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
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ✔

Remarks:

Old fill material. Rocks, cobbles, and shale throughout. Cannot dig below a few inches.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: B9w17

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Palustrine Local relief (concave, convex, none): None Slope (%): ____

Subregion (LRR or MLRA): L 101 Lat: 42.6538779 Long: -78.9869910 Datum: WGS 84

Soil Map Unit Name: ____ NWI classification: PSS/SS1E

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 ___	Is the Sampled Area within a Wetland? Yes ✔ No ___
Hydric Soil Present?	Yes ✔ No ___	
Wetland Hydrology Present?	Yes ✔ No ___	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 Vis ble 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): 4
Saturation Present? (includes capillary fringe)	Yes ✔	No ___	Depth (inches): 2

Wetland Hydrology Present? Yes ✔ No ___

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: B9w17

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	15	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Cornus amomum	70	✔	FACW
2. Lonicera tatarica	20	✔	FACU
3.			
4.			
5.			
6.			
7.			
	90%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Carex lupulina	25	✔	OBL
2. Geum laciniatum	20	✔	FACW
3. Glyceria melicaria	15	✔	OBL
4. Solidago rugosa	10		FAC
5. Lonicera tatarica	5		FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across All Strata:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	83	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	105	x 2 =	210
FAC species	10	x 3 =	30
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	180 (A)		380 (B)

Prevalence Index = B/A = 2.1

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** ___

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

SOIL

Sampling Point: B9w17

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 - 8	2.5YR 3/2	90	10YR 4/6	10	C	M	Silty Clay Loam	
8 - 18	2.5Y 5/2	80	10YR 5/4	20	C	M	Silty Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: B9U18

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): 0

Subregion (LRR or MLRA): L 101 Lat: 42.6540457 Long: -78.9869027 Datum: WGS 84

Soil Map Unit Name: Farnham 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 ✔
Hydric Soil Present?	Yes ___	No ✔
Wetland Hydrology Present?	Yes ___	No ✔

Is the Sampled Area within a Wetland? **Yes** ___ **No** ✔

If yes, optional Wetland Site ID: ______

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

Disturbed dump site.

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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: B9U18

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Potentilla simplex	55	✔	FACU
2. Daucus carota	10		UPL
3. Dipsacus fullonum	10		FACU
4. Poa pratensis	10		FACU
5. Solidago canadensis	10		FACU
6. Phleum pratense	5		FACU
7. Symphyotrichum pilosum	5		FACU
8.			
9.			
10.			
11.			
12.			
	105% = Total Cover		

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
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 (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	95	x 4 = 380
UPL species	10	x 5 = 50
Column Totals:	105 (A)	430 (B)

Prevalence Index = B/A = 4.1

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** ✔

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

SOIL

Sampling Point: B9U18

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
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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 ✔

Remarks:

Old fill. Rocks, cobbles, & shale.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: C4W19

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Depression, Filled Local relief (concave, convex, none): Undulating Slope (%): ____

Subregion (LRR or MLRA): L 101 Lat: 42.6542204 Long: -78.9873727 Datum: WGS 84

Soil Map Unit Name: Farnham NWI classification: Pss

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

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 Vis ble 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): 0

Saturation Present? (includes capillary fringe) Yes ✔ No ____ Depth (inches): 0

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: C4W19

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus amomum	30	✔	FACW
2. Salix discolor	25	✔	FACW
3. Populus deltoides	15	✔	FAC
4.			
5.			
6.			
7.			
	70%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Phalaris arundinacea	70	✔	FACW
2. Solidago gigantea	25	✔	FACW
3. Juncus effusus	5		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	150	x 2 =	300
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	170 (A)		350 (B)

Prevalence Index = B/A = 2.1

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** ___

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

SOIL

Sampling Point: C4W19

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 - 7.5	5Y 4/2	95	10YR 4/4	5	RM	PL	Clay	
7.5 - 20	5Y 5/2	85	10YR 5/6	15	RM	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: D6U20

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): ____

Subregion (LRR or MLRA): L 101 Lat: 42.6568175 Long: -78.9909638 Datum: WGS 84

Soil Map Unit Name: Orpark 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 ✔
Hydric Soil Present?	Yes ___	No ✔
Wetland Hydrology Present?	Yes ___	No ✔

Is the Sampled Area within a Wetland? **Yes** ___ **No** ✔

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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: D6U20

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus strobus	20	✔	FACU
2. Populus deltoides	5	✔	FAC
3.			
4.			
5.			
6.			
7.			
	25%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rosa multiflora	25	✔	FACU
2. Crataegus douglasii	15	✔	FAC
3. Cornus amomum	10	✔	FACW
4.			
5.			
6.			
7.			
	50%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Solidago canadensis	60	✔	FACU
2. Poa pratensis	20	✔	FACU
3. Dipsacus fullonum	10		FACU
4. Symphyotrichum pilosum	10		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 43 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	20	x 3 = 60
FACU species	145	x 4 = 580
UPL species	0	x 5 = 0
Column Totals:	175 (A)	660 (B)

Prevalence Index = B/A = 3.8

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 ✔

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

SOIL

Sampling Point: D6U20

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 4/3	100					Silty Clay Loam	Rock fragments
6 - 20	2.5Y 5/3	95	10YR 5/6	5	RM	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: D6W21

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Palustrine Local relief (concave, convex, none): Undulating Slope (%): ______

Subregion (LRR or MLRA): L 101 Lat: 42.6570257 Long: -78.9909796 Datum: WGS 84

Soil Map Unit Name: Canandigua NWI classification: PSS1E

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 ______	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ______
Hydric Soil Present?	Yes ✔ No ______	
Wetland Hydrology Present?	Yes ✔ No ______	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)	✔ Water-Stained Leaves (B9)	
✔ High Water Table (A2)	___ Aquatic Fauna (B13)	
✔ Saturation (A3)	___ Marl Deposits (B15)	
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remarks)	
___ Sparsely Vegetated Concave Surface (B8)		

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 Vis ble 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): 4
Saturation Present? (includes capillary fringe)	Yes ✔	No ______	Depth (inches): 2

Wetland Hydrology Present? Yes ✔ **No** ______

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: D6W21

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	5	✔	FACW
2. Nyssa sylvatica	5	✔	FAC
3. Populus deltoides	5	✔	FAC
4.			
5.			
6.			
7.			
	15%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus amomum	60	✔	FACW
2. Lonicera tatarica	10		FACU
3. Rhamnus cathartica	5		FAC
4.			
5.			
6.			
7.			
	75%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Glyceria melicaria	25	✔	OBL
2. Rubus hispidus	20	✔	FACW
3. Geum laciniatum	15		FACW
4. Solidago rugosa	15		FAC
5. Fragaria virginiana	5		FACU
6. Juncus effusus	5		OBL
7.			
8.			
9.			
10.			
11.			
12.			
	85%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	30	x 1 = 30
FACW species	100	x 2 = 200
FAC species	30	x 3 = 90
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	175 (A)	380 (B)

Prevalence Index = B/A = 2.2

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** ___

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

SOIL

Sampling Point: D6W21

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 12	10YR 3/2	90	10YR 4/6	10	C	M	Silty Clay Loam	
12 - 20	2.5Y 5/1	90	2.5Y 5/6	10	C	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: D39U22

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): ____

Subregion (LRR or MLRA): L 101 Lat: 42.6607226 Long: -78.9909742 Datum: WGS 84

Soil Map Unit Name: Remsen 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.

	Yes	No
Hydrophytic Vegetation Present?		✔
Hydric Soil Present?		✔
Wetland Hydrology Present?	✔	

Is the Sampled Area within a Wetland? **Yes** ___ **No** ✔

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 Vis ble on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

	Yes	No	Depth (inches)
Surface Water Present?		✔	
Water Table Present?	✔		12
Saturation Present? (includes capillary fringe)	✔		0

Wetland Hydrology Present? **Yes** ✔ **No** ___

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: D39U22

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	25	✔	FAC
2. Fraxinus americana	20	✔	FACU
3. Pinus strobus	20	✔	FACU
4. Rhamnus cathartica	15		FAC
5.			
6.			
7.			
	80%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Lonicera tatarica	65	✔	FACU
2. Rosa multiflora	30	✔	FACU
3.			
4.			
5.			
6.			
7.			
	95%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fragaria virginiana	20	✔	FACU
2. Agrimonia striata	15	✔	FACU
3. Solidago rugosa	15	✔	FAC
4. Glyceria melicaria	10		OBL
5. Juncus effusus	10		OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
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: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	0	x 2 =	0
FAC species	55	x 3 =	165
FACU species	170	x 4 =	680
UPL species	0	x 5 =	0
Column Totals:	245 (A)		865 (B)

Prevalence Index = B/A = 3.5

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** ✔

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

SOIL

Sampling Point: D39U22

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 - 10	2.5Y 4/2	100					Clay Loam	
10 - 20	5Y 5/2	90	10YR 5/6	10	RM	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: D39W23

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Palustrine Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR or MLRA): L 101 Lat: 42.6605107 Long: -78.9910066 Datum: WGS 84

Soil Map Unit Name: Canandaigua NWI classification: PSS/SS1E

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 ___
Hydric Soil Present?	Yes ✔	No ___
Wetland Hydrology Present?	Yes ✔	No ___

Is the Sampled Area within a Wetland? **Yes** ✔ **No** ___

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 Vis ble 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): 4
Saturation Present? (includes capillary fringe)	Yes ✔	No ___	Depth (inches): 2

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: D39W23

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	10	✔	FAC
2. Acer saccharinum	10	✔	FACW
3. Fraxinus pennsylvanica	5	✔	FACW
4.			
5.			
6.			
7.			
	25% = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Cornus amomum	25	✔	FACW
2. Rosa multiflora	10	✔	FACU
3.			
4.			
5.			
6.			
7.			
	35% = Total Cover		

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Glyceria melicaria	40	✔	OBL
2. Rubus hispidus	25	✔	FACW
3. Carex lurida	15		OBL
4. Solidago rugosa	15		FAC
5. Fragaria virginiana	5		FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100% = Total Cover		

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 86 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	55	x 1 = 55
FACW species	65	x 2 = 130
FAC species	25	x 3 = 75
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	160 (A)	320 (B)

Prevalence Index = B/A = 2.0

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** ___

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

SOIL

Sampling Point: D39W23

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

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0 - 10	10YR 3/2	80	10YR 4/8		C	M	Silty Clay Loam	
10 - 18	2.5Y 4/2	90	2.5Y 5/6	10	C	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: E35U24

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): 2

Subregion (LRR or MLRA): L 101 Lat: 42.6626063 Long: -78.9937747 Datum: WGS 84

Soil Map Unit Name: Remsen 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 ✔
Hydric Soil Present?	Yes ✔	No ___
Wetland Hydrology Present?	Yes ✔	No ___

Is the Sampled Area within a Wetland? **Yes** ___ **No** ✔

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 Vis ble 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): 3
Saturation Present? (includes capillary fringe)	Yes ✔	No ___	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: E35U24

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Carya ovata	35	✔	FACU
2. Ulmus americana	20	✔	FACW
3. Fraxinus americana	15		FACU
4. Populus tremuloides	15		FACU
5.			
6.			
7.			
	85%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Lonicera tatarica	75	✔	FACU
2. Rosa multiflora	25	✔	FACU
3.			
4.			
5.			
6.			
7.			
	100%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fragaria virginiana	20	✔	FACU
2. Solidago canadensis	20	✔	FACU
3. Symphyotrichum lateriflorum	15	✔	FAC
4. Onoclea sensibilis	10		FACW
5. Potentilla simplex	10		FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	15	x 3 =	45
FACU species	215	x 4 =	860
UPL species	0	x 5 =	0
Column Totals:	260 (A)		965 (B)

Prevalence Index = B/A = 3.7

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** ✔

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

SOIL

Sampling Point: E35U24

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 11	2.5Y 4/1	95	10YR 4/4	5	RM	PL	Clay Loam	
11 - 20	2.5Y 5/2	85	10YR 5/8	15	RM	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: E35W25

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): ______ Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR or MLRA): L 101 Lat: 42.6626154 Long: -78.9939131 Datum: WGS 84

Soil Map Unit Name: Canandigua NWI classification: PSS1E

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 ____	**Is the Sampled Area within a Wetland?**	**Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔ No ____		
Wetland Hydrology Present?	Yes ✔ No ____	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 Vis ble 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): 1	
Water Table Present?	Yes ✔ No ____	Depth (inches): 0	
Saturation Present? (includes capillary fringe)	Yes ✔ No ____	Depth (inches): 0	**Wetland Hydrology Present? Yes** ✔ **No** ____

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: E35W25

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	10	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Cornus amomum	35	✔	FACW
2. Lonicera tatarica	25	✔	FACU
3. Rosa multiflora	15		FACU
4. Fraxinus pennsylvanica	10		FACW
5.			
6.			
7.			
	85%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Rubus hispidus	40	✔	FACW
2. Symphyotrichum puniceum	25	✔	OBL
3. Eutrochium purpureum	10		FAC
4. Toxicodendron radicans	10		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Toxicodendron radicans	5	✔	FAC
2.			
3.			
4.			
	5%	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	95	x 2 =	190
FAC species	25	x 3 =	75
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	185 (A)		450 (B)

Prevalence Index = B/A = 2.4

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** ___

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

SOIL

Sampling Point: E35W25

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 12	10YR 3/2	90	10YR 4/6	10	C	M	Silty Clay	
12 - 20	2.5Y 3/2	80	10YR 6/8	20	C	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: E8U26

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Undulating Slope (%): ____

Subregion (LRR or MLRA): L 101 Lat: 42.6615478 Long: -78.9975240 Datum: WGS 84

Soil Map Unit Name: Niagara 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.

	Yes	No
Hydrophytic Vegetation Present?		✔
Hydric Soil Present?	✔	
Wetland Hydrology Present?		✔

Is the Sampled Area within a Wetland? **Yes** ____ **No** ✔

If yes, optional Wetland Site ID: ____

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

Old gravel runway. Overgrown.

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 Vis ble on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: E8U26

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus strobus	15	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	15%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rhamnus cathartica	35	✔	FAC
2. Rosa multiflora	15	✔	FACU
3.			
4.			
5.			
6.			
7.			
	50%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Poa pratensis	25	✔	FACU
2. Daucus carota	20	✔	UPL
3. Phleum pratense	15	✔	FACU
4. Symphyotrichum pilosum	15	✔	FACU
5. Fragaria virginiana	10		FACU
6. Taraxacum officinale	10		FACU
7.			
8.			
9.			
10.			
11.			
12.			
	95%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	35	x 3 =	105
FACU species	105	x 4 =	420
UPL species	20	x 5 =	100
Column Totals:	160 (A)		625 (B)

Prevalence Index = B/A = 3.9

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 ✔

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

SOIL

Sampling Point: E8U26

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 20	2.5Y 5/2	40	10YR 5/6	5	RM	M		30% gravel and shale.
0 - 2			2.5Y 5/1	25	C	M	Clay	30% gravel and shale
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: E8W27

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Palustrine Local relief (concave, convex, none): ______ Slope (%): 0

Subregion (LRR or MLRA): L 101 Lat: 42.6615762 Long: -78.9978722 Datum: WGS 84

Soil Map Unit Name: Canandigua NWI classification: PSS1E

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 ___	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ___
Hydric Soil Present?	Yes ✔ No ___	
Wetland Hydrology Present?	Yes ✔ No ___	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 Vis ble 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): 5
Saturation Present? (includes capillary fringe)	Yes ✔	No ___	Depth (inches): 2

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: E8W27

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	10	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus amomum	60	✔	FACW
2. Rhamnus cathartica	10		FAC
3. Rosa multiflora	10		FACU
4. Lonicera tatarica	5		FACU
5.			
6.			
7.			
	85%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)			
1. Glyceria melicaria	25	✔	OBL
2. Solidago rugosa	20	✔	FAC
3. Symphyotrichum puniceum	20	✔	OBL
4. Rubus hispidus	10		FACW
5. Solidago gigantea	10		FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	45	x 1 =	45
FACW species	90	x 2 =	180
FAC species	30	x 3 =	90
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	180 (A)		375 (B)

Prevalence Index = B/A = 2.1

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** ___

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

SOIL

Sampling Point: E8W27

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 - 8	10YR 3/2	80	2.5Y 4/6	20	C	M	Silty Clay Loam	
8 - 18	2.5Y 3/1	90	10YR 5/4	10	C	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: UPL28

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): ____

Subregion (LRR or MLRA): L 101 Lat: 42.6641289 Long: -78.9896813 Datum: WGS 84

Soil Map Unit Name: Remsen 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 ✔	**Is the Sampled Area within a Wetland?**	**Yes** ___ **No** ✔
Hydric Soil Present?	Yes ___ No ✔		
Wetland Hydrology Present?	Yes ___ No ✔	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 Vis ble 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 ✔**

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL28

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	35	✔	FACU
2. Carya ovata	25	✔	FACU
3. Acer saccharum	20	✔	FACU
4. Fagus grandifolia	15		FACU
5.			
6.			
7.			
	95%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	

Herb Stratum (Plot size: 5 ft r)			
1. Carpinus caroliniana	10	✔	FAC
2. Rosa multiflora	5	✔	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	15%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)			
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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (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	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	110 (A)		430 (B)

Prevalence Index = B/A = 3.9

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** ✔

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

Mature wood lot.

SOIL

Sampling Point: UPL28

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 - 6	10YR 3/2	100					Silt Loam	
6 - 20	2.5Y 5/3		2.5Y 5/6	30	RM	M	Silty Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2021-11-17

Applicant/Owner: Wendel State: New York Sampling Point: UPL29

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Undulating Slope (%): ______

Subregion (LRR or MLRA): L 101 Lat: 42.6549645 Long: -78.9890558 Datum: WGS 84

Soil Map Unit Name: Farnham 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 ✔	**Is the Sampled Area within a Wetland?** **Yes** ______ **No** ✔
Hydric Soil Present?	Yes ______	No ✔	
Wetland Hydrology Present?	Yes ______	No ✔	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)	___ Water-Stained Leaves (B9)
___ High Water Table (A2)	___ Aquatic Fauna (B13)
___ Saturation (A3)	___ Marl Deposits (B15)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remarks)
___ Sparsely Vegetated Concave Surface (B8)	

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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL29

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Prunus serotina	30	✔	FACU
2. Acer saccharum	25	✔	FACU
3. Pinus strobus	20	✔	FACU
4.			
5.			
6.			
7.			
	75% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Lonicera tatarica	40	✔	FACU
2. Rubus flagellaris	15	✔	FACU
3. Cornus racemosa	10		FAC
4. Rosa multiflora	10		FACU
5. Rubus allegheniensis	10		FACU
6.			
7.			
	85% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Solidago rugosa	15	✔	FAC
2. Symphyotrichum lateriflorum	15	✔	FAC
3. Glyceria melicaria	10	✔	OBL
4. Rubus flagellaris	10	✔	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	0	x 2 = 0
FAC species	40	x 3 = 120
FACU species	160	x 4 = 640
UPL species	0	x 5 = 0
Column Totals:	210 (A)	770 (B)

Prevalence Index = B/A = 3.7

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** ✔

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

SOIL

Sampling Point: UPL29

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 8	2.5Y 3/2	100					Clay Loam	
8 - 20	2.5Y 5/4	90	10YR 5/6	10	RM	M	Silty Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County Agribusiness Park City/County: Evans / Erie Sampling Date: 2023-07-18

Applicant/Owner: Wendel Companies State: New York Sampling Point: AN9W30

Investigator(s): R. Feickert & D. Wilson Section, Township, Range: ______

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

Subregion (LRR or MLRA): L 101 Lat: 42.66012377 Long: -78.98720262 Datum: WGS 84

Soil Map Unit Name: DdA-Derb silt loam, 0 to 3 percent slopes NWI classification: PSS1B

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 ______	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ______
Hydric Soil Present?	Yes ✔ No ______	
Wetland Hydrology Present?	Yes ✔ No ______	If yes, optional Wetland Site ID: Wetland AN

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

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 Vis ble 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** ______

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: AN9W30

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	10	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Cornus amomum	30	✔	FACW
2. Lonicera tatarica	20	✔	FACU
3. Rhamnus cathartica	20	✔	FAC
4.			
5.			
6.			
7.			
	70%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Scirpus cyperinus	40	✔	OBL
2. Agrimonia parviflora	20	✔	FAC
3. Carex vulpinoidea	20	✔	OBL
4. Onoclea sensibilis	20	✔	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	7	(A)
Total Number of Dominant Species Across All Strata:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	88	(A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	60	x 1 =	60
FACW species	60	x 2 =	120
FAC species	40	x 3 =	120
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	180 (A)		380 (B)

Prevalence Index = B/A = 2.1

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** ___

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

SOIL

Sampling Point: AN9W30

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 - 20	2.5Y 4/1	80	5YR 4/4	20	C	PL / M	Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County Agribusiness Park City/County: Evans / Erie Sampling Date: 2023-07-18

Applicant/Owner: Wendel Companies State: New York Sampling Point: AN9U31

Investigator(s): R. Feickert & D. Wilson Section, Township, Range: ____

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

Subregion (LRR or MLRA): L 101 Lat: 42.65987449 Long: -78.98709460 Datum: WGS 84

Soil Map Unit Name: DdA-Derb silt loam, 0 to 3 percent slopes 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 ✔
Hydric Soil Present?	Yes ____	No ✔
Wetland Hydrology Present?	Yes ____	No ✔

Is the Sampled Area within a Wetland? **Yes** ____ **No** ✔

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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: AN9U31

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus racemosa	30	✔	FAC
2. Lonicera tatarica	30	✔	FACU
3. Rosa multiflora	10		FACU
4. Rubus idaeus	10		FACU
5.			
6.			
7.			
	80%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Lonicera tatarica	20	✔	FACU
2. Solidago canadensis	10	✔	FACU
3. Geum canadense	5		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	35	x 3 = 105
FACU species	80	x 4 = 320
UPL species	0	x 5 = 0
Column Totals:	115 (A)	425 (B)

Prevalence Index = B/A = 3.7

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** ✔

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

SOIL

Sampling Point: AN9U31

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 20	2.5Y 4/3	90	10YR 5/8	10	C	M	Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ 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)

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**)
___ Dark Surface (S7) (**LRR K, L**)
___ 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 (TF12)
___ 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** ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County Agribusiness Park City/County: Evans / Erie Sampling Date: 2023-07-18

Applicant/Owner: Wendel Companies State: New York Sampling Point: UPL33

Investigator(s): R. Feickert & D. Wilson Section, Township, Range: ______

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

Subregion (LRR or MLRA): L 101 Lat: 42.65849177 Long: -78.98692758 Datum: WGS 84

Soil Map Unit Name: DdA-Derb silt loam, 0 to 3 percent slopes 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 ✔
Hydric Soil Present?	Yes ✔	No ______
Wetland Hydrology Present?	Yes ______	No ✔

Is the Sampled Area within a Wetland? **Yes** ______ **No** ✔

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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL33

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	10	✔	FAC
2. Fraxinus americana	10	✔	FACU
3.			
4.			
5.			
6.			
7.			
	20%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Frangula alnus	30	✔	FAC
2. Lonicera tatarica	30	✔	FACU
3. Rubus idaeus	15	✔	FACU
4.			
5.			
6.			
7.			
	75%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Lonicera tatarica	20	✔	FACU
2. Parthenocissus quinquefolia	20	✔	FACU
3. Rosa multiflora	20	✔	FACU
4. Frangula alnus	10		FAC
5. Acer rubrum	5		FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	55	x 3 =	165
FACU species	115	x 4 =	460
UPL species	0	x 5 =	0
Column Totals:	170 (A)		625 (B)

Prevalence Index = B/A = 3.7

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** ✔

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

SOIL

Sampling Point: UPL33

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 - 20	10YR 4/1	95	10YR 5/4	5	C	M	Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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 ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County Agribusiness Park City/County: Evans / Erie Sampling Date: 2023-07-18

Applicant/Owner: Wendel Companies State: New York Sampling Point: UPL34

Investigator(s): R. Feickert & D. Wilson Section, Township, Range: ______

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

Subregion (LRR or MLRA): L 101 Lat: 42.65832448 Long: -78.98471793 Datum: WGS 84

Soil Map Unit Name: DdA-Derb silt loam, 0 to 3 percent slopes 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 ✔	**Is the Sampled Area within a Wetland?** **Yes** ______ **No** ✔
Hydric Soil Present?	Yes ✔	No ______	
Wetland Hydrology Present?	Yes ______	No ✔	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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL34

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus americana	20	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Frangula alnus	30	✔	FAC
2. Rosa multiflora	30	✔	FACU
3.			
4.			
5.			
6.			
7.			
	60%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Onoclea sensibilis	10	✔	FACW
2. Parthenocissus quinquefolia	10	✔	FACU
3. Rosa multiflora	10	✔	FACU
4. Rubus idaeus	10	✔	FACU
5. Solidago rugosa	5		FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	35	x 3 =	105
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	125 (A)		445 (B)

Prevalence Index = B/A = 3.6

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 ✔

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

SOIL

Sampling Point: UPL34

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 - 16	10YR 4/2	90	10YR 5/6	10	C	M	Clay Loam	
16 - 20	10YR 5/1	85	10YR 4/4	15	C	M	Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2023-07-18

Applicant/Owner: Wendel State: New York Sampling Point: UPL35

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

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

Subregion (LRR or MLRA): L 101 Lat: 42.65843101 Long: -78.98350968 Datum: WGS 84

Soil Map Unit Name: Derb 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 ✔
Hydric Soil Present?	Yes ✔	No ___
Wetland Hydrology Present?	Yes ___	No ✔

Is the Sampled Area within a Wetland? **Yes** ___ **No** ✔

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 Vis ble 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** ✔

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL35

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus americana	60	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	60%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Lonicera tatarica	45	✔	FACU
2. Cornus racemosa	25	✔	FAC
3. Cornus alba	20		FACW
4. Rosa multiflora	10		FACU
5. Rubus allegheniensis	5		FACU
6.			
7.			
	105%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Solidago canadensis	35	✔	FACU
2. Glyceria melicaria	20	✔	OBL
3. Prunella vulgaris	15		FAC
4. Geum canadense	10		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1. Toxicodendron radicans	10	✔	FAC
2.			
3.			
4.			
	10%	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	20	x 2 =	40
FAC species	60	x 3 =	180
FACU species	155	x 4 =	620
UPL species	0	x 5 =	0
Column Totals:	255 (A)		860 (B)

Prevalence Index = B/A = 3.4

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** ✔

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

SOIL

Sampling Point: UPL35

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 - 14	10YR 4/1	85	10YR 4/4	15	C	M	Clay Loam	
14 - 20	2.5Y 5/2	90	7.5YR 5/8	10	C	M	Silty Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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 ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Erie County AgriPark City/County: Erie Sampling Date: 2023-07-18

Applicant/Owner: Wendel State: New York Sampling Point: WET36

Investigator(s): R Feickert & D Wilson Section, Township, Range: Evans

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

Subregion (LRR or MLRA): L 101 Lat: 42.65645491 Long: -78.983536 Datum: WGS 84

Soil Map Unit Name: Churchville NWI classification: PFO

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 ______
Hydric Soil Present?	Yes ✔	No ______
Wetland Hydrology Present?	Yes ✔	No ______

Is the Sampled Area within a Wetland? **Yes** ✔ **No** ______

If yes, optional Wetland Site ID: Wetland A South

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 Vis ble 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** ______

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: WET36

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	20	✔	FACW
2. Fraxinus americana	5	✔	FACU
3.			
4.			
5.			
6.			
7.			
	25%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Cornus alba	50	✔	FACW
2. Fraxinus pennsylvanica	15	✔	FACW
3. Rhamnus cathartica	10		FAC
4.			
5.			
6.			
7.			
	75%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Toxicodendron radicans	30	✔	FAC
2. Symphyotrichum lanceolatum	25	✔	FACW
3. Symphyotrichum puniceum	25	✔	OBL
4. Glyceria melicaria	20	✔	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 88 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	45	x 1 = 45
FACW species	110	x 2 = 220
FAC species	40	x 3 = 120
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	200 (A)	405 (B)

Prevalence Index = B/A = 2.0

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** ___

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

SOIL

Sampling Point: WET36

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 - 20	10YR 4/2	90	10YR 4/6	10	C	M	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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 (TF12)
- ___ 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** ______

Remarks:

Appendix C

Site Photographs

Site Photos

North, into mature woodlands from sample point A6U12.

South, into Wetland A from sample point A6W1.

South, into mature woodlands from sample point A40U4.

North, into Wetland A from sample point A40W3.

Northeast, into upland woodlands from sample point A76U6.

Southwest, into Wetland A from sample point A76W5.

West, looking down old gravel runway from sample point A95U8.

East, into Wetland A from sample point A95W7.

West, into upland woodlot from sample point A208U14.

East, into Wetland A from sample point A205W13.

East, showing upland filled/disturbed areas from sample point A272U16.

East, into Wetland A from sample point A272U15.

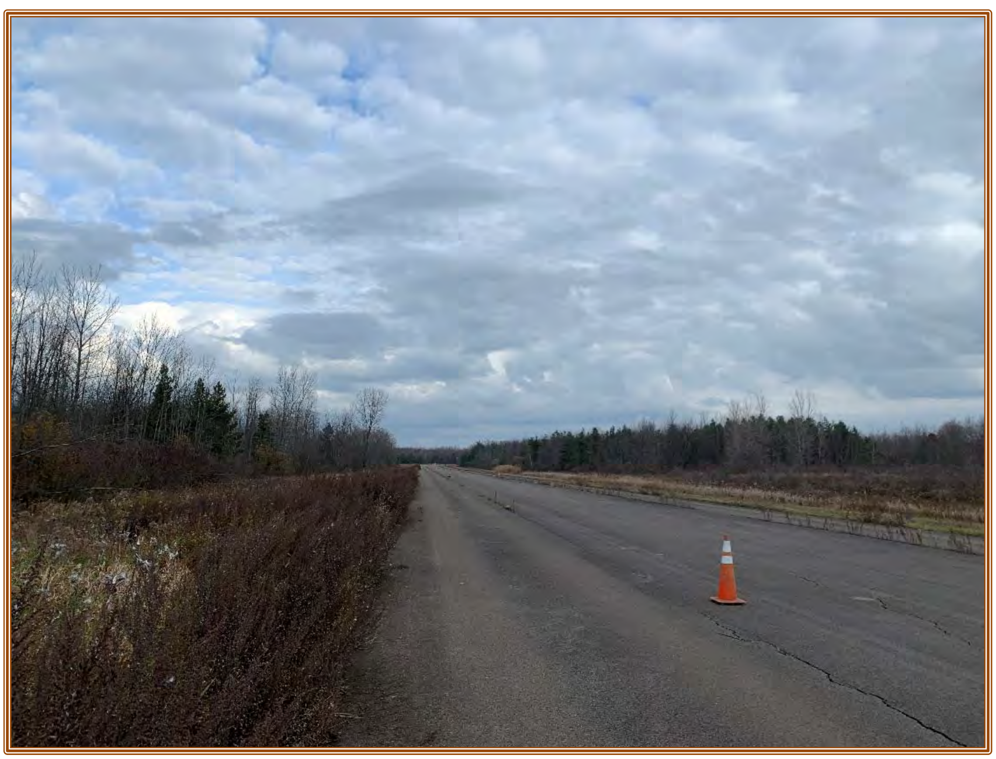
South, into Wetland B from sample point B9W17.

West, showing separation between Wetlands B & C, from sample point B9U18.

North, into Wetland C from sample point C4W19.

Gravel Access road in southern region of the site.

Asphalt pad in south-central region of the site.



North, down main runway.

South, into upland meadow from sample point D6U20.

South, into Wetland D from sample point D39W23.

Northwest, into Wetland E from sample point E8U26.

East, down asphalt runway from sample point E8U26.

West, into Wetland E from sample point E35U25.

South, into upland woodlot from sample point UPL28.

Appendix D

Wetland Delineation Map

DAVEY®

Resource Group

1 TOPOGRAPHIC DRAINAGE MAP: PORTION OF WETLAND "A"
SCALE: 1" = 100'

GENERAL NOTES:

1. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83), WESTERN ZONE, US SURVEY FEET. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88) AS ESTABLISHED BY THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) REAL TIME NETWORK (NYSNET RTN)
2. THIS PROPERTY IS LOCATED WITHIN THE AREA HAVING A ZONE DESIGNATION "X" BY FEDERAL EMERGENCY AGENCY (FEMA) OF FLOOD INSURANCE RATE MAP NO. 36029C0461H WITH AN EFFECTIVE DATE JUNE 7, 2019 FOR COMMUNITY NO. 360240 IN THE TOWN OF EVANS & FLOOD INSURANCE RATE MAP NO. 36029C0463H WITH AN EFFECTIVE DATE JUNE 7, 2019 FOR COMMUNITY NO. 360240 IN THE TOWN OF EVANS, ERIE COUNTY AND THE STATE OF NEW YORK.
3. CONTOUR INTERVAL IS 1 FOOT. CONTOUR DATA REFLECTS A COMBINATION OF GROUND TOPOGRAPHY WITHIN THE CLEARED, DEVELOPED AREAS AND 2008 LIDAR DATA WITHIN THE WOODED, UNDEVELOPED AREAS.
4. WETLAND AREAS DEPICTED HEREON ARE BASED ON THE WETLAND DELINEATION REPORT PREPARED BY WILSON ENVIRONMENTAL TECHNOLOGIES.
5. TOPOGRAPHIC FIELD WORK PERFORMED MARCH, APRIL, MAY, 2021 BY RAVI ENGINEERING & LAND SURVEYING, P.C.

FILENAME: P:\283214 ECIDA AGRIBIZ PARK MASTER PLANGEIS\16. CAD\DWG\CIVIL\FIGURES\WETLAND DRAINAGE.DWG LAYOUT: WLA-1 DATE: 4/20/2022 3:08:01 PM

ECIDA
THE ECONOMIC DEVELOPMENT CORPORATION FOR ERIE COUNTY

ERIE COUNTY INDUSTRIAL DEVELOPMENT AGENCY
95 PERRY STREET, SUITE 403
BUFFALO, NY 14203

ECIDA AGRIBUSINESS PARK
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ANGOLA, NY 14006

wendel
Centerpointe Corporate Park
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Williamsville, NY 14221
www.wendelcompanies.com
p:716.688.0766 f:716.625.6825
Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

RAVI ENGINEERING & LAND SURVEYING, P.C.
2110 S. Clinton Avenue, Suite 1
Rochester, NY 14618

PROGRESS PRINT
4/20/2022
NOT FOR CONSTRUCTION

NO.	REVISIONS	DATE

DWG. TITLE

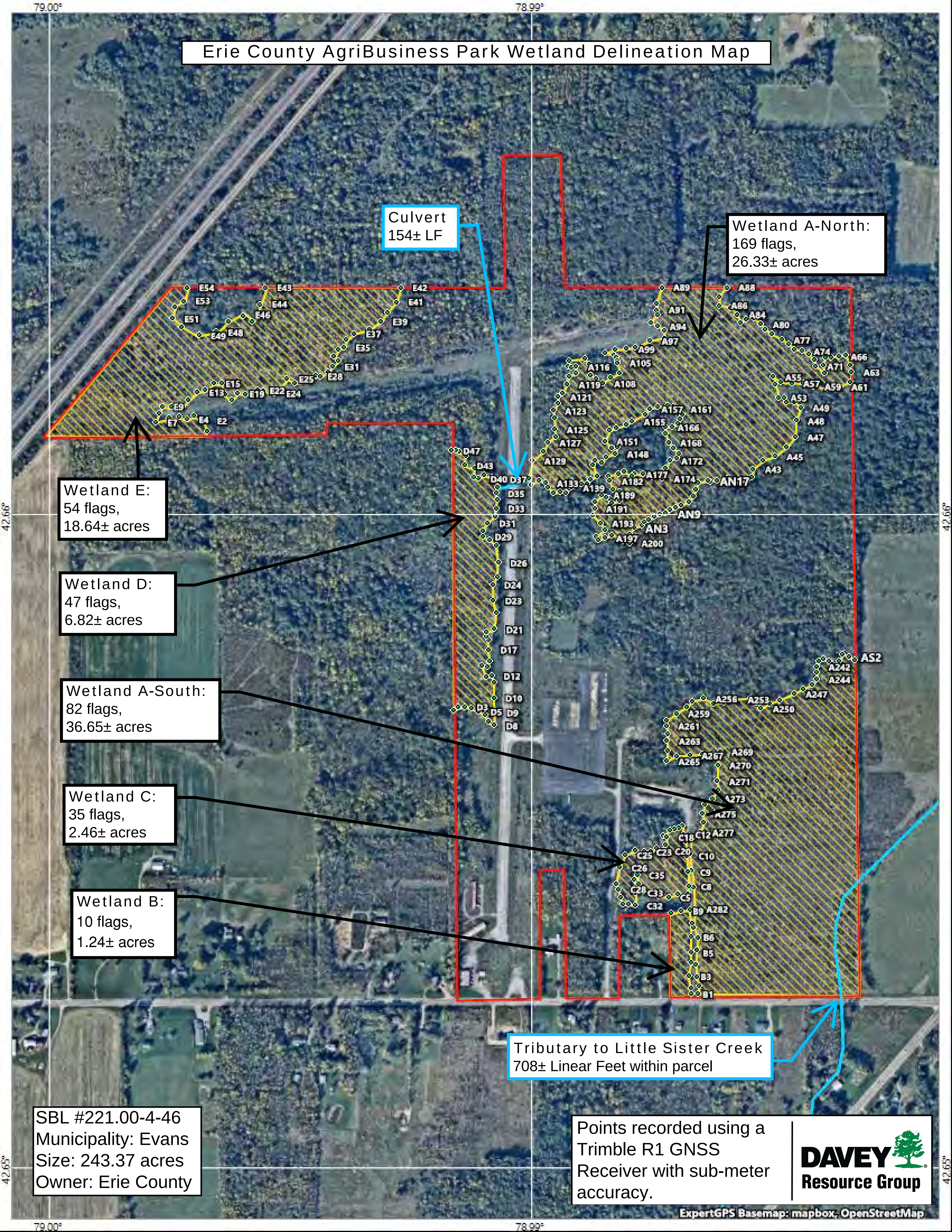
TOPOGRAPHIC DRAINAGE MAP: PORTION OF WETLAND "A"

0 1" 2"
GENERIC SCALE BAR
SCALE BAR SHOWN IS TWO INCHES ON THE ORIGINAL DRAWING. IF NOT TWO INCHES ON THIS SHEET, ADJUST ACCORDINGLY

DATE	01-18-2022		
SCALE	AS SHOWN		
DWN.	TAR	CHK.	WET
PROJ. No.	283214		

DWG. No.

WLA-1


Erie County AgriBusiness Park Wetland Delineation Map
Culvert
154± LF
Wetland A-North:
169 flags,
26.33± acres
Wetland E:
54 flags,
18.64± acres
Wetland D:
47 flags,
6.82± acres
Wetland A-South:
82 flags,
36.65± acres
Wetland C:
35 flags,
2.46± acres
Wetland B:
10 flags,
1.24± acres
Tributary to Little Sister Creek
708± Linear Feet within parcel
SBL #221.00-4-46
Municipality: Evans
Size: 243.37 acres
Owner: Erie County
Points recorded using a
Trimble R1 GNSS
Receiver with sub-meter
accuracy.
DAVEY
Resource Group
ExpertGPS Basemap: mapbox, OpenStreetMap
79.00°
78.99°
42.66°
42.65°

Appendix D
List of Wildlife Species Likely Found at Project Site

Wildlife Species Likely Found at the Project Site

Common Name	Scientific Name
Mammals	
Whitetail Deer	*Odecoileus virginianus*
Raccoon	*Procyon lotor*
Opossum	*Didelphis virginiana*
Red Fox	*Vulpes*
Gray Fox	*Urocyon cinereoargenteus*
Coyote	*Canis latrans*
Chipmunk	*Tamias striatus*
Red Squirrel	*Tamiasciurus hudsonicus*
Gray Squirrel	*Sciurus carolinensis*
Big Brown Bat	*Eptesicus fuscus*
Long-tailed Weasel	*Mustela frenata*
Eastern Cottontail Rabbit	*Sylvilagus floridanus*
Shrews, Moles, and Voles	*Blarina brevicauda, Cryptotis, Sorex spps., Condylura cristata, Parascalops breweri, Scalopus aquaticus, Microtus spps.*
Mice	*Permyscus leucopus, P .maniculatus, Mus musculus*
Norway Rat	*Rattus norvegicus*
Striped Skunk	*Mephitis*
Woodchuck	*Marmota monax*
Birds	
American Robin	*Turdus rufopalliatus*
House Sparrow	*Passer domesticus*
Song Sparrow	*Melospiza melodia*
European Starling	*Sturnus vulgaris*
Black-capped Chickadee	*Poecile atricapillus*
Northern Cardinal	*Cardinalis*
Mourning Dove	*Zenaida macroura*
Eastern Towhee	*Pipilo erythrophthalmus*
Downy Woodpecker	*Dryobates pubescens*
Hairy Woodpecker	*Dryobates villosus*
Pileated Woodpecker	*Dryocopus pileatus*
Cooper's Hawk	*Accipiter cooperii*
Red-tailed Hawk	*Buteo jamaicensis*

Wildlife Species Likely Found at the Project Site

Common Name	Scientific Name
Red-shouldered Hawk	*Buteo lineatus*
Great Horned Owl	*Bubo virinianus*
Dark-eyed Junco	*Junco hyemalis*
Northern Mockingbird	*Mimus polyglottos*
Gray Catbird	*Dumetella carolinensis*
Veery	*Catharus fuscenscens*
Wild Turkey	*Meleagris gallopavo*
Reptiles and Amphibians	
American Toad	*Bufo americanus*
Wood Frog	*Rana sylvatica*
Spring Peeper	*Pseudacris crucifer*
Green Frog	*Lithobates clamitans*
Red Spotted Newt	*Notophthalmus v. viridescens*
Common Garter Snake	*Thamnophis sirtalis*
Short-Head Garter Snake	*Thamnophis brachystoma*
Northern Ring-Necked Snake	*Diadophis punctatus edwardsii*
Northern Brown Snake	*Storeria d. dekayi*

Appendix E
Phase 1A Archaeological Investigation

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PHASE 1A ARCHAEOGICAL INVESTIGATION FOR THE PROPOSED ERIE COUNTY AGRIBUSINESS PARK MASTER PLAN AND INFRASTRUCTURE PROJECT

TOWN OF EVANS, ERIE COUNTY, NEW YORK

New York State Historic Preservation Office PR#21PR02647

Prepared for:

WENDEL
Centerpointe Corporate Park
375 Essjay Road, Suite 200
Williamsville, New York 14221

Prepared by:

PANAMERICAN CONSULTANTS, INC.
2390 Clinton Street
Buffalo, New York 14227-1735
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June 2021

PHASE 1A ARCHAEOGICAL INVESTIGATION

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Centerpointe Corporate Park
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Prepared by:

Edwin W. Button, M.A., RPA, Principal Investigator
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June 2021

Management Summary

SHPO Project Review Number: #21PR02647

Involved State and Federal Agencies:

Phase of Survey: Phase 1A Cultural Resources Investigation

Location Information:
Location: 1526 Eden Evans Center Road and adjacent parcel to the northwest.
Minor Civil Division: Town of Evans
County: Erie County

Survey Area (Metric & English): This Phase 1A cultural resources sensitivity assessment includes approximately 240 acres (97.12 hectares) in preparation for the future development of an agribusiness complex.

USGS 7.5 Minute Quadrangle Map: Eden, NY 1965, and Angola, NY 1960

Archaeological Survey Overview: The proposed 240-acre Erie County Agribusiness Park Master Plan and Infrastructure Project entails redevelopment of the abandoned Angola Airport at 1526 Eden Evans Center Road in the Town of Evans, New York. The private airport was constructed on former farmland around 1960 and closed in 2002.

No archaeological sites are listed inside or adjacent to the project area, or within a half-mile. Documented Native American sites in the region indicate a settlement pattern that favored proximity to Big Sister Creek and the confluence with Lake Erie at Bennett Beach, Angola, New York (an area between 1.5 and 3 miles west of the project). The project area is not considered archaeologically sensitive for Native American sites due to its distance from regionally preferred areas of occupation, and the presence of soils classified by the USDA as "poorly drained" or "somewhat poorly drained" covering 90-percent of the project. Paved/disturbed soils are found largely covering portions of the project where limited "moderately" drained soils are indicated.

A portion of the project area is considered archaeologically sensitive for historic period cultural resources associated with an extant nineteenth century farmhouse at 1576 Eden Evans Center Road, located within the south portion of the project. Although county tax records list the house as being built around 1880, map research shows a structure was present as early as 1854. No other map documented structures are indicated within the remaining portions of the project.

A Phase 1B cultural resources investigation is recommended for an approximate 500-ft by 500-ft (5.7 acre) portion of the project encompassing the nineteenth century farmhouse at 1576 Eden Evans Center Road. No archaeological investigations are recommended for the remainder of the 240-acre project area which is considered to have a low archaeological sensitively.

The proposed project is not anticipated to impact any eligible or listed S/NRHP places. The Main Office Building/Hangar - Former Angola Airport (USN 02913.000176) at 1526 Eden Evans Center Road in the project area is determined not eligible for listing in the New York State and National Registers of Historic Places (NYS OPRHP Resource Evaluation April 23, 2021). A ca. 1880 farmhouse identified opposite the project area at 1551 Eden Evan Center Road is situated within a modern developed residential area, already opposite a former airport.

Report Author(s): E. Button, C. Longiaru, M. Steinback

Date of Report: June 2021

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1.0 Introduction

1.1 PROJECT DESCRIPTION

Panamerican Consultants, Inc., was contracted by Wendel, Williamsville, New York, to conduct a Phase 1A archeological investigation for the proposed Erie County Agribusiness Park Master Plan and Infrastructure Project Town of Evans, Erie County, New York (Figure 1). The property consists of a former airport facility located at 1526 Eden Evans Center Road and an adjacent parcel to the northwest. The maximum area of potential effect (APE) is 240 acres (97.12 hectares). The New York State Historic Preservation Office (NYSHPO) has assigned this project number #21PR02647.

Proposed plans (Figure 2) for the Agribusiness Park include a utility network, water and sewer systems and amenities to support the park, upgrades to the old airport strip and related infrastructure to accommodate truck traffic, and the possible addition of rail access to the site (Troy Licastro/WIVB News: April 22, 2020).

The purpose of the Phase 1A investigation is to identify previously recorded archaeological resources that may be impacted by the proposed project and to assess the likelihood that unrecorded resources may be present within the APE (New York Archaeological Council [NYAC] 1994). The investigation included documentary and historical map research, a site file and literature search, the examination of properties listed in the New York State and National Registers of Historic Places (S/NRHP), preparation of Native American and historic contexts of the project area, assessment of cultural resources sensitivity and past disturbances at the site, a walkover reconnaissance, and photographic documentation of field conditions. Photographs of the field investigation are presented in Appendix A.

The cultural resource investigation was conducted in compliance with the National Historic Preservation Act (as amended), the National Environmental Policy Act, the New York State Historic Preservation Act, and the State Environmental Quality Review Act, as well as all relevant federal and state legislation. The investigation was also conducted according to the New York Archaeological Council's Standards for Archaeological Investigations and NYSHPO guidelines.

The Phase 1A field reconnaissance was conducted on June 15, 2021 and included field survey and photographic documentation of the setting (e.g., previous disturbances, structures, field conditions). Mr. Edwin Button, M.A., RPA, was the Principal Investigator and conducted the site investigation, Ms. Christine Longiaru, M.A., conducted background research and contributed significantly to report authorship, and Mr. Mark Steinback, M.A., MBA, served as Project Director.

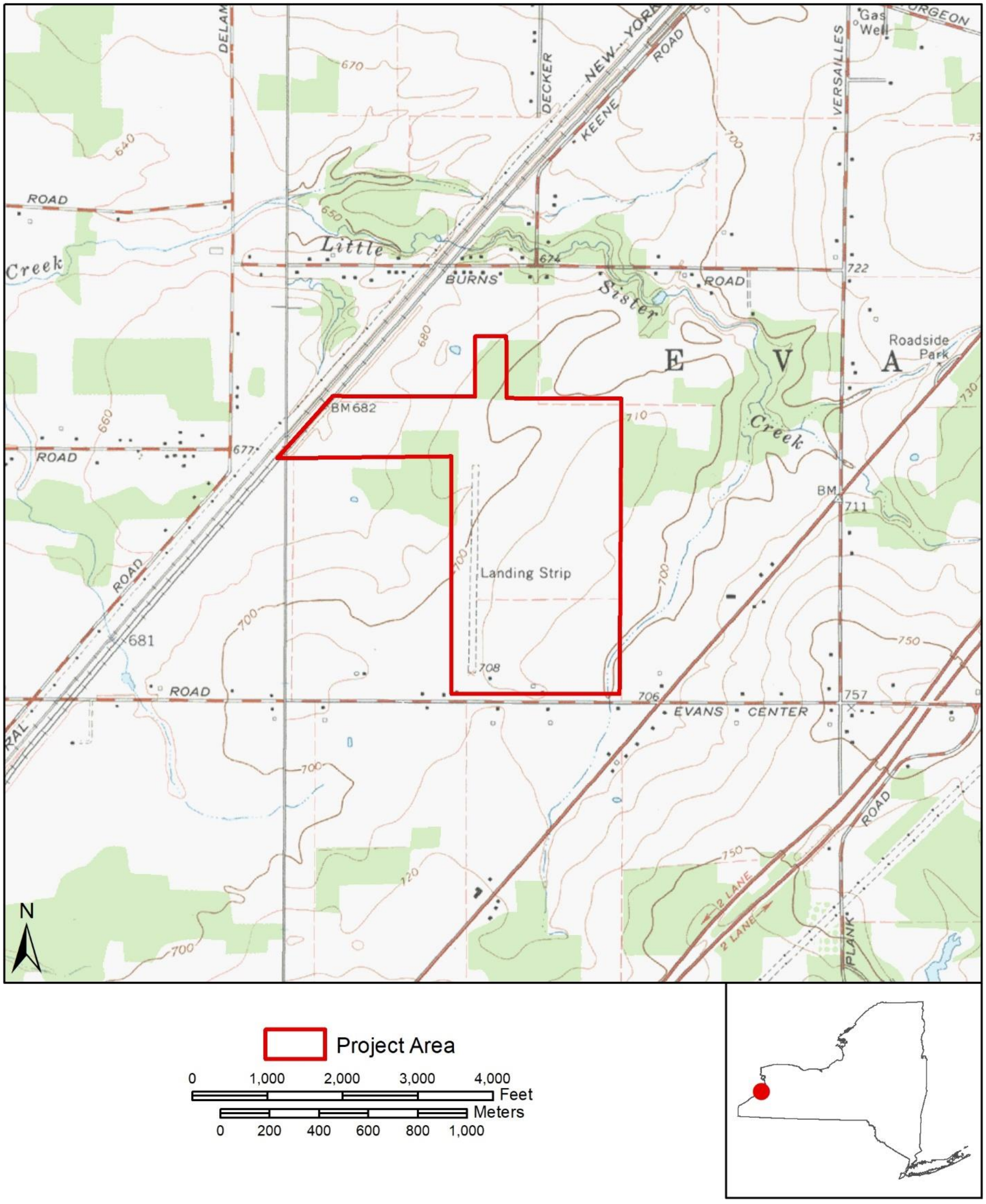

Figure 1. Location of the project area in the Town of Evans, Erie County, New York *(USGS Eden, NY 1965, Angola, NY 1960).*

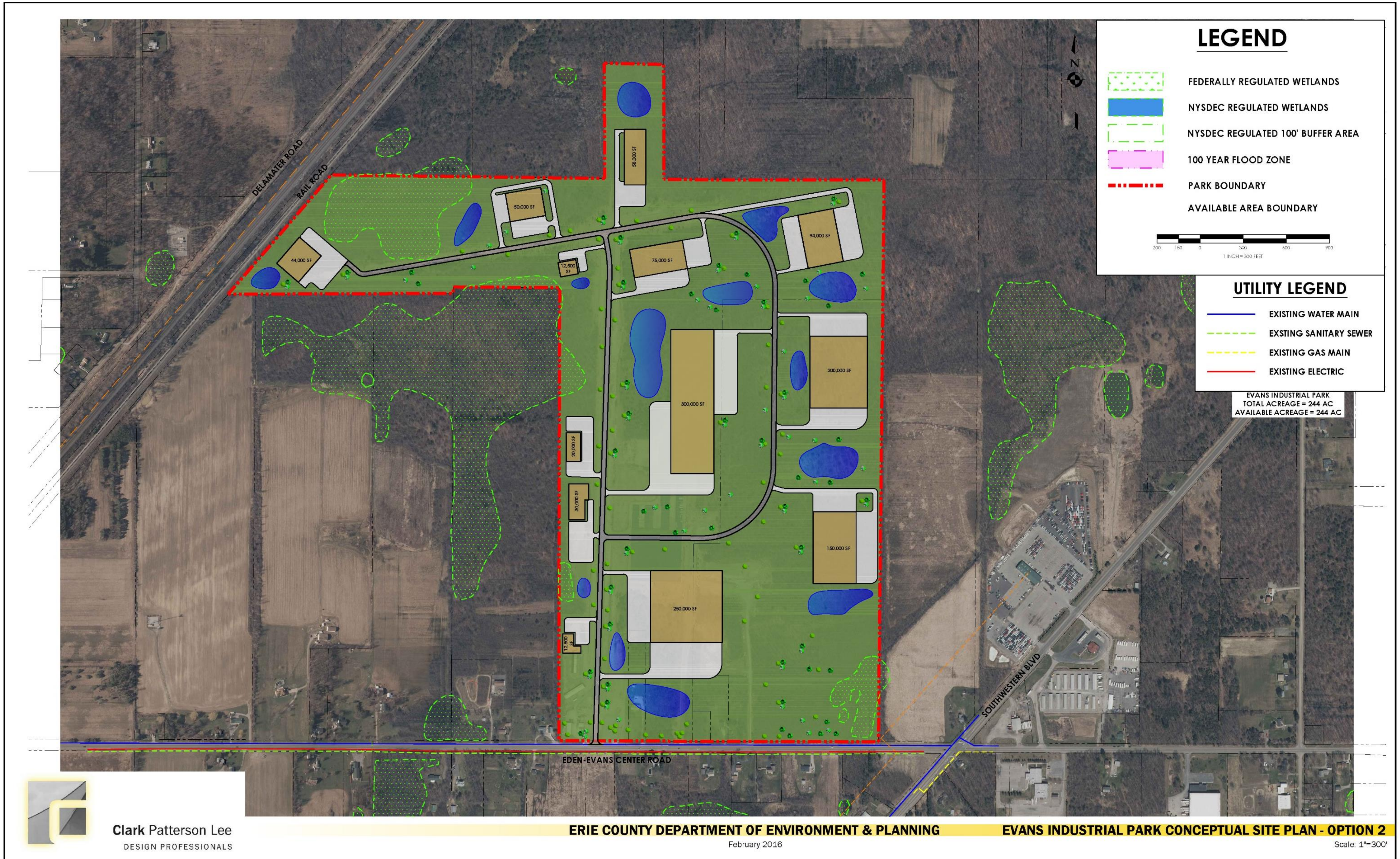

Figure 2. Evans Industrial Park Conceptual Site Plan *(Wendel / Clark Patterson Lee 2021).*

1.2 ENVIRONMENTAL SETTING

Topography. The project area is situated within the Erie-Ontario Lake Plain, one of the two physiographic provinces contained within Erie County (the Allegheny Plateau is the other). The Lake Plain is a nearly level plain, between 2 to 4 miles (3.2 to 6.4 km) wide, running along the shore of Lake Erie. The terrain is typical of abandoned lakebeds, where there is little significant relief except for narrow ravines carved by the area's streams. Elevations within the generally level project area range between approximately 670 and 710 feet (ft) (204.21 / 216.4 meters[m]) above mean sea level, increasing gradually from west to east away from the lake (U.S. Geological Survey [USGS] 1960 and 1965; see Figure 1).

Geology and Soils. In general, bedrock underlying Erie County formed in bands oriented east-west more than four hundred million years ago during the Silurian and Devonian periods. Bedrock beneath the project area is an extensive band of shale and sandstones characteristic of the Java and West Falls Group formed during the Devonian period, one of the younger periods of bedrock formation in the county. Relatively flat, the bedrock underlying Erie County tilts to the southwest at approximately 50 ft (15 m) per mile (Owens et al. 1986:2-4).

Soils in the project area are summarized in Table 1 and shown in Figure 3 (Owens et al. 1986; NRCS 2017). Roughly 90-percent of the soils in the APE are "poorly drained" or "somewhat poorly drained". "Moderately well drained" soils are largely limited to an area with indicated Farnham channery silt loam (FbA).

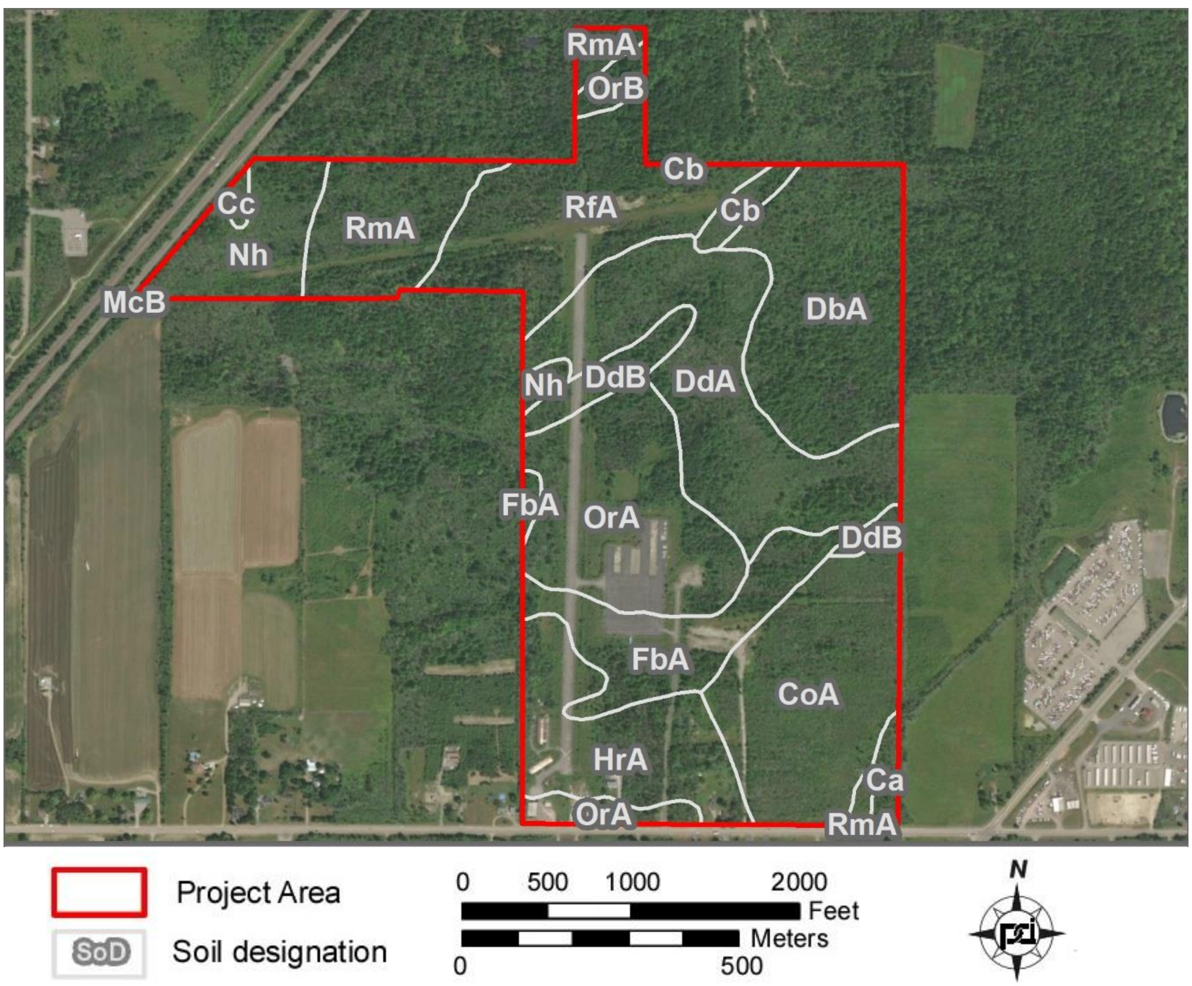

Figure 3. Soils within the project area *(NRCS 2017).*

Table 1. Soils within and adjacent to the project area.

Name	Slope %	Drainage	Landform
Canadice silt loam (Ca)	Nearly level	Poorly	Intermittent streams, closed depressions on nearly flat plains
Canadice silt loam, channery till substratum (Cb)	Nearly level, 0-3%	Poorly	Nearly flat areas or in closed depressions
Canandaigua silt loam (Cc)	0-3%	Poorly	Depressions
Churchville silt loam (CoA)	Nearly level, 0-3%	Somewhat poorly	Broad flats of lowland till plain
Darien silt loam (DbA)	Nearly level, 0-3%	Somewhat poorly	benches, broad hilltops, concave toe slopes & level parts of rolling till plains
Derb silt loam (DdA)	Nearly level, 0-3%	Somewhat poorly	Upland glacial till plains & glaciated dissected plateaus
Derb silt loam (DdB)	3-8%	Somewhat poorly	Undulating glacial till plains & dissected upland plateaus
Farnham channery silt loam (FbA)	0-3%	Moderately well	Terraces, glacial lake beaches, outwash plains & recessional moraines
Hornell silt loam (HrA)	0-3%	Somewhat poorly	Broad, nearly flat areas where topography influenced by underlying bedrock
Mardin silt loam (McB)	3-8%	Moderately well	Broad divides on upland till plains & on lower side slopes of valleys
Niagara silt loam (Nh)	Nearly level	Somewhat poorly	Broad flats in northern part of county & smaller areas elsewhere
Orpark silt loam (OrA)	Nearly level 0-3%	Somewhat poorly	Flat ledges & ridge crests of shelflike edge of upland plateau
Remsen silty clay loam (RfA)	Nearly level 0-3%	Somewhat poorly	Almost flat till plains, most in N-central & SW parts of county
Rhinebeck silty clay loam, stratified substratum (RmA)	Nearly level 0-3%	Somewhat poorly	Near remnant glacial lake beaches

Drainage. The project area is roughly 3.6 miles (5.8 km) east of Lake Erie. Little Sister Creek is in proximity to the north and east of the project area. A tributary of the creek enters through the southeast corner of the project area. Big Sister Creek is approximately 1.3 miles (2.1 km) to the south of Eden Evans Center Road. National Wetlands Inventory identified wetlands in the northwest, west, and southeast portions of the project area (Erie County NY Interactive Mapping Viewer).

Forest Zone and Vegetation. The project area is within the Elm-Red Maple-Northern Hardwood forest zone (de Laubenfels 1966:92). This zone is found along Lake Erie and the southwestern portion of Erie County, and reflects recent conditions where poorly drained areas are widespread, the natural forest has been removed, and better drained areas have been used for agriculture. Climatic conditions of this zone comprise cooler summers and a shorter growing season; the prevalence of elm and red maple is due to human impacts to the environment (de Laubenfels 1966:95). The APE is largely wooded, with non-forested portions associated with a paved runway, an extensive parking lot, a paved access road and a second gravel access road, cleared areas in proximity of two airplane hangars and two facility buildings, and the immediate yards of two residences within the southwest portion of the project.

Man-Made Features and Alterations. The project area includes a former aircraft facility (Figures 4 through 6) which consists of a complex of small buildings (office, maintenance facility, and two airplane hangars) along Eden Evans Center Road, a 3,212-ft by 60-ft (979-m x 18-m) asphalt landing strip (#01/19; north-south), a 2,800-ft by 60-ft (853-m x 18-m) turf and gravel runway (# 09/27; east-west), and a 360-ft by 680-ft (110-m x 207-m) paved aircraft parking area on the east side of the asphalt landing strip (Freeman 2020; see Section 4 for current conditions of abandoned airport). Dense woods cover most of the project area.

The proposed project area includes two residences: a ca. 1948 residence at 1548 Eden Evans Center Road (Figure 7) on a 2.05-acre parcel (SBL 221.00-4-28.2) and a ca. 1882 residence with detached garage at 1576 Eden Evans Center Road (Figure 8) on a 1.9-acre parcel (SBL: 221.00-3-25) (Erie County NY Real Property Information).

The setting around the project area is primarily rural residential and agricultural. The surrounding area includes a mix of agricultural land, woods, residential properties on Eden Evans Center Road, and modern commercial properties to the east on Southwestern Boulevard. CSX Erie-West Subdivision MT1-2 railroad parallels the northwest edge of the project area. An existing water main extends along Eden Evans Center Road.

NOTE: Seven residential structures are located within 200 ft (60 m) of the project, on the south side of Eden Evans Center Road (listed from West to East):

- 1519 Eden Evans Center Road, ca. 1985 residence.
- 1535 Eden Evans Center Road, ca. 2017 residence.
- 1551 Eden Evans Center Road, ca. 1880 residence (Figure 9).
- 1561 Eden Evans Center Road, ca. 2003 residence.
- 1579 Eden Evans Center Road, ca. 1978 residence.
- 1583 Eden Evans Center Road, ca. 1978 residence.
- 1585 Eden Evans Center Road, ca. 1971 residence.

One residential structure is located within 200 ft (60 m) of the west side of the project, on the north side of Eden Evans Center Road

- 1520 Eden Evans Center Road, ca. 1953 residence.

Figure 4. Former Angola Airport Office and Maintenance buildings within the southwest portion of the project area, facing north from Eden Evans Center Road *(Panamerican 2021).*

Figure 5. Former Angola Airport airplane hangars situated on west side of asphalt landing strip, facing north from Eden Evans Center Road *(Panamerican 2021).*

Figure 6. Former Angola Airport asphalt landing strip, facing north *(Panamerican 2021).*

Figure 7. South elevation of ca. 1948 residence at 1548 Eden Evans Center Road, located within the south portion of the project. View is facing north *(Panamerican 2021).*

Figure 8. South elevation of ca. 1882 residence at 1576 Eden Evans Center Road, located within the south portion of the project. View is facing north *(Panamerican 2021).*

Figure 9. North elevation of ca. 1880 residence at 1551 Eden Evans Center Road, located opposite (outside) the south portion of the project. View is facing south *(Panamerican 2021).*

2.0 Phase 1A Methodology

A Phase 1A archaeological investigation is designed to identify and assess sensitivity and potential for locating archaeological resources within the project's APE. These resources include archaeological sites (Native American or Euro-American) and related aboveground features. The investigation consists of a background/literature search, a site file check, and a field reconnaissance of the project area. The geography and history of the region was reviewed to understand the background of the project area and provide a context for any resources that may exist within the project's APE. Archaeological and historic site files at the New York State OPRHP's online Cultural Resources Information System (CRIS) were reviewed as an initial step to determine the presence of known archaeological sites within 0.5 mile (0.8 km) of the APE. These files include data recorded at both the OPRHP and the New York State Museum (NYSM). Field reconnaissance was conducted to observe and photographically document the setting and general conditions (e.g., disturbances, drainage, sensitive terrain) of the APE.

Information collected during the Phase 1A survey (i.e., background research and field investigation) was used to assess the sensitivity of the project area for the presence of archaeological resources. Areas are considered to have low archaeological sensitivity according to the following criteria:

- graded and cut areas through surrounding terrain (e.g., hills or gorges), such as those resulting from road construction
- areas that appear to have large amounts of fill
- areas previously impacted by construction of utilities, drainage ditches, streets or other obvious areas of significant earth movement
- areas including poorly drained soils and wetlands
- areas having slopes greater than 15 percent

Areas of archaeological potential and high sensitivity are identified based on the following criteria:

- undisturbed areas that are environmentally sensitive with relatively level well-drained soils or in the vicinity of potable water such as springs, streams or creeks (these characteristics typify known site locations in the region)
- known archaeological site locations within or adjacent to the project area
- map-documented structure (MDS) locations identified within or immediately adjacent to the project area

3.0 Background Research

3.1 Site File and Records Review. A review of the Office of Parks, Recreation, and Historic Preservation (OPRHP) archaeological site-file database conducted through the New York State Cultural Resource Information System (CRIS) revealed no archaeological sites within the project area or within a 0.5-mi radius. of the project area.

Previous Surveys. No cultural resources investigations for the project area have been recorded in the files of the OPRHP, as accessed through CRIS. Three archaeological investigations have been conducted within one-half mile of the project area (Mack and Young 2019a, 2019b; Perrelli 2002). Two of these investigations were conducted along a 20-mile (32.2-km) linear corridor just west of the project area on the west side of the CSX railroad right-of-way, for the proposed rebuild of a portion of the Gardenville-Dunkirk 141/142 115kV transmission lines between the Gardenville Substation in the Town of West Seneca, New York and the North Angola Substation in the Village of Angola, New York (Mack and Young 2019a, 2019b). The segments of the Phase 1B archaeological investigation APE near the project area did not identify any cultural resources.

One other investigation for improvements to the Evans Water Distribution System entailed archaeological investigation on Eden Evans Center Road west of the project. Two shovel test pits were excavated on the north side of the road roughly 675 m east of Delamater Road. No cultural materials were found in the shovel test pits (Perrelli 2002:36).

Consultation Projects. The boundaries of one consultation project, Town of Evans Water Tower and Water Main Project (#18PR05805) is in the northwest corner of the current project. It is a closed project in CRIS. No further information is available. Two other consultation projects are within a half-mile (0.8 km) of the project area: Southtowns Auto Auction Expansion Project (#5PR05453, open project in CRIS) and Burns Solar Garden Construction Project (5 MW/~18 of 21 acres [# 21PR02726], closed project in CRIS). No additional information for these two projects is available in CRIS.

Register Listings. A review of the New York State and National Registers of Historic Places, as accessed by CRIS, did not identify any properties, buildings, sites or districts within or in proximity to the project area as listed or eligible for listing in the National Register of Historic Places (CRIS 2021). The Main Office Building/Hangar - Former Angola Airport (USN 02913.000176) at 1526 Eden Evans Center Road in the project area is not eligible for listing in the New York State and National Registers of Historic Places (NYS OPRHP Resource Evaluation April 23, 2021).

3.2 Historical Map Analysis. Six historic period maps were reviewed for the project area, including: Burr 1829 (not reproduced in this report), Geil 1854 (Figure 10); Stone and Stewart 1866 (Figure 11); Beers 1880 (Figure 12); Century Map Company 1909 (Figure 13); and USGS 1965 (Figure 15). In addition, two historical aerial photographs—Erie County Department of Public Works (ECDPW) 1926 (Figure 14) and Google Earth 1994 (Figure 16)—were also reviewed for the project area. Finally, the 1800 Ellicott map of western New York (Figure 17) was inspected to determine the location of the project relative to former Native American Reservations.

1829 map. Township names, lot divisions, major rivers and creeks are shown. Lot owner names and existing buildings are not identified (map was inspected but not reproduced herein).

1854 map (Figure 10). The project area is on Lots 27 and 37. The Buffalo & State Line Railroad is shown adjacent to the northwest edge of the project area. By 1854, multiple structures are located along the north and south sides of Eden Evans Center Road between the railroad and Versailles Road to the east. One structure is shown within the south portion of the project, attributed to *P.R. Clark*. The *Clark* structure is shown in proximity of an extant residence at 1576 Eden Evans Center Road (see Figure 8). Four structures are shown adjacent (within approximately 200 ft [60 m]) of the project (outside the project limits), including: *R.J. Calkins* on the west side of the project, and (from west to east) *D.T. Mosher*, *S. Irish*, and *S. Holmes* shown opposite the project – on the south side of Eden Evans Center Road. The *Mosher* structure is shown in proximity of an extant residence at 1551 Eden Evans Center Road (see Figure 9). Modern residences are found where the other structures are indicated.

1866 map (Figure 11). Limited changes had occurred between the 1854 and 1866 maps. One structure continues to be shown within the project area – again attributed to *P.R. Clark* (see Figure 10). Four structures are shown adjacent to (outside) the project area: *W. J. Cameron* (formerly *R.J. Calkins*) to the west, and to the south (from west to east) *J. Nichols* (formerly *D.T. Mosher*; see Figure 10), *S. Irish*, and *D. Nichols* (formerly *S. Holmes*). The previously identified *Buffalo & State Line Rail Road* shown adjacent to the northwest limits of the project area has been replaced by the *Buffalo and Erie Rail Road* by 1866.

1880 map (Figure 12). Lot 37 had been subdivided into four parcels by 1880. The project area spans five or six parcels. The Clark structure remains within the south portion of the project area, with Phillip Clark owning 200 acres spanning the east portion of Lot 27 and the west portion of Lot 37 (representing a majority of the present project area). The *Calkins / Cameron* structure previously shown west of the project area is no longer evident. The *J. Nichols* (formerly *Mosher)* and *S. Irish* structures continue to be shown on the south side of the road, opposite the project (see Figures 10 and 11). A structure attributed to *C.N. Johnson* appears adjacent to the east limits of the project (on the north side of Eden Evans Center Road), although this is likely the same structure attributed to *C. Johnson* on the 1866 map, only drawn closer.

The previously named *Buffalo and Erie Rail Road* adjacent to the northwest limits of the project area is now identified as the *Lake Shore Michigan Southern Rail Road* on the 1880 map.

1909 map (Figure 13). The project area is indicated within Township 8, Range 9, within Lots 27 and 37. Eden Evans Center Road was known as Union School House Road at the time. The former Clark structure continues to be shown within the south portion of the project, now attributed to *F. Rehberg*. An outbuilding attributed to *C.J. Nichols* is shown outside the west limits of the project for the first time; outside the east limits is a structure and outbuilding attributed to *E. Schoepflin* (formerly *C.N. Johnson*). Four structures are shown opposite the project on the south side of the present Eden Evans Center Road, including the previously identified *J. Nichols* (former *D.T.* M*osher)* and *S. Irish* (attributed to *A. Irish* on the 1909 map) structures (see Figures 10 and 11). By 1909, Pikes Crossing railroad station was established on Lot 47, on the northeast corner of the railroad and Eden Evans Center Road.

1926 aerial (Figure 14). The 1926 aerial photograph shows the project area comprised of many agricultural fields with a centrally located field access road extending northwest then north from the former *P.R. Clark / Phillip Clark* /*F. Rehberg* farmstead. Two farmsteads stand out opposite the project area, the western most one appearing where the *Mosher/Nichols* structure is shown on earlier referenced maps, and the easternmost farm opposite the *Clark/Rehberg* farm – approximately where a house at 1561 Eden Evans Center Road is today.

1965 map (Figure 15). A single north/south “Landing Strip” is first documented on the 1965 USGS topographic map, showing the **Angola Airport** which was constructed between 1959 and 1965. An unidentified structure is shown at the southwest end of the landing strip, in proximity of an extant residence at 1548 Eden Evans Center Road (see Figure 7).

The privately-owned public airport had several owners during its operation. The original name of the airport was Evans Airways Airfield. It is noted as having a 3,000-ft unpaved roadway on the July 1965 and 1971 Detroit Sectional Chart. The 1982 AOPA Airport Directory lists the “Angola Airways” Airfield with a 3,200-ft asphalt runway 1/19 & a 2,550' gravel runway 9/27 (Freeman 2020).

By 1986, the airport had expanded with an east-west, 2,800-ft turf and gravel runway and several small buildings on the southwest side of the main runway. Angola Aircraft Services & Premier Airways were the operators at that time. A new ramp on the east side of the field was under construction in 1994 (see Figure 16 - 1995 aerial view). “Angola Airport was still listed in the 2001 AOPA Airport Directory. It was described as having a 3,212-ft by 60-ft asphalt Runway 1/19 & a 2,800' by 60’ gravel Runway 9/27. Angola Airport closed in 2002 (Freeman 2020).

Buffalo & Erie County Industrial Land Development Corp. (ILDC) purchased the former airport property and an adjacent parcel in April 2020 (Licastro 2020).

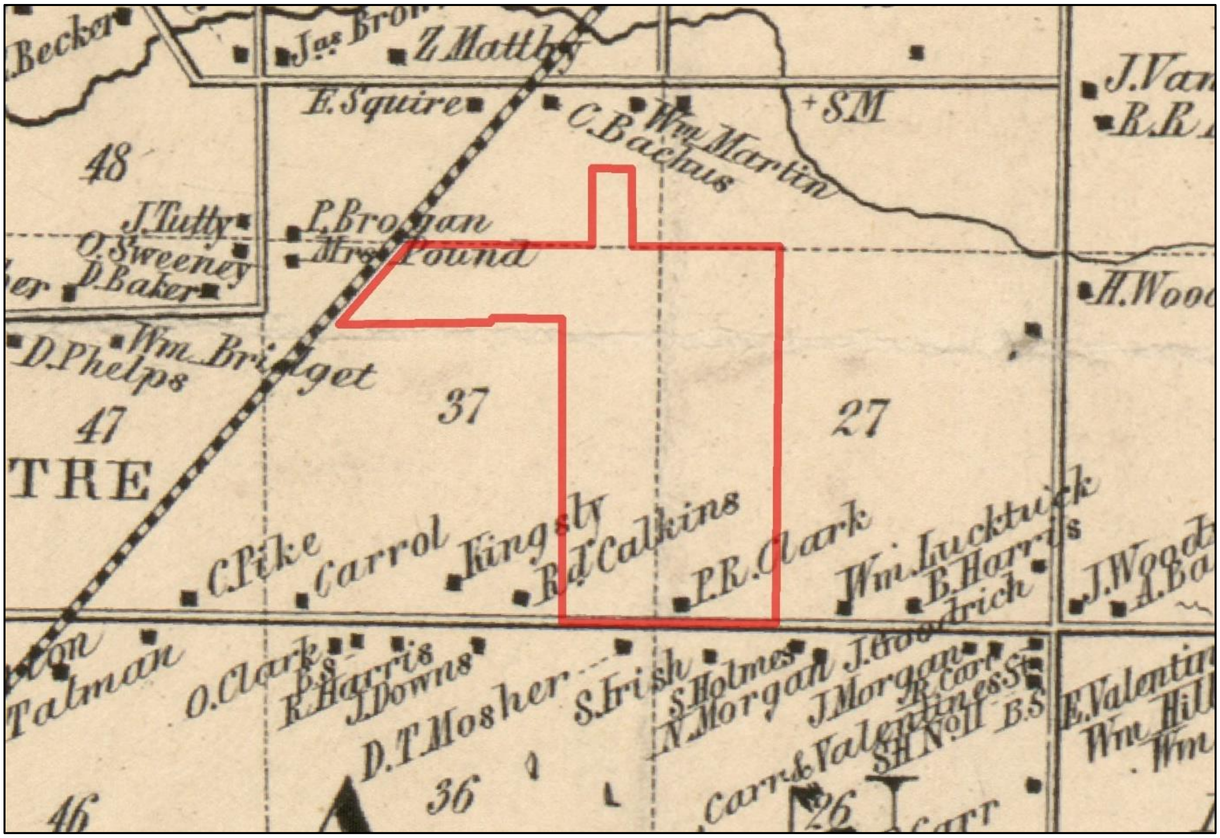

Figure 10. Approximate location of the project area (red polygon) in 1854 *(Geil 1854).*

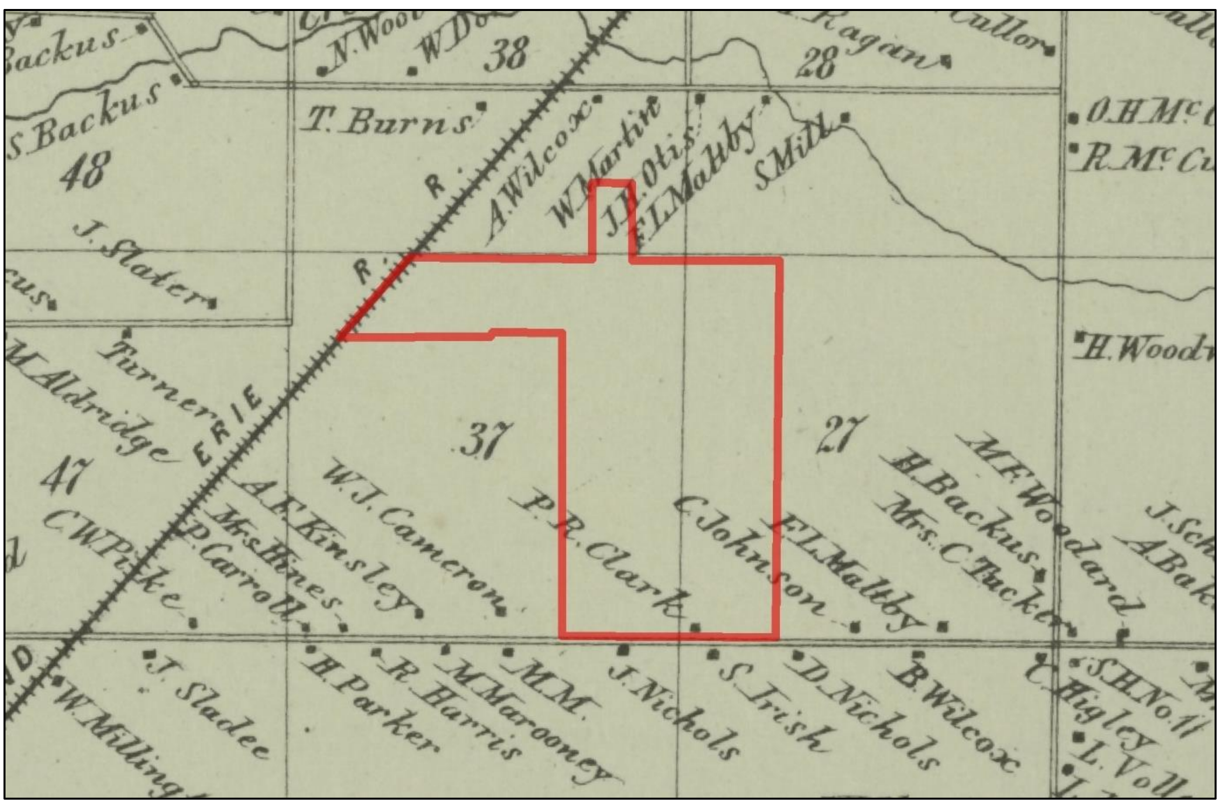

Figure 11. Approximate location of the project area (red polygon) in 1866 *(Stone and Stewart 1866).*

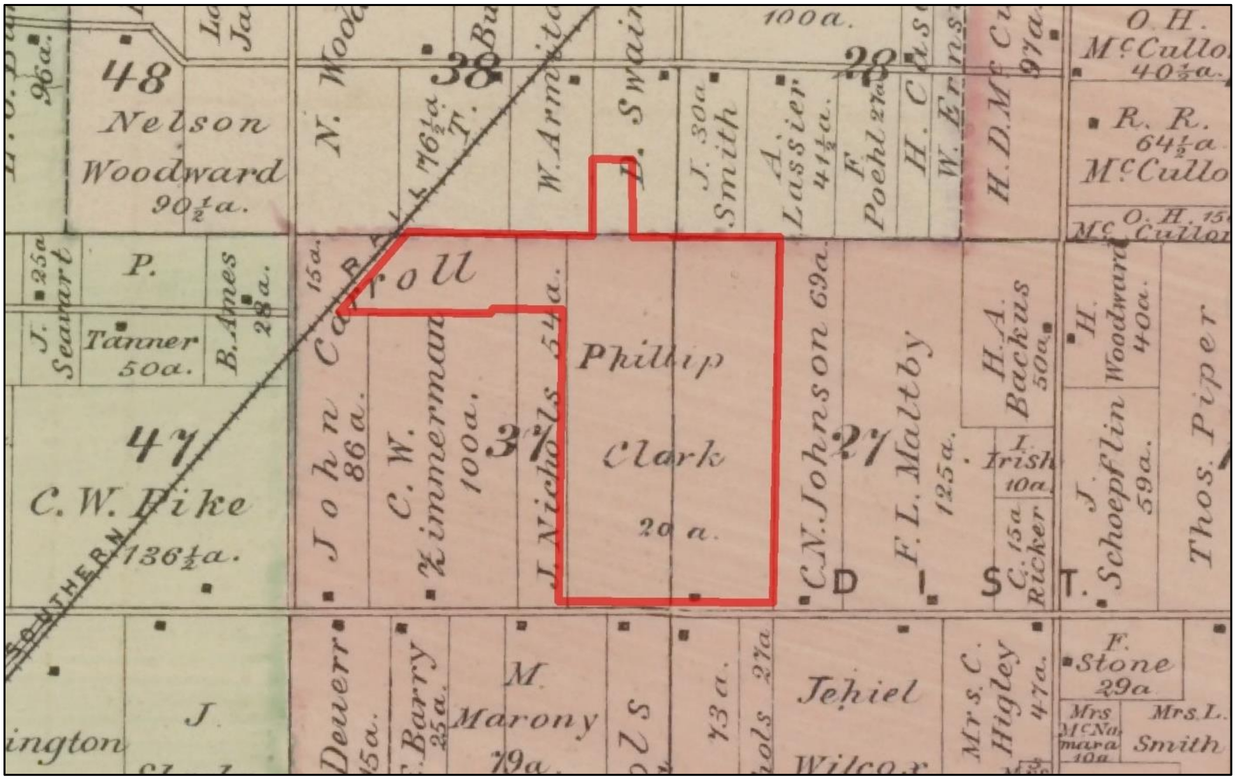

Figure 12. Approximate location of the project area (red polygon) in 1880 *(Beers 1880).*

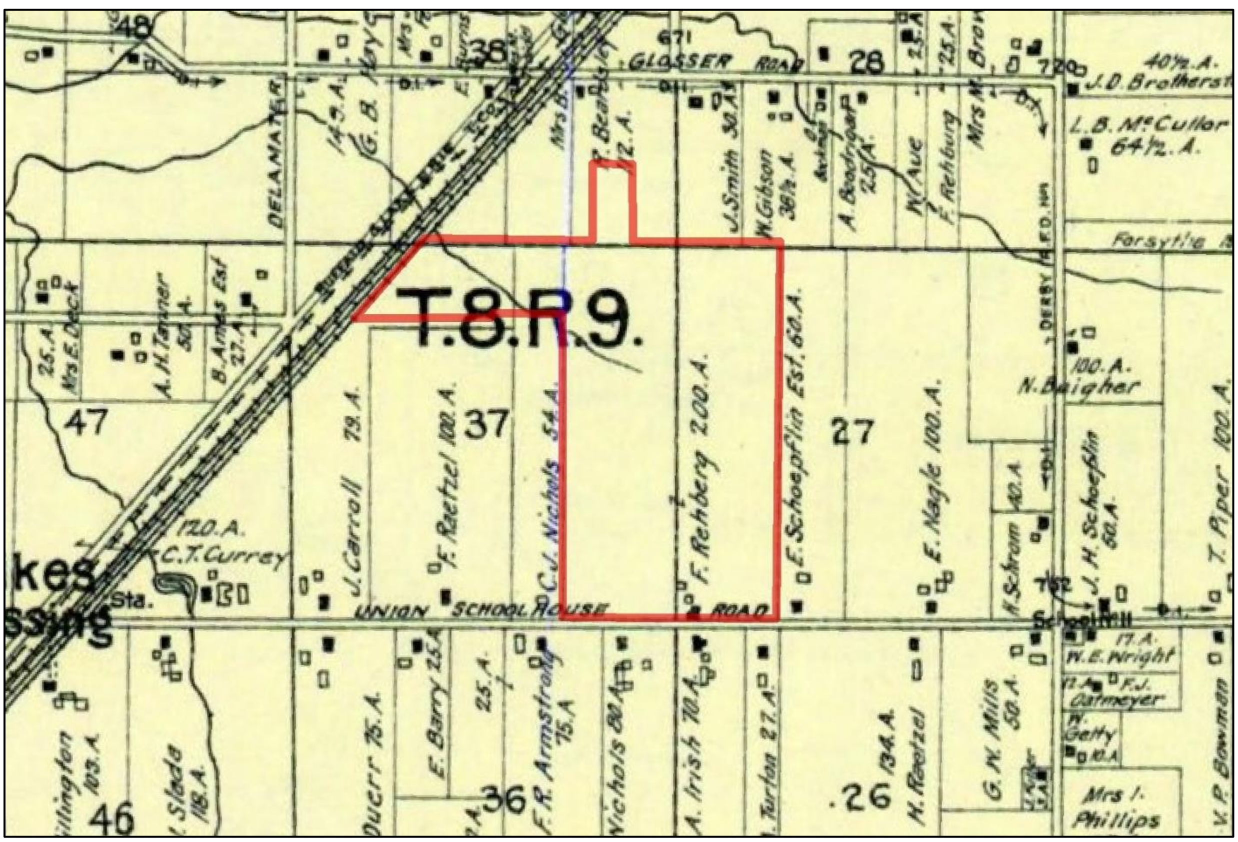

Figure 13. Approximate location of the project area (red polygon) in 1909 *(Century Map Company 1909).*

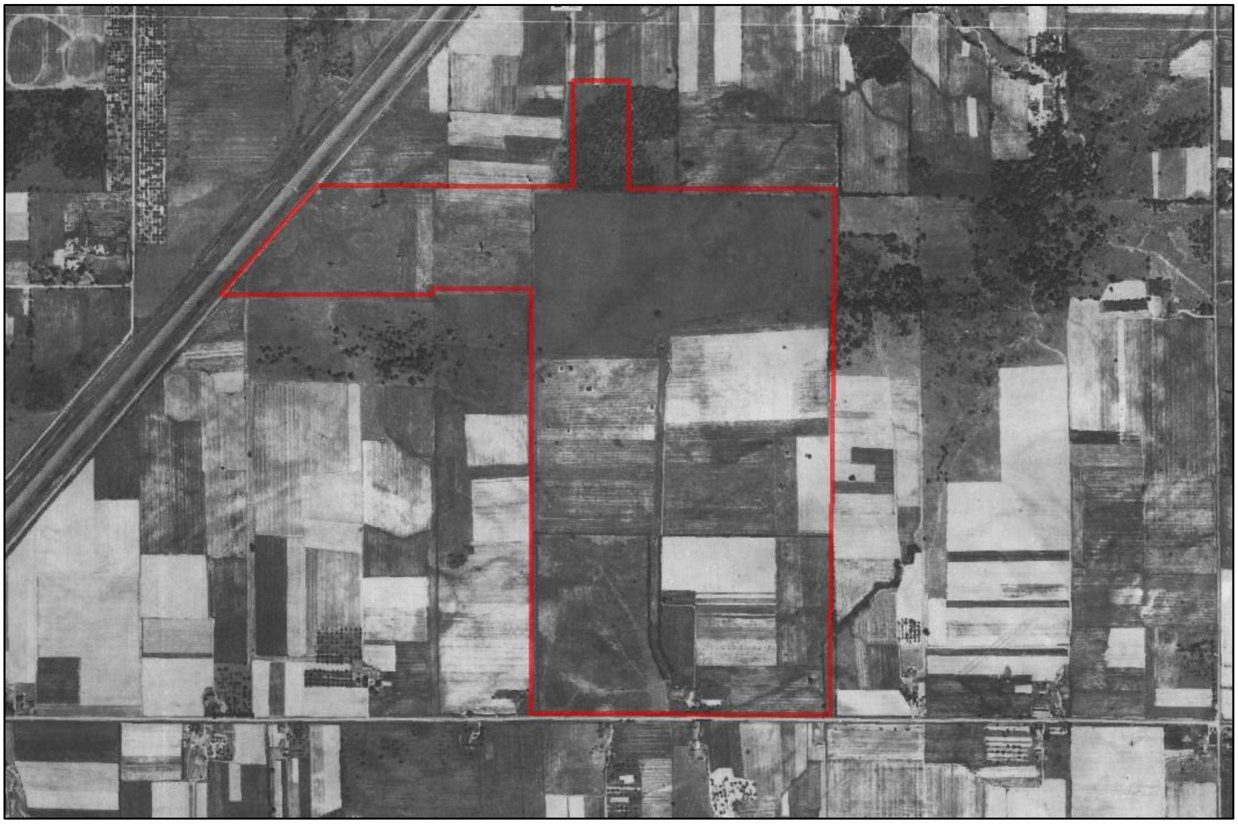

Figure 14. Approximate location of the project area (red polygon) in 1926 *(ECDPW 1926).*

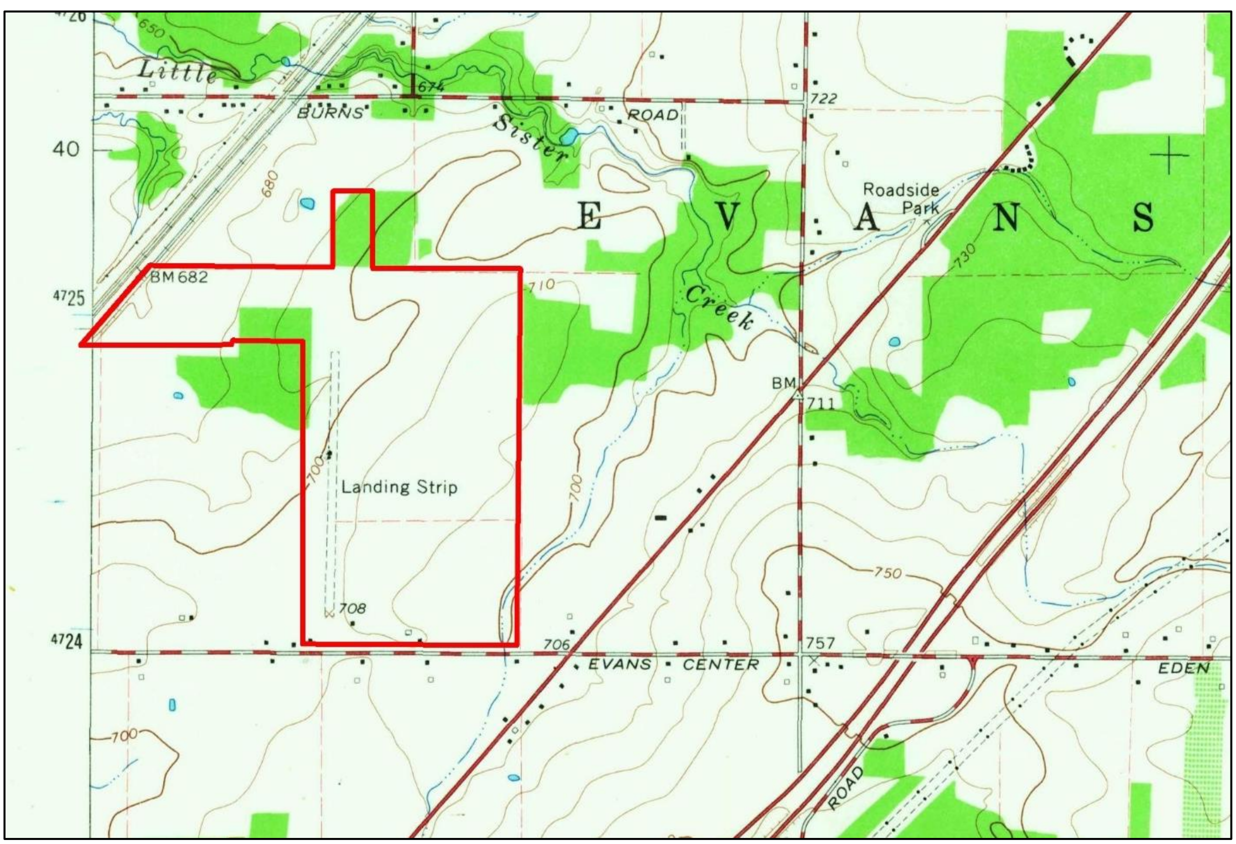

Figure 15. Approximate location of the project area (red polygon) in 1965 *(USGS Eden, NY 1965).*

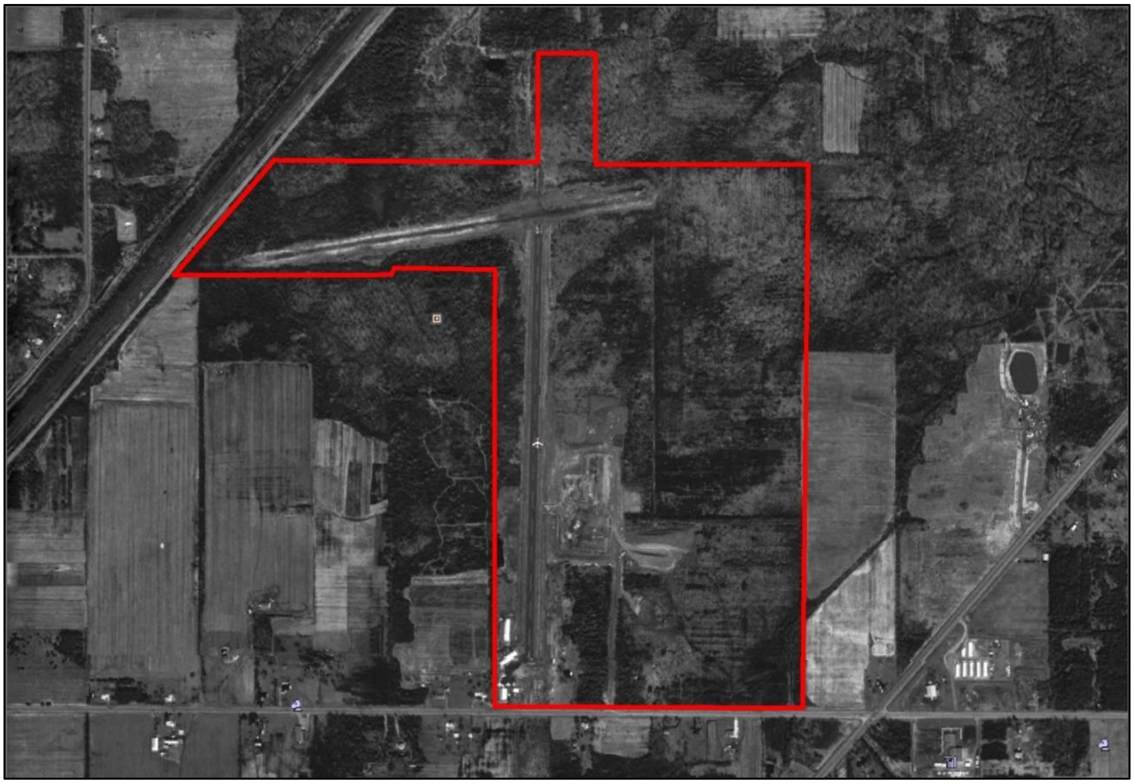
Figure 16. Approximate location of the project area in 1994 *(Google Earth 1994).*

1800 Ellicott Map (Figure 17). The Ellicott Map indicates the project is not in or near an extant or former Native American Reservation. The Cattaraugus Reservation is the closest; it is roughly six miles (9.6) km south of the APE.

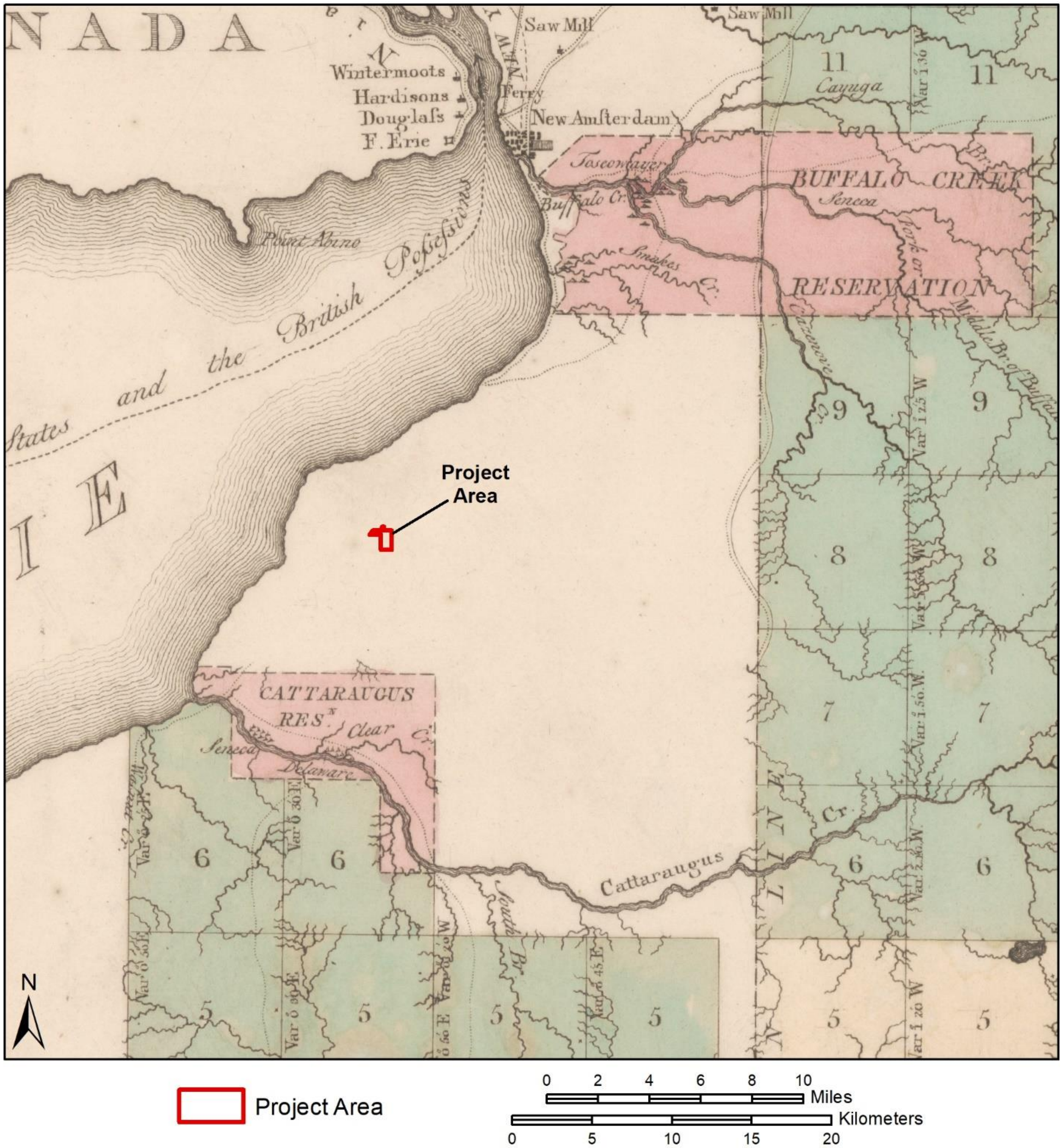

Figure 17. The project area relative to western New York Native American Reservations in 1800 *(Ellicott 1800).*

4.0 Field Reconnaissance

A field reconnaissance of the 240-acre Phase 1A investigation area was conducted to observe and photographically document the setting and general conditions (e.g., disturbances, drainage, potential intact soils) of the project area. The setting of the project is primarily rural residential and agricultural (see Appendix A: Photographs 1 through 6). The project area is characteristically level and largely wooded with a dense brush understory. Poorly drained soils are indicated within approximately 40 percent of the undeveloped areas (Figure 18).

As described in Section 1.2 (Man-Made Features and Alterations) – the project area includes a former airfield which consists of a complex of small buildings (office, maintenance facility, and two airplane hangars) along Eden Evans Center Road (see Appendix A: Photographs 7 through 10), in addition to a 3,212-ft by 60-ft (979-m x 18-m) asphalt landing strip (aligned north-south) with an adjacent directional air indicator (see Appendix A: Photographs 4 and 11), a 2,800-ft by 60-ft (853-m x 18-m) turf and gravel runway (aligned east-west; see Appendix A: Photograph 5), and a 360-ft by 680-ft (110-m x 207-m) paved aircraft parking area on the east side of the asphalt landing strip (see Appendix A: Photograph 12).

The proposed project area also contains two residences: a ca. 1948 structure at 1548 Eden Evans Center Road (see Appendix A: Photograph 13) and a ca. 1882 structure with detached garage at 1576 Eden-Evans Center Road (see Appendix A: Photograph 14).

Previous disturbances include:

- Grading and ditching within 100 ft of both elevated airstrips (see Appendix A: Photograph 15).
- Grading, gravel fill, and paved vehicle/aircraft access roads associated with the facility buildings in the southwest corner of the project area impact approximately 4.9 acres (see Appendix A: Photographs 16 and 17).
- Gravel lot adjacent to Eden Evans Center Road and east of the former airport building (see Appendix A: Photograph 18).
- Undetermined if the two residences within the project have backyard septic systems or are connected to a municipal waste system.
- Partial gravel and paved access road extending from the aircraft parking lot to Eden Evans Center Road is elevated 1.5 meters (5 ft) in the north portion – with an elevated gravel lot extension at the north terminus (see Appendix A: Photographs 19 and 20). A 10-ft wide disturbance along each side of the access road is anticipated due to road construction activities (tree/brush removal, grading and fill).
- Two extensive channery gravel piles extending 200 ft to 300 ft (61 m to 91 m) in length are located just east of the paved aircraft parking area (lot) (see Appendix A: Photograph 21).
- Gravel access road extending from the east side of the two gravel piles mentioned above, extending south towards Eden Evans Center Road. A 10-ft wide disturbance along each side of the access road is anticipated due to road construction activities (tree/brush removal, grading and fill) (see Appendix A: Photograph 22).

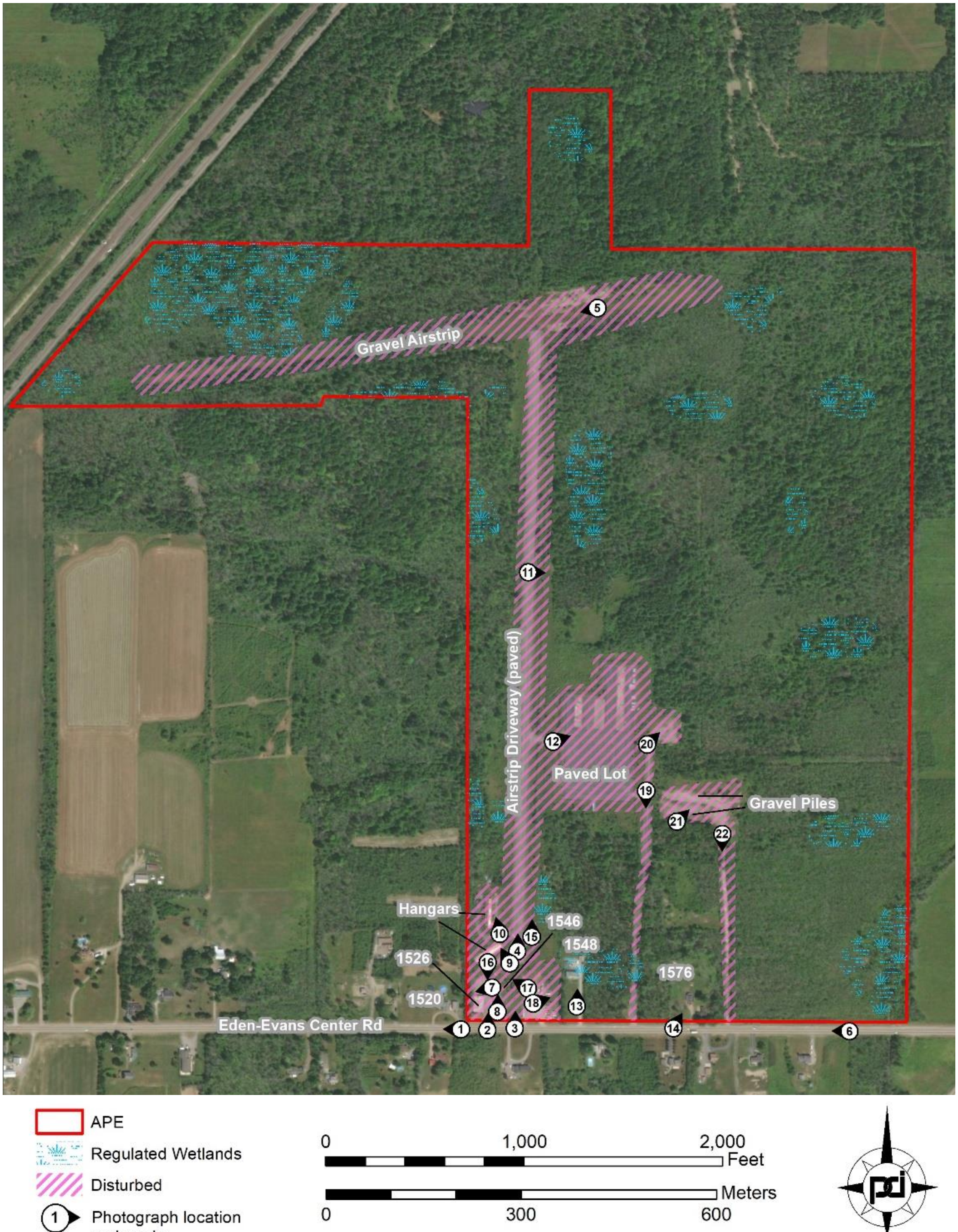

Figure 18. Location of indicated wet areas, buildings, lots, drives, disturbances, and photograph locations and directions in the project area (see Photographs in Appendix A) *(aerial source: New York State Orthos Online 2019).*

5.0 Conclusions and Recommendations

Conclusions. A portion of the project's APE is considered archaeologically sensitive for historic period cultural resources associated with an extant nineteenth century farmhouse at 1576 Eden Evans Center Road, located within the south portion of the project. Although county tax records list the house as being built around 1880, the historic maps show a structure was present as early as 1854. No other map documented structures are indicated within the remaining portions of the project.

The SHPO has no record of archaeological sites inside or adjacent to the project area or within a half-mile. Documented Native American sites indicate a settlement pattern that favored proximity to Big Sister Creek and the confluence with Lake Erie at Bennet Beach, Angola, New York (an area between 1.5 and 3 miles west of the project). The project area is not considered archaeologically sensitive for Native American sites due to its distance from locally preferred occupation areas and the presence of soils classified by the USDA as "poorly drained" or "somewhat poorly drained" covering 90 percent of the project (see Figure 19). USDA classified "moderately well drained" soils are indicated in a limited portion of the project, in areas that have been largely disturbed (i.e., south portion of the paved airplane parking areas, gravel mounds on the east side of the parking area, a portion of the asphalt airstrip, and the former hangar areas).

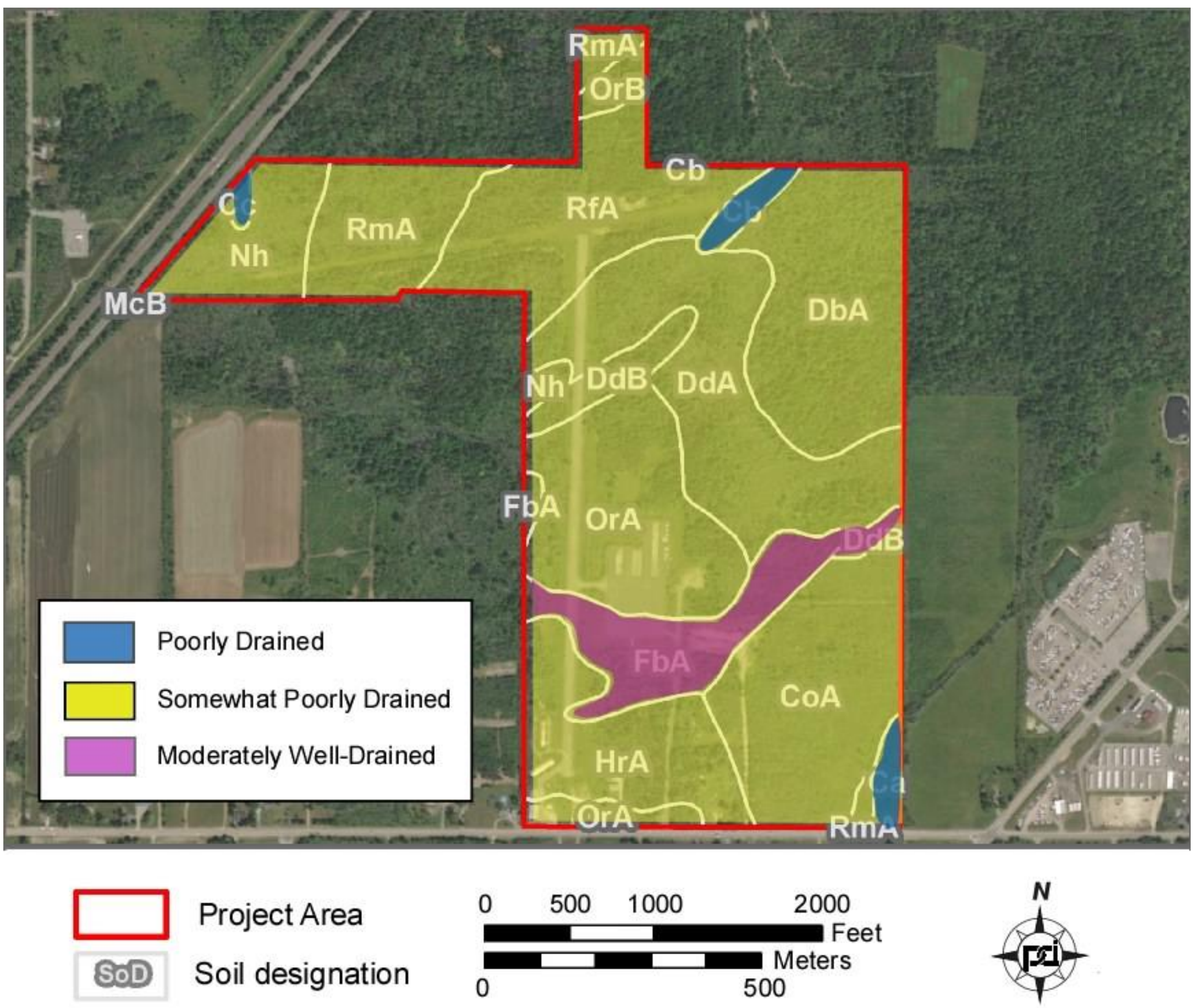

Figure 19. USDA classified drainage within the project area *(NRCS 2017).*

The aerial photo of 1926 (see Figure 14) indicates that the project area was once comprised of tillable land – likely through drainage efforts that have since ceased to be effective with the land resorting back to a wetland state. Construction of the airport in the 1960s and additions made as late and the 1990s were accomplished by bringing in gravelly (slate-channer) fill.

Recommendations. A Phase 1B cultural resources investigation is recommended for an approximate 500-ft by 500-ft (5.7-acre) portion of the project (Figure 20) encompassing the nineteenth century farmhouse at 1576 Eden Evans Center Road (see Figures 8 and 18).

No archaeological investigations are recommended in proximity of the post 1960 airfield buildings, or in the remainder of the 240-acre project area which is considered to have a low archaeological sensitively.

The proposed project is not anticipated to impact any eligible or listed architectural resources. The Main Office Building/Hangar - Former Angola Airport (USN 02913.000176) at 1526 Eden Evans Center Road in the project area is determined not eligible for listing in the New York State and National Registers of Historic Places (NYS OPRHP Resource Evaluation April 23, 2021). A ca. 1880 farmhouse (see Figure 9) identified opposite the project area at 1551 Eden Evan Center Road is situated within a fairly modern developed residential area, already opposite a former airport.

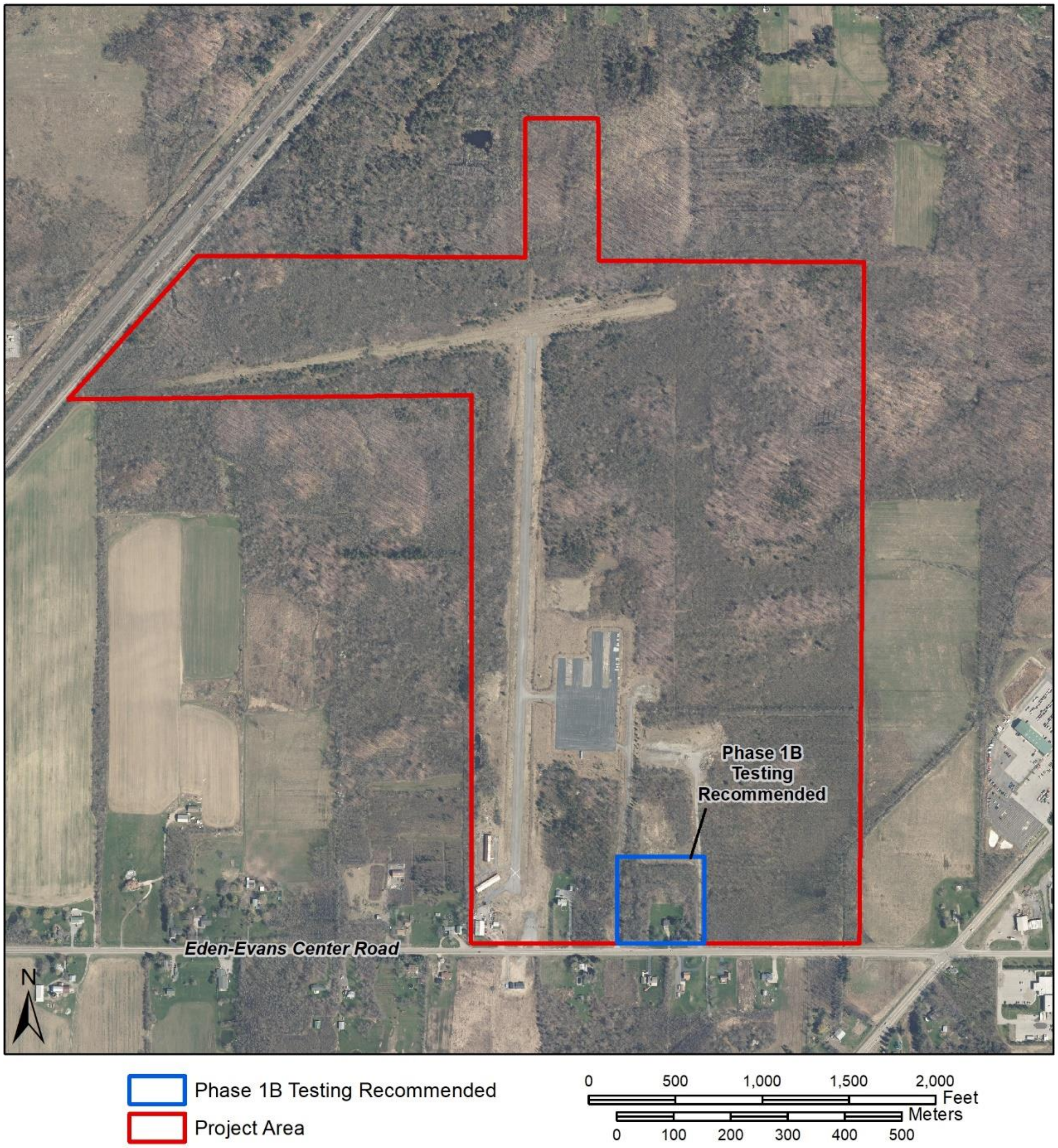

Figure 19. Phase 1B testing recommended for 5.7-acre portion of the Erie County Agribusiness Park Master Plan Project associated with a mid-to-late nineteenth century farmhouse at 1576 Eden Evans Center Road *(Discover GIS NY 2017).*

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Appendix A. Photographs

Photograph 1. Project is located within a rural residential/agricultural setting. View is facing west along Eden Evans Center Road from the southwest entrance of the project *(Panamerican 2021).*

Photograph 2. Former Angola Airport buildings (maintenance building and office, with one of two hangars visible at center), facing north from Eden Evans Center Road *(Panamerican 2021).*

Photograph 3. Former Angola Airport office buildings at far left (office and one of two hangars), facing north from Eden Evans Center Road along one of two airstrips within the project area *(Panamerican 2021).*

Photograph 4. Former Angola Airport asphalt airstrip aligned north-south (facing north from south terminus). A second gravel airstrip aligned east-west is located within the north portion of the project *(Panamerican 2021).*

Photograph 5. Former Angola Airport gravel airstrip aligned east-west is located within the north portion of the project. View is facing west from east-end of the airstrip *(Panamerican 2021).*

Photograph 6. Twentieth century residences are found opposite the project area along Eden Evans Center Road. View is facing west from the southeast limits of the project *(Panamerican 2021).*

Photograph 7. Northeast elevation of maintenance/office building (1526 Eden Evans Center Road) shown in Photograph 2, facing southwest *(Panamerican 2021).*

Photograph 8. South elevation of office building (1526 Eden Evans Center Road) shown in Photograph 2, facing north *(Panamerican 2021).*

Photograph 9. Southeast elevation of one of two hangars (the second one is at center-right) located on west side of the asphalt airstrip, facing northwest *(Panamerican 2021).*

Photograph 10. Southeast elevation of the second hangar located on the west side of the asphalt airstrip, facing northwest *(Panamerican 2021).*

Photograph 11. Directional air indicator located on east side of the asphalt airstrip, facing east *(Panamerican 2021).*

Photograph 12. Paved airplane parking area located on east side of the asphalt airstrip. View is facing northeast *(Panamerican 2021).*

Photograph 13. South elevation of ca. 1948 residence located within the south portion of the project at 1548 Eden Evans Center Road, facing north *(Panamerican 2021).*

Photograph 14. Southwest elevation of ca. 1882 residence located within the south portion of the project at 1576 Eden Evans Center Road, facing northeast *(Panamerican 2021).*

Photograph 15. Grading disturbance approximately between 50-ft and 75-ft (15-m and 23-m) width noted along edges of both runways. View is facing north *(Panamerican 2021).*

Photograph 16. Multiple paved/gravel road disturbances extend between and around buildings associated with the former Angola Airport facility. View is facing south towards Eden Evans Center Road *(Panamerican 2021).*

Photograph 17. Gravel fill extends between the former Angola Airport facility and a gravel lot located on the east side of the facility. View is facing northwest from the gravel lot towards hangar buildings *(Panamerican 2021).*

Photograph 18. Gravel lot disturbance on east side of the former Angola Airport facility. View is facing northeast towards residence at 1548 Eden Evans Center (shown in Photograph 13) – located within the project *(Panamerican 2021).*

Photograph 19. Paved access road extending south from the airplane parking area to Eden Evans Center Road. View is facing south *(Panamerican 2021).*

Photograph 20. Elevated gravel filled lot located at north terminus of the paved access road shown in Photograph 19. View is facing northeast *(Panamerican 2021).*

Photograph 21. Two large gravel piles between 200-ft and 300-ft length are found on the east side of the airplane parking area. View is facing northwest *(Panamerican 2021).*

Photograph 22. Gravel access road extending south from the two large gravel piles shown in Photograph 21 to Eden Evans Center Road. View is facing south *(Panamerican 2021).*

Appendix F
Traffic Impact Study

November 2023

ERIE COUNTY AGRIBIZ PARK

TRAFFIC IMPACT STUDY

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Appendix A – Traffic Count Data
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Executive Summary

This Traffic Impact Study (Study) was conducted as part of the Draft Generic Environmental Impact Statement (DGEIS) to assess the potential environmental impacts that may result from the proposed Erie County AgriBiz Park (the “Project” or Master Plan). This Study has been prepared in accordance with Guidelines for Traffic Impact Studies in support of SEQRA Actions to assess potential impacts of the proposed development on the existing transportation system.   Future development associated with the Erie County AgriBiz Park site will increase traffic on the adjacent road network.

In order to properly identify and evaluate the potential impacts to the transportation system resulting from the build out of the Project, traffic turning movement counts were collected at the following intersections on Thursday, April 15, 2021 and Tuesday April 20, 2021:

- Eden Evans Center Road and I-90 Interchange 48A Ramp Drive
- Eden Evans Center Road and Southwestern Boulevard (US Route 20)
- Eden Evans Center Road and Erie County Agribusiness Park Drive 1
- Beach Drive and Erie Road (NY Route 5)

Specifically, traffic counts were collected between 7:00am and 9:00am (morning peak hour) and between 4:00pm and 6:00pm (evening peak hour). In addition to turning movement counts, other data such as intersection geometry, traffic signal timing, and roadway speed limits were collected, as needed, to complete the capacity analysis.

Synchro Version 11 traffic modeling software was used to assess Level of Service (LOS) and the 95th percentile intersection queue for six traffic operational scenarios as follows:

1. 2021 Existing Conditions;
2. 2030 Background Conditions;
3. 2030 Option 1 Build Conditions;
4. 2030 Option 2 Build Conditions;
5. 2030 Option 1 Build Conditions with Mitigation; and,
6. 2030 Option 2 Build Conditions with Mitigation.

Level of Service (LOS) and queue analyses were prepared at Study intersections to establish a baseline for existing traffic operations. These existing condition traffic analyses show that the road network and accompanying intersections in the Study area currently operate at an Unsignalized LOS (b) or Signalized LOS C or better. There is sufficient storage available at all intersection approaches to accommodate the 95th Percentile Queues.

Future background traffic conditions were developed based on historic growth rates obtained from Greater Buffalo Niagara Transportation Council (GBNRTC) traffic volume data. Growth rates in the area vary between +2% per year to -3% per year between 2007 and 2020 resulting in an average growth rate of -1%. Therefore, a more conservative annual growth rate of +0.5% was used to calculate the 3.5% total growth rate in background traffic for the full build year of 2030.

As demonstrated by the level of service analyses presented in Appendix B, Background condition traffic analyses show that the road network and accompanying intersections in the Study area will operate at an Unsignalized LOS (b) or Signalized LOS C or better. There is sufficient storage available at all intersection approaches to accommodate the 95th Percentile Queues.

Trip generation for the full build out was determined by using the ITE Trip Generation Manual, 11th Edition. Since this Traffic Impact Study has been prepared to support the Generic Environmental Impact Study (GEIS), specific land uses or tenants have not been identified. Therefore, generalized ITE Land Uses were selected to best represent the type and size of development that is envisioned for the Agribusiness Park. Land Uses that were utilized to calculate trip generation volumes include Land Use Code 130 Industrial Park, Land Use Code 157 High-Cube Cold Storage Warehouse and Land Use Code 770 Business Park.

Option 1 Development best advances the ILDC's goals and maximizes full build out of the site at approximately 1.89 million square feet. Summarizing Option 1 Build Trip Generation, during the morning peak hour, the project site can be expected to generate a total of 654 trips, with 551 entering and 108 exiting. During the evening peak hour, Option 1 Development will generate a total of 637 trips, with 169 entering and 468 exiting.

Option 2 Development (Potential Wetland/Conservation Area Option) has less acreage available due to avoidance of site environmental constraints (i.e., wetlands). Option 2 build-out is expected to create approximately 931,000 square feet of space. Summarizing Option 2 Build Trip Generation, during the morning peak hour, the project site can be expected to generate a total of 441 trips, with 373 entering and 68 exiting. During the evening peak hour, Option 2 Development will generate a total of 421 trips, with 110 entering and 311 exiting.

As demonstrated by the level of service analyses presented in Appendix B, for the Option 1 worst case evening peak hour, results indicate that most approaches for unsignalized intersections at the I-90 Exit 57A and Site Access Road operate at LOS (c) or better. One exception is the southbound left turn movement at the Site Access Road which operates at LOS (f). The signalized intersection at NYS Route 5 and Beach Road operates at an overall

LOS B with individual movements operating at LOS D or better. The signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS F. Therefore , the exiting left turn movement from the Site Access Road and the eastbound and westbound movements on Eden Evans Center Road at US Route 20 exhibit failing levels of service and may require mitigation. As demonstrated by the queue analyses presented in Appendix B, all approaches have sufficient length to accommodate the required 95^{th} percentile queue length.

As demonstrated by the level of service analyses presented in Appendix B, for the Option 2 worst case evening peak hour, results indicate that most approaches at the unsignalized intersection at the I-90 Exit 57A and Site Access Road operate at LOS (d) or better. The signalized intersection at NYS Route 5 and Beach Road operates at an overall LOS B with individual movements operating at LOS D or better. The signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS E with eastbound movements on Eden Evans Center Road operating at LOS E and westbound movements on Eden Evans Center Road operating at LOS F. Therefore, the eastbound and westbound movements on Eden Evans Center Road at US Route 20 exhibit failing levels of service and may require mitigation. As demonstrated by the queue analyses presented in Appendix B, all approaches have sufficient length to accommodate the required 95th percentile queue length.

2030 Option 1 Build Condition Mitigation

The following potential impacts were identified for Option 1.

- During the evening peak, the exiting left turn movement from the Site Access Road operates at LOS (f).
- During the evening peak, the eastbound and westbound movements on Eden Evans Center Road at US Route 20 operate at LOS F.

Mitigation measures for these locations include the following:

- Site Access Road – The exit approach would consist of two lanes including a dedicated left turn lane and dedicated right turn lane. In addition, a two phase semi-actuated traffic signal would be constructed at this intersection. Phase 1 timing for the Eden Evans Center Road approaches would be 50 seconds. Phase 2 timing for exiting site traffic would be 30 seconds.
- Eden Evans Center Road at US Route 20 – The eastbound and westbound approaches on Eden Evans Center Road would be modified to provide a dedicated left turn lane with a length of 200 feet. The existing protected/permissive turn phase for the eastbound approach would be retained left turn movements. In addition, existing signal timing would be optimized to provide an additional 5 seconds for the

Eden Evans Center Road approaches and reducing the green time for the US Route 20 approaches by 5 seconds.

An updated level of service simulation was completed for Option 1 incorporating these mitigation measures. Results of this mitigation simulation are presented in Appendix B and summarized below.

With the addition of the proposed mitigation measures, the level of service associated with the Site Access Road exit improves from unsignalized LOS (f) to a signalized overall LOS C with the exiting left turns improving to LOS D during the evening peak hour. Proposed mitigation at the Eden Evans Center Road and US Route 20 intersection will improve the overall level of service from LOS F to LOS C with all movements operating at LOS D or better. Therefore with implementation of these proposed mitigation measures, all potential impacts to traffic operations can be satisfactorily mitigated.

2030 Option 2 Build Condition Mitigation

The following potential impacts were identified for Option 2.

- During the evening peak, the signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS E with eastbound movements on Eden Evans Center Road operating at LOS E and westbound movements on Eden Evans Center Road operating at LOS F.

Mitigation measures for this location includes the following:

- Eden Evans Center Road at US Route 20 – Existing signal timing would be optimized to provide an additional 10 seconds of green time for the Eden Evans Center Road approaches while reducing the green time for the US Route 20 approaches by 8 seconds as well as the eastbound left turn movement on Eden Evans Center Road by 2 seconds.

An updated level of service simulation was completed for Option 2 incorporating these mitigation measures. Results of this mitigation simulation are presented in Appendix B and summarized below.

With the addition of the proposed mitigation measures, the level of service associated with the Eden Evans Center Road and US Route 20 intersection will improve the overall level of service from LOS E to LOS D with all movements operating at LOS D or better. Therefore, with implementation of these proposed mitigation measures, all potential impacts to traffic operations can be satisfactorily mitigated.

Recommendations

With the addition of the proposed mitigation measures Option 1 or Option 2, traffic on Eden Evans Center Road and associated intersections operation satisfactorily. Therefore, development of Option 1 and Option 2 should include implantation of traffic mitigation measures.

The development threshold associated with Option 2 is 931,000 square feet. Therefore, this threshold of 931,000 square feet be utilized to represent Agripark development without the need for capitol improvements for mitigation of traffic impacts.

I. Introduction

As part of the development of the Draft Generic Environmental Impact Statement for the Erie County Agribusiness Park Project, a Traffic Impact Study (Study) was conducted to assess potential traffic impacts associated with the proposed development. The Study assessed existing and future traffic operations on the street network in the vicinity of the project, evaluated potential traffic impacts resulting from the full build out of the proposed Shovel Ready Project, and identified mitigation measures to avoid or minimize potential impacts to the transportation system. In addition, a sensitivity analysis was performed to establish a threshold for development without traffic impacts. Synchro Version 8 traffic modeling software was used to conduct five traffic operational analyses:

1. 2021 Existing Conditions;
2. 2030 Background Conditions;
3. 2030 Option 1 Build Conditions of the Project Site;
4. 2030 Option 2 Build Conditions of the Project Site
5. 2030 Option 1 Build Conditions of the Project Site with Mitigation; and,
6. 2030 Option 2 Build Conditions of the Project Site with Mitigation.

Synchro Version 11 traffic modeling software was used to analyze traffic operations. Synchro is based on methodologies presented in the 2010 Highway Capacity Manual that describe the operation of both signalized and unsignalized intersections. Although the 2010 Highway Capacity Manual does consider the effects of adjacent traffic signals on overall operations, Synchro provides a more refined process to account for signal actuation, progression between signals and impacts of traffic queues. This program is an industry accepted standard and was used to determine the Levels of Service (LOS) for traffic traveling through the study area intersections.

The LOS for both signalized and unsignalized intersections are defined in terms of control delay. Control delay is a measure of the total travel time lost and includes slowing delay, stopped delay, queue move up time and start up lost time. LOS thresholds are defined as average delay in seconds per vehicle over a fifteen-minute analysis period and range from LOS A to LOS F for both signalized and unsignalized intersections. LOS A represents operating conditions of freely flowing traffic with little or no delay. LOS F represents operating conditions of highly congested traffic with forced (breakdown) flow and substantial delays. The following provides a summary of the Level of Service thresholds as defined in the 2010 Highway Capacity Manual.

Table 1: Level of Service Thresholds

Level of Service Thresholds	Signalized Intersections (seconds of delay)	Unsignalized Intersections (seconds of delay)
A – Little or no delay	Less than 10.0 seconds	Less than 10.0 seconds
B – Minor, short delays	10.1 to 20.0 seconds	10.1 to 15.0 seconds
C – Average delays	20.1 to 35.0 seconds	15.1 to 25.0 seconds
D – Long but acceptable delays	35.1 to 55.0 seconds	25.1 to 35.0 seconds
E – Long, near unacceptable delays	55.1 to 80.0 seconds	35.1 to 50.0 seconds
F – Unacceptable delays	More than 80.0 seconds	More than 50.0 seconds

An overall intersection LOS D or better is generally considered acceptable at a signalized intersection. An overall intersection LOS (e) or better is considered acceptable at an unsignalized intersection. The acceptable Level of Service thresholds are lower for an unsignalized intersection because drivers generally expect longer delays at unsignalized intersections verses signalized ones.

The Study utilizes accepted traffic impact Study processes and methodology, as generally accepted by the New York State Department of Transportation (NYSDOT).

II. Project Location and Description

The Buffalo and Erie County Industrial Land Development Corporation (ILDC), acting as Lead Agency for the State Environmental Quality Review Act and its implementing regulations as set forth in 6 NYCRR Part 617 (collectively referred to as SEQRA), has prepared this Draft Generic Environmental Impact Statement (DGEIS) to assess the potential environmental impacts that may result from the proposed Erie County Agribusiness Park (the “Project” or Master Plan). The Project, located on Eden-Evans Center Road in the Town of Evans, involves the adoption and implementation of a Master Plan for development of the site, and installation and construction of utilities and infrastructure in support of the future agriculture related commercial and warehousing development of the site.

It is anticipated that the Project will result in the installation of on-site roadways, water, sewer, stormwater management facilities, and private utilities in support of the future build-out of development parcels for agriculturally related commercial opportunities. The number of businesses to be accommodated at the site will depend upon demand and user needs. Thresholds and standards for future development will be established to help guide development in a manner consistent with the Master Plan and in a manner that mitigates potential environmental impacts.

The conceptual Master Plan was developed in accordance with the guidelines established by the Governor’s Office of Regulatory Reform (GORR) and New York State Empire State Development (ESD) in order to facilitate a future application for Shovel Ready Certification under the Build Now New York Program. As a result, there are areas where additional documentation is provided beyond what is necessary to evaluate anticipated environmental impacts.

The Study was developed to support Generic Environmental Impact Assessment (GEIS) for the Erie County Agribusiness Park Development project. Vehicular access to the project site would be provided by improving/updating the existing site access road and installation of a second site access road. The site access road runs perpendicular to and intersects Eden Evans Center Road. The sight distance at the existing access exceeds 1,000 feet along Eden Evans Center Road, allowing for more than adequate site distance. All trucks traveling to/from the project site will utilize state or county routes that have been designated for truck travel. Trucks will adhere to any local, county, and state regulations on truck traffic.

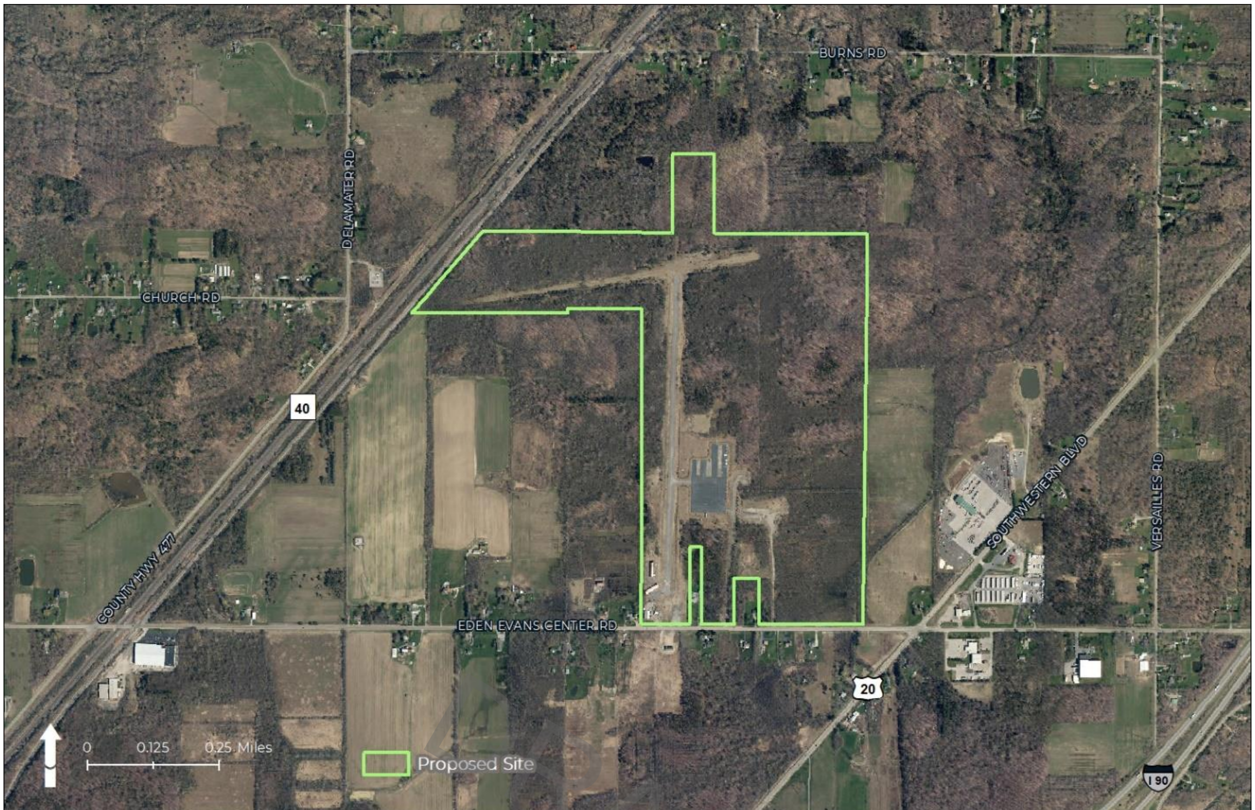

Figure 1: Project Location

III. Existing Transportation System

Roadways

Primary roadways in the vicinity of the site include Interchange 48A of I-90 (New York State Thruway), Southwestern Boulevard (US Route 20), Erie Road (NY Route 5) and Eden Evans Center Road. These roadways are described as follows. In addition, a private access road provides access to the existing site from Eden Evans Center Road.

I-90 Interchange 48A Ramp is located approximately 1.8 miles to the east of the site and provides access between I-90 and Eden Evans Center Road. The 48A Ramp consists of 60 feet of pavement width, with a posted 30 mph speed limit. I-90 Interchange 48A Ramp conveys an average of 5,243 vehicles per day (per 2014 NYSDOT AADT Count).

Southwestern Boulevard (US Route 20) is located approximately one-half mile to the east of the site and intersects with Eden Evans Center Road at a 4-leg signalized intersection. US Route 20 is a northeast-southwest oriented, two-lane US Route classified as a rural principal arterial other. The roadway consists of 40 feet of pavement width near the intersection, with a posted 55 mph speed limit. Southwestern Boulevard (US Route 20) conveys an average of 6,575 vehicles per day (per 2009 NYSDOT AADT Count).

Erie Road (NY Route 5) is located approximately 2.5 miles to the west of the site and intersects with Beach Road at a signalized intersection. NY Route 5 is a north-south, four-lane road classified as a principal arterial. The roadway consists of approximately 70 feet of pavement width near the intersection. The posted speed limit is 45 mph. NY Route 5 conveys an average of 11,439 vehicles per day (per 2015 NYSDOT AADT Count).

Public Transit

The Niagara Frontier Transportation Authority (NFTA) operates Bus Route 76 along Erie Road (SR 31) between Evans and Hamburg. The closest public transit stop is approximately a one mile from the project site. There is no public transit service along Eden Evans Center Road. Therefore, public transit service to the site is not convenient.

Railroad

There is a Class 1 Main Line Railroad that borders the western edge of the project site. The line is operated by Norfolk Southern Railroad. While rail service may be available for site tenants, the need for rail access to this site is not anticipated at this time.

Pedestrian/Bicycle

There are no sidewalks on any of the adjacent or nearby streets.

IV. Existing Traffic Operations

Manual turning movement counts used in the development of the Study were taken during both the morning (7:00-9:00am) and evening (4:00-6:00pm) on Thursday, April 15, 2021 and Tuesday April 20, 2021. The following intersections were counted and then modeled to evaluate traffic operations:

1. Eden Evans Center Road and I-90 Interchange 48A Ramp Drive
2. Eden Evans Center Road and Southwestern Boulevard (US Route 20)
3. Eden Evans Center Road and Erie County Agribusiness Park Drive 1
4. Beach Road and Erie Road (NY Route 5)

Traffic count results are presented in Appendix A – Existing Traffic Count Results. Figure 2 - 2021 Existing Traffic Volumes, illustrates existing traffic volumes at the Study intersections.

Level of Service (LOS) and queue analyses were prepared using SYNCHRO Traffic Modeling software to establish a baseline for existing traffic operations at these intersections. Tables included as Appendix B – Level of Service and Queue Summary, summarize the morning and evening peak hour Levels of Service and 95th Percentile Queues for the Study intersections under existing conditions. These existing condition traffic analyses show that the road network and accompanying intersections in the Study area currently operate at an Unsignalized LOS (b) or Signalized LOS C or better. There is sufficient storage available at all intersection approaches to accommodate the 95th Percentile Queues.

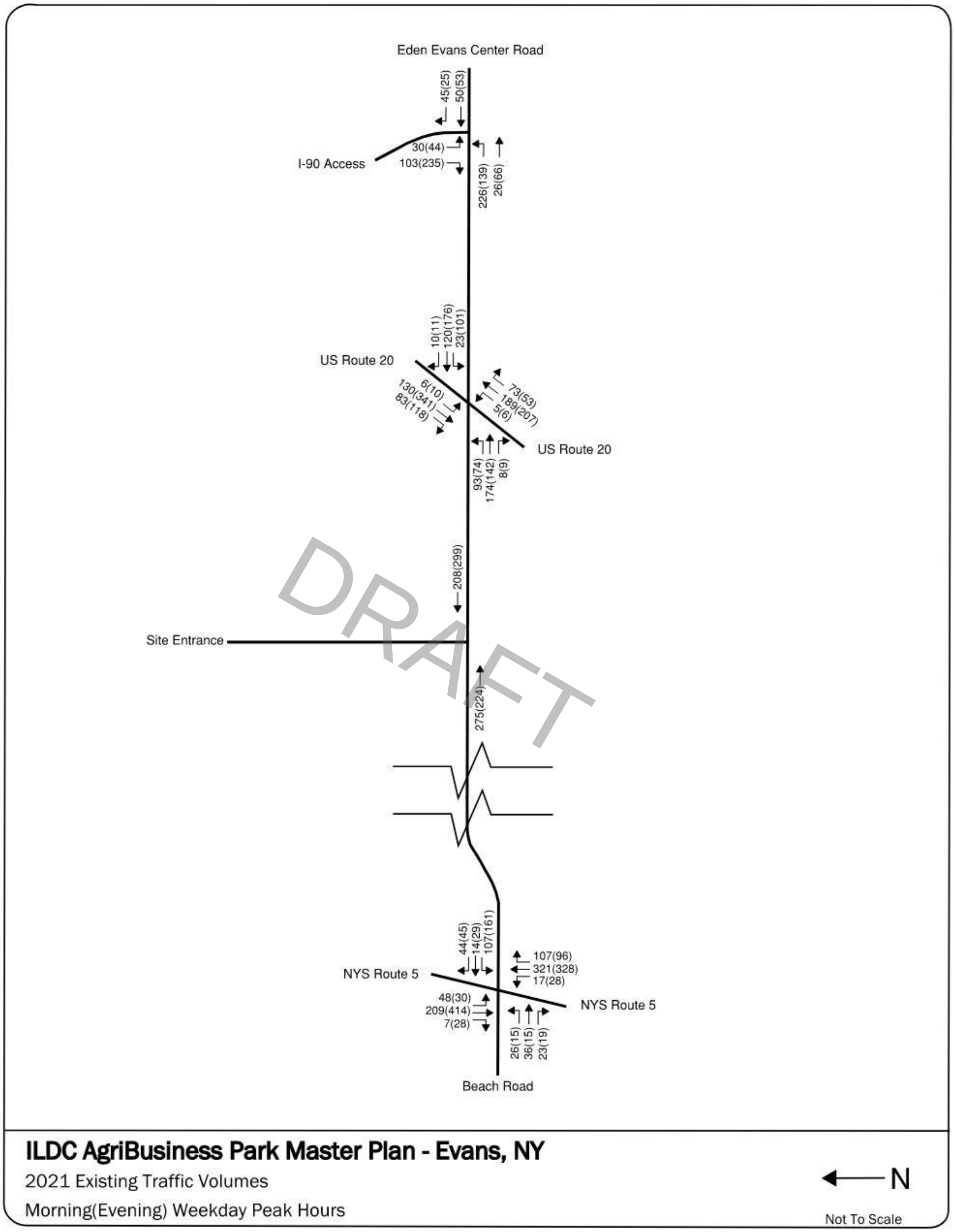

Figure 2: 2021 Existing Traffic Volumes

V. Future Traffic Operations

Background Growth

In order to determine the future traffic conditions in the Study area, it is first necessary to conduct a traffic analysis of the Study intersections for a future year considering only the growth of existing traffic in the area.

Based on historical Greater Buffalo Niagara Transportation Council (GBNRTC) traffic volume data from 2020, growth rates in the area vary between +2% per year to -3% per year between 2007 and 2020. This results in an average growth rate for recent years of -1%. Therefore, a more conservative growth rate of +0.5% was used for the Study.

This +0/5% annual growth rate was used to determine the background traffic for the full build year of 2030. The total growth rate in background traffic for the full build year of 2030 is 3.5%.

2030 Background Conditions for the Project Site

Figure 3 - 2030 Background Peak Traffic Volumes, illustrates background traffic volumes at the Study intersections. The 2030 Background Traffic Volumes were calculated by applying the 3.5% growth rate to the 2021 Existing Traffic Volumes presented in Figure 2.

Level of Service (LOS) and queue analyses were prepared using SYNCHRO Traffic Modeling software to establish a baseline for existing traffic operations at these intersections. Tables included as Appendix B, summarize the morning and evening peak hour Levels of Service and Maximum Queues for the Study intersections under 2030 Background traffic conditions. These background condition traffic analyses show that the road network and accompanying intersections in the Study area will operate at an Unsignalized LOS (b) or Signalized LOS C or better. There is sufficient storage available at all intersection approaches to accommodate the 95th Percentile Queues.

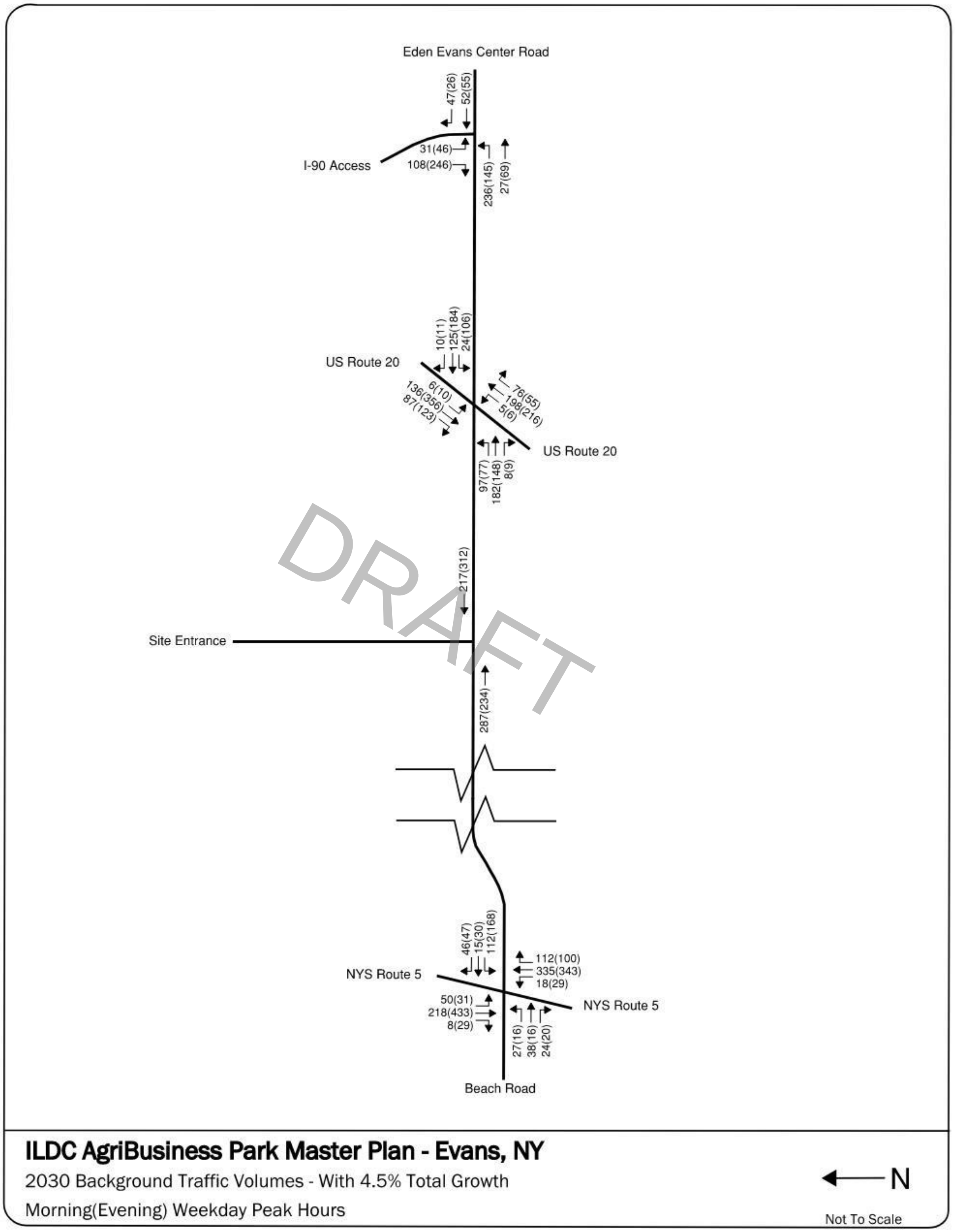

Figure 3: 2030 Background Peak Traffic Volumes

Project Trip Generation

Trip generation for the full build out was determined by using the ITE Trip Generation Manual, 11th Edition. Since this Traffic Impact Study has been prepared to support the Generic Environmental Impact Study (GEIS), specific land uses or tenants have not been identified. Therefore, generalized ITE Land Uses were selected to best represent the type and size of development that is envisioned for the Agribusiness Park. The Land Uses that were utilized to calculate trip generation volumes resulting from site development include, Land Use Code 130 Industrial Park, Land Use Code 157 High-Cube Cold Storage Warehouse and Land Use Code 770 Business Park. Land use descriptions and trip generation rates for these uses are presented in Appendix A.

Two Build Options were developed for the Agribusiness Park. Option 1 is presented in Figure 4 and Option 2 is presented in Figure 5.

Option 1, Full Build-Out, best advances the ILDC's goal of a conceptual design for roads, utilities, and development lots that can be implemented in a phased approach, as needed, to facilitate the maximum redevelopment of this property and encouraging new investment and job creation. It is anticipated that Option 1 will result in the conversion of the existing site runway to the main access road into the site and the installation of new streets to access the development parcels. Maximum build-out is expected to create approximately 1.89 million square feet of business or industrial park as well as cold storage facility space. Depending on demand, the number and size of the development lots to be subdivided and sold may vary from the Option 1 Plan. The lots are arranged along the converted runway and a series of new access streets. The Option 1 plan depicts new streets and access ways. This option will include one driveway entrance that will serve as the main to the development with a secondary entrance that is available only for authorized and emergency access.

Option 2 (Potential Wetland/Conservation Area Option) has less acreage available for development due to avoidance of site environmental constraints (i.e., wetlands). Option 2 presents a conceptual design for roads, utilities, and development of a smaller number of lots that can be implemented in a phased approach to encourage new investment and job creation. Proposed site uses are similar to those of Option 1. The main difference with this option is the establishment of large conservation areas on the southeast, northeast, and northwest portions of the Project site that allow for avoidance of wetland areas. Maximum build-out is expected to create approximately 931,000 square feet of business or industrial park as well as cold storage facility space. The Option 2 plan depicts new streets and access ways. Similar to Option 1, Option 2 will include one driveway entrance that will serve as the main to the development with a secondary entrance that is available only for authorized and emergency access.

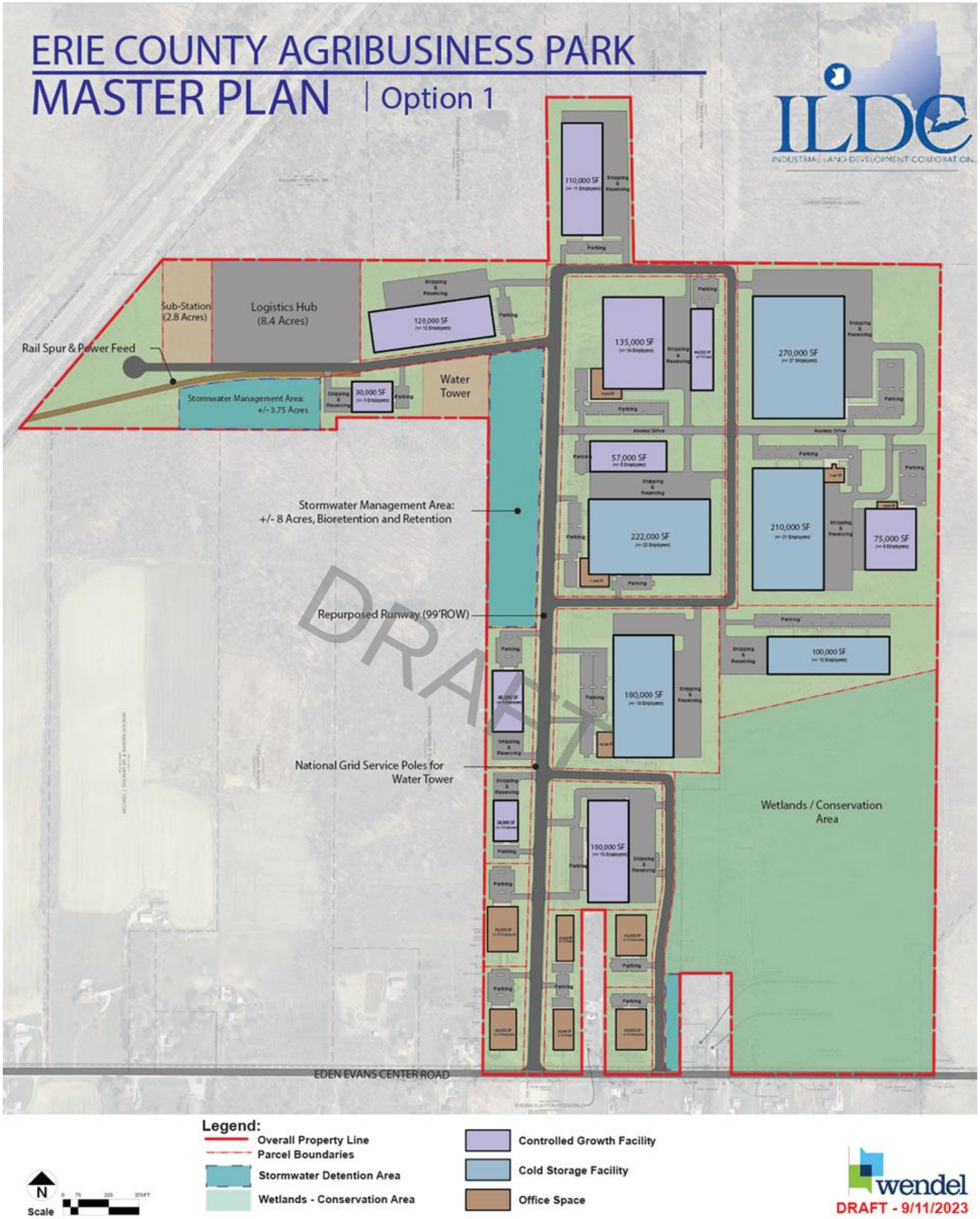

Figure 4: Build Option 1

Figure 5: Build Option 2

Trip Generation 2030 Option 1 Build Conditions

The 2030 Option 1 Build conditions were analyzed based on a build out of the site with 1.89 million square feet of Industrial Park, Cold Storage Warehouse and Business Park uses. As shown in Table 2 - Option 1 Build Trip Generation Summary, during the morning peak hour, the project site can be expected to generate a total of 654 trips, with 551 entering and 108 exiting. During the evening peak hour, the project site can be expected to generate a total of 637 trips, with 169 entering and 468 exiting.

Table 2: Option 1 Build Trip Generation Summary

ILDC AgriBusiness Park Master Plan Option 1
Evans, NY
Trip Generation Estimate - Weekday AM + PM

Trip Generation Summary						
	AM Peak Hour			PM Peak Hour		
Project Component:	**Total Trips**	**Entering**	**Exiting**	**Total Trips**	**Entering**	**Exiting**
Land Use 130 - Industrial Park	256	213	43	256	62	194
Land Use 157 - Cold Storage Warehouse	99	79	20	108	31	77
Land Use 770 - Business Park	299	259	40	273	76	197
Total Trips Generated	**654**	**551**	**103**	**637**	**169**	**468**

Trip Generation 2030 Option 2 Build Conditions

The 2030 Option 2 Build conditions were analyzed based on a build out of the site with approximately 1.89 million square feet of Industrial Park, Cold Storage Warehouse and Business Park uses. As shown in Table 3 - Option 2 Build Trip Generation Summary, during the morning peak hour, the project site can be expected to generate a total of 441 trips, with 373 entering and 68 exiting. During the evening peak hour, the project site can be expected to generate a total of 421 trips, with 110 entering and 311exiting.

Table 3: Option 2 Build Trip Generation Summary

ILDC AgriBusiness Park Master Plan Option 2
Evans, NY
Trip Generation Estimate - Weekday AM + PM

Trip Generation Summary						
	AM Peak Hour			PM Peak Hour		
Project Component:	**Total Trips**	**Entering**	**Exiting**	**Total Trips**	**Entering**	**Exiting**
Land Use 130 - Industrial Park	160	133	27	160	38	122
Land Use 157 - Cold Storage Warehouse	32	26	6	35	10	25
Land Use 770 - Business Park	249	214	35	226	62	164
Total Trips Generated	**441**	**373**	**68**	**421**	**110**	**311**

As illustrated in Figure 6 - Site Generated Trip Distribution, indicates the origin and destination of site generated traffic. Trip distribution for site generated traffic generally follows existing traffic patterns. Approximately 80% of site generated traffic travels to and from the east along Eden Evans Center Road. Approximately 30% of this traffic uses US Route 20, 45% uses I-90 and 5% uses Eden Evans Center Road for access to the site. The remaining 20% of site generated traffic is oriented to the west of the site with 18% using NY Route 5 and the remaining 2% using Beach Road. This arrival and distribution pattern was used for both Option 1 and 2.

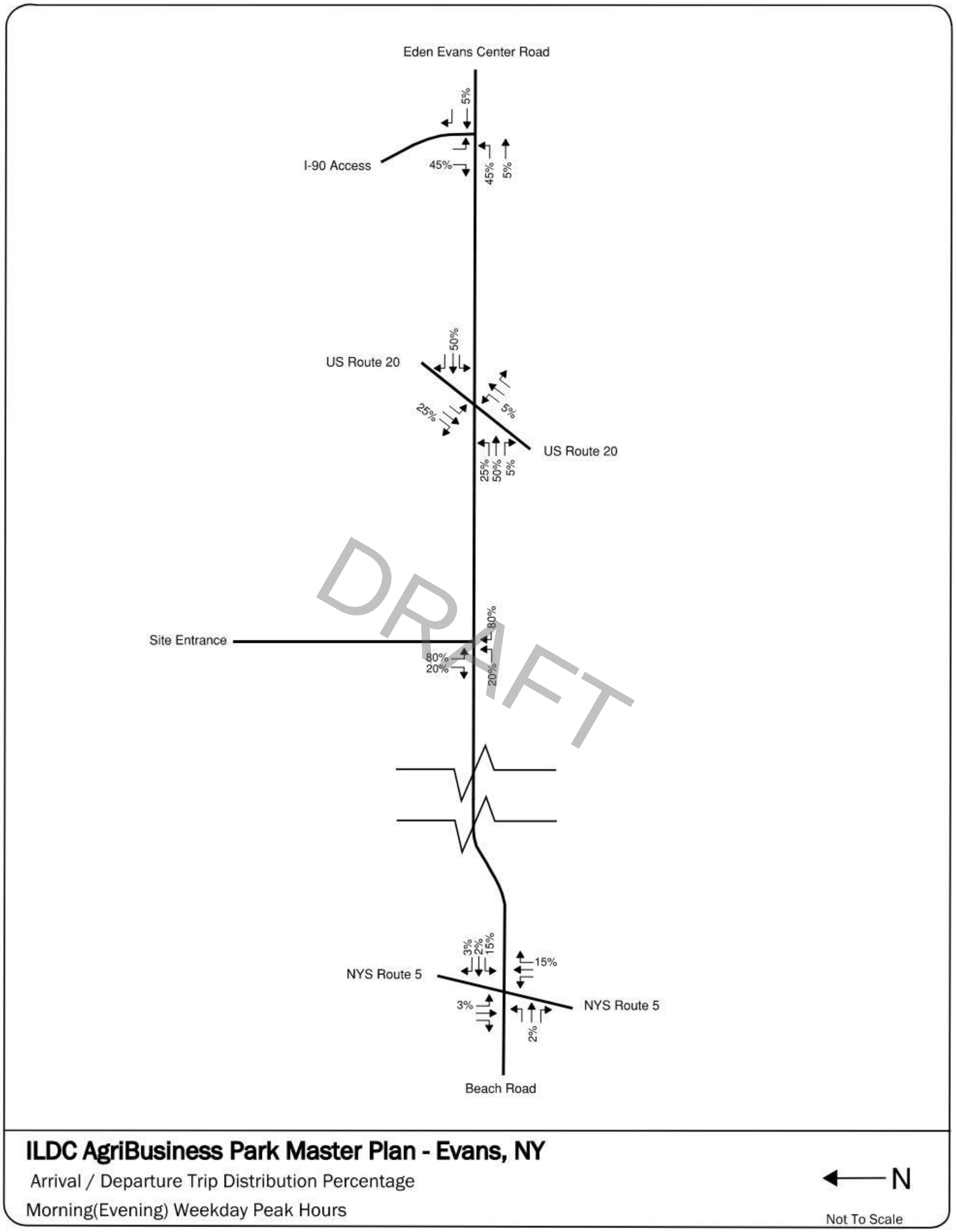

Figure 6: Site Generated Trip Distribution

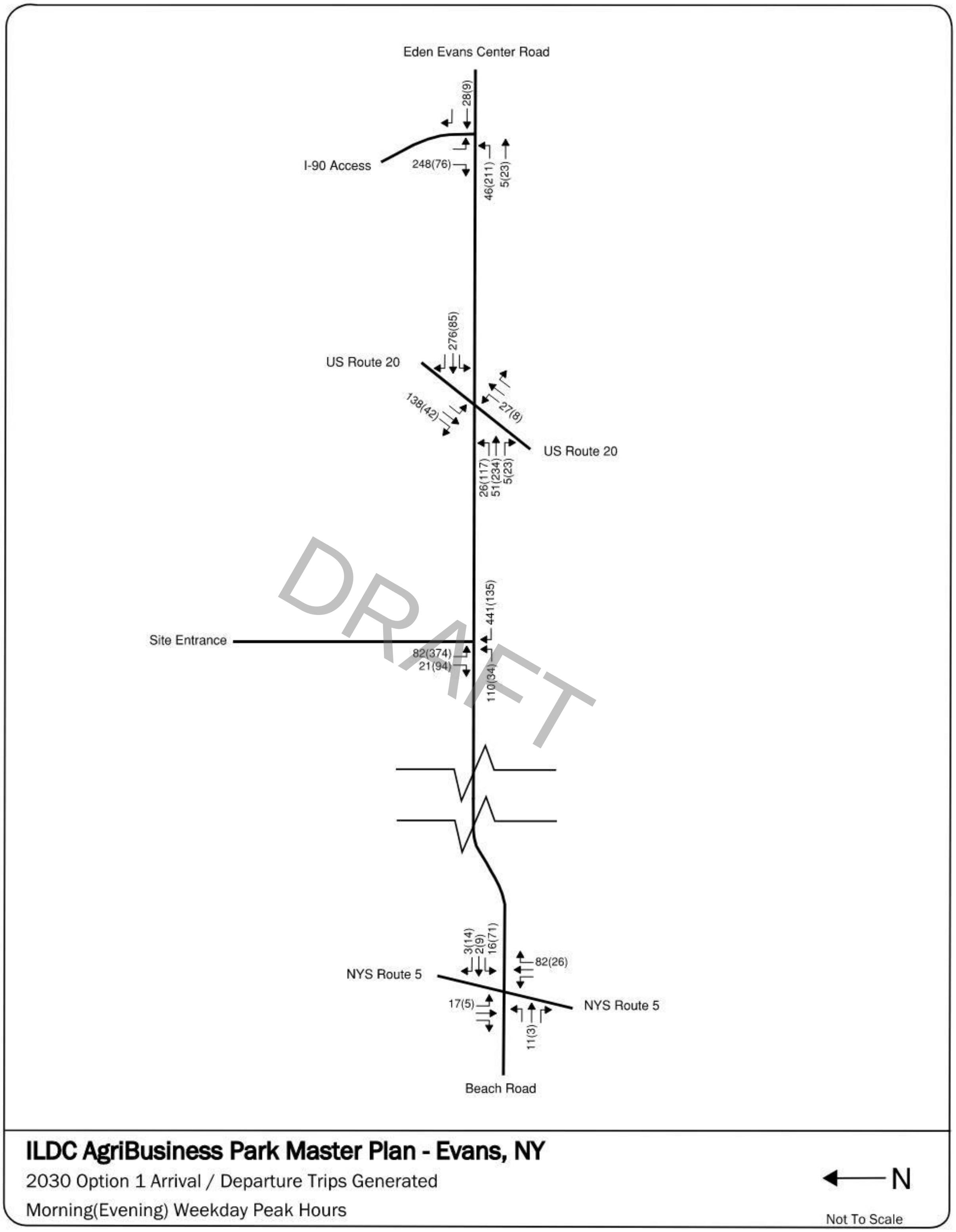

Figure 7: Option 1 Site Generated Trips

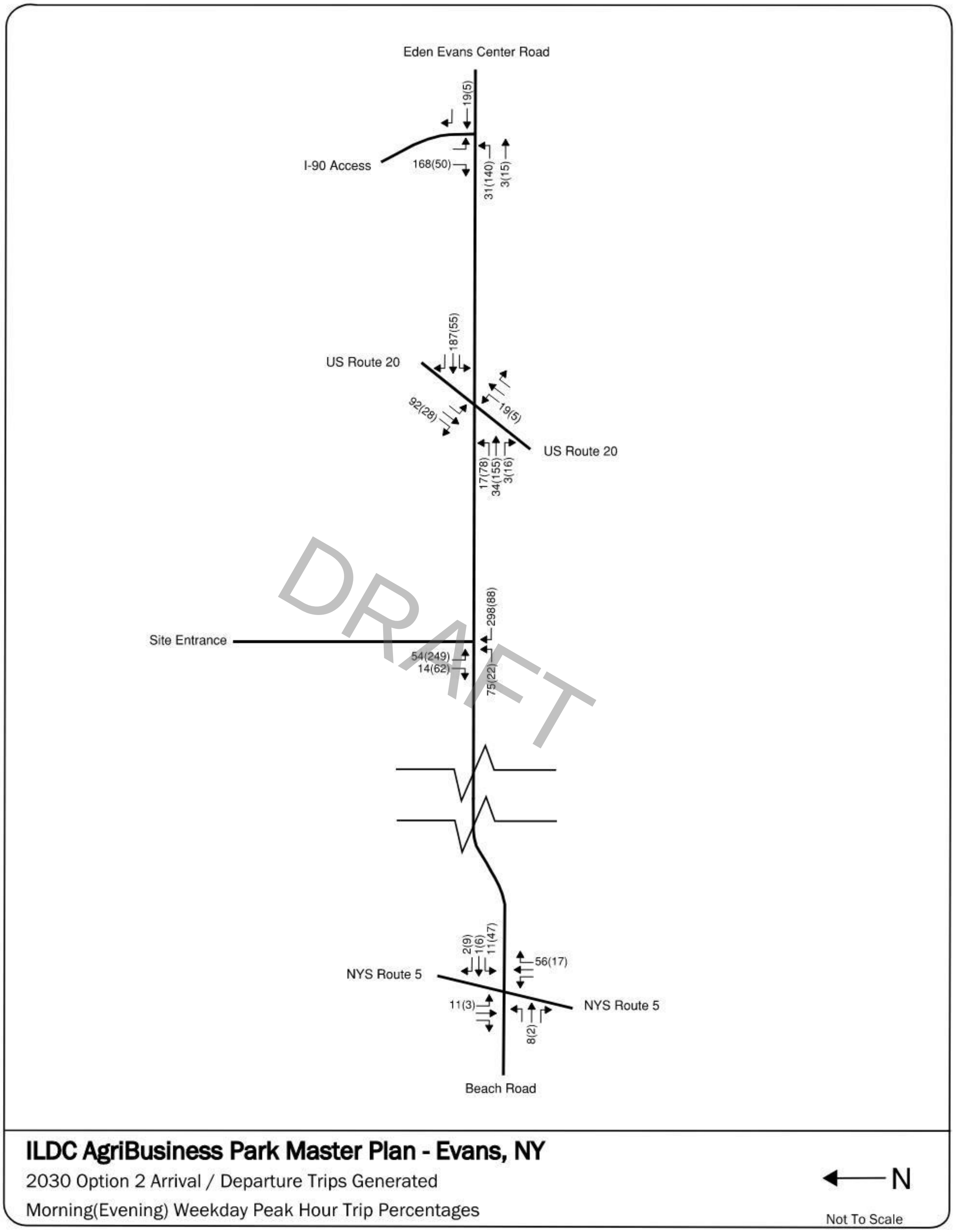

Figure 8: Option 2 Site Generated Trips

Combined Traffic Volumes Option 1 and 2

Site Generated Traffic that is shown in Figures 7 and 8 was added to the 2030 Background Traffic to obtain the Combined Traffic Volumes for Options 1 and 2. Combined traffic volumes are illustrated in Figures 9 and 10. These combined volumes were used in the LOS and Queue analyses that were performed for Options 1 and 2.

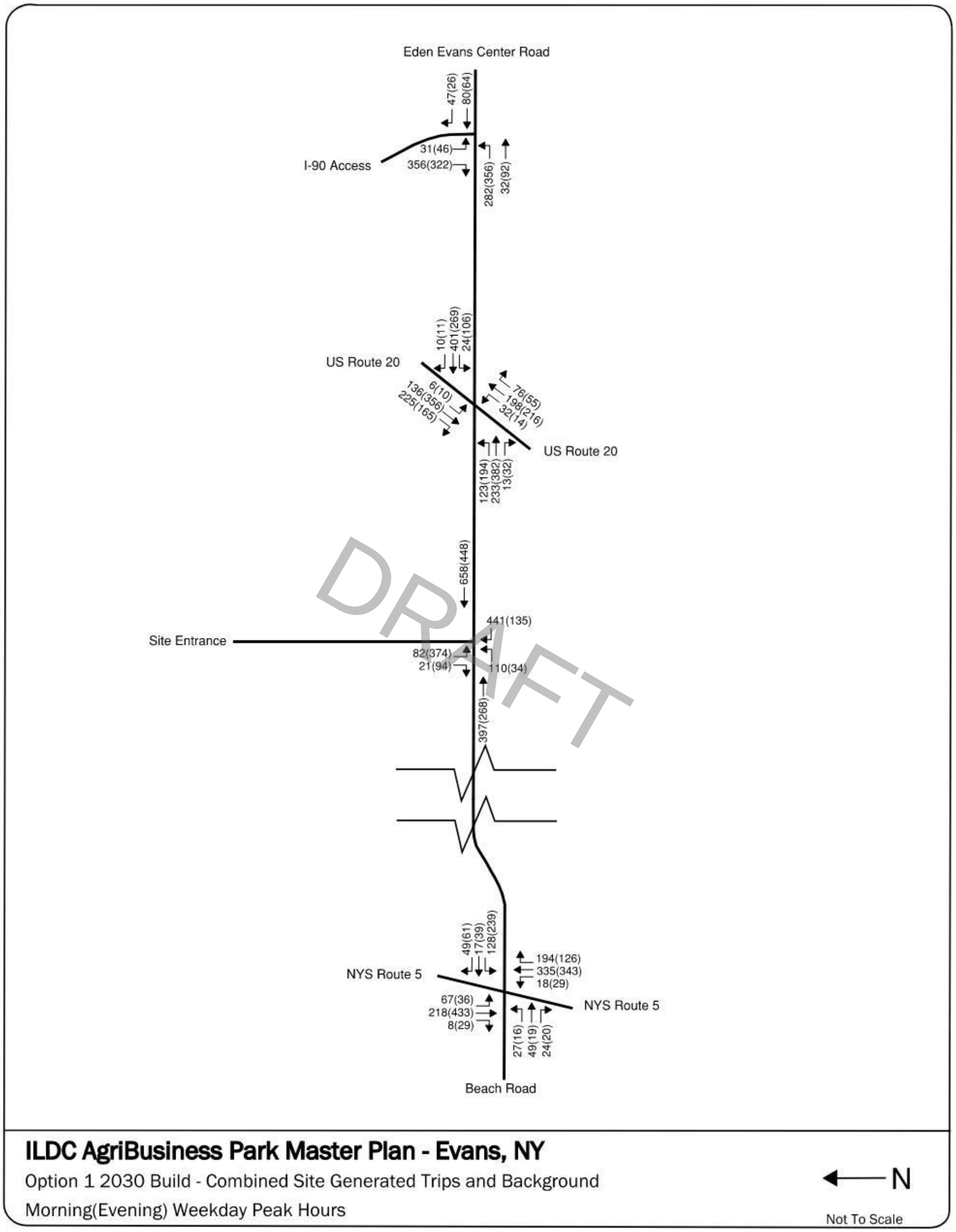

Figure 9: Option 1 Combined Traffic Volumes

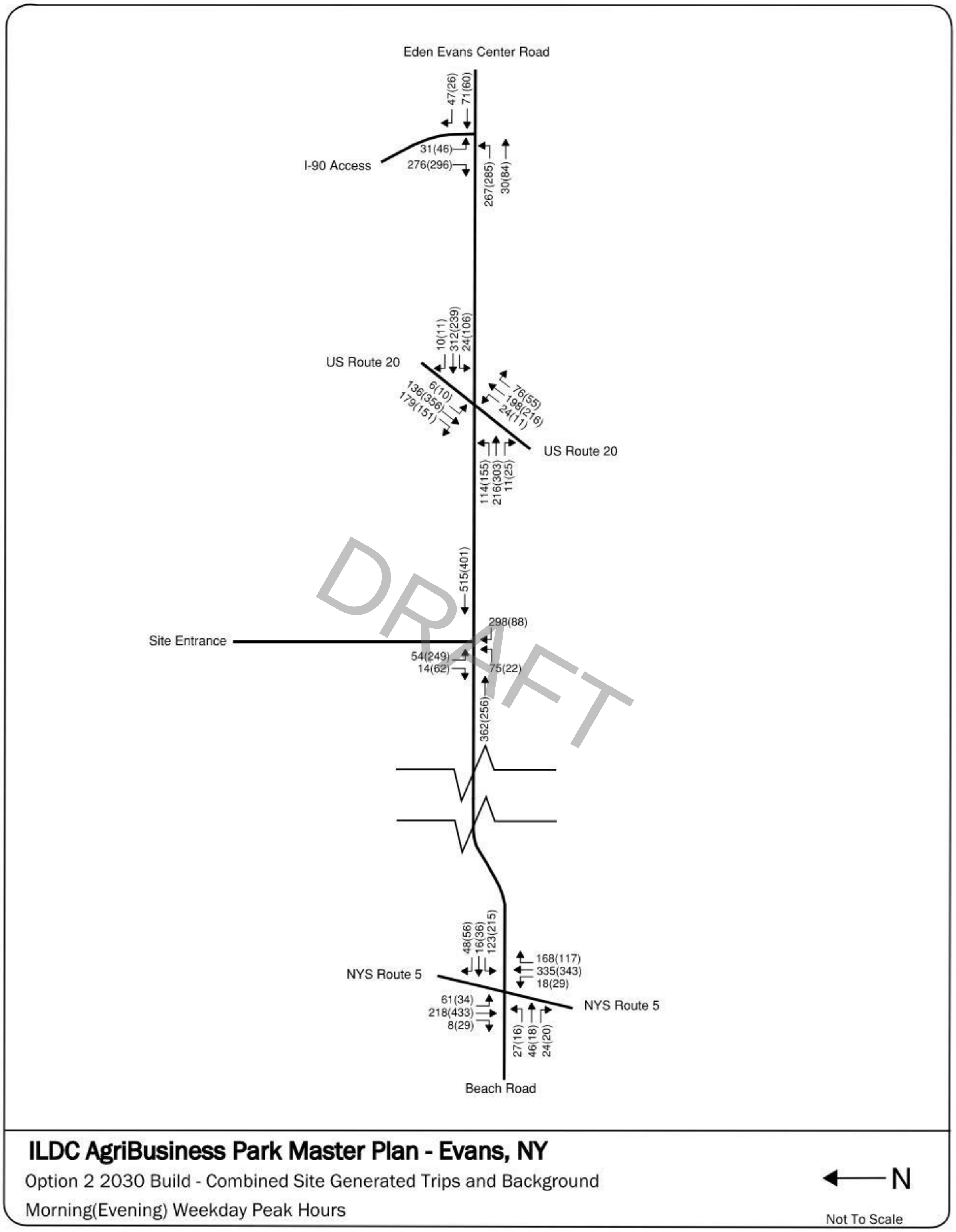

Figure 10: Option 2 Combined Traffic Volumes

VI. Build Option 1 and 2 Traffic Operations and Potential Impacts

2030 Option 1 Build Condition

Level of service and queue analyses were prepared for the Option 1 Build Scenario. Results of these analyses are summarized in the tables that are included in Appendix B – Level of Service and Queue Summary and discussed below. LOS results for Option 1 are illustrated in Figure 11.

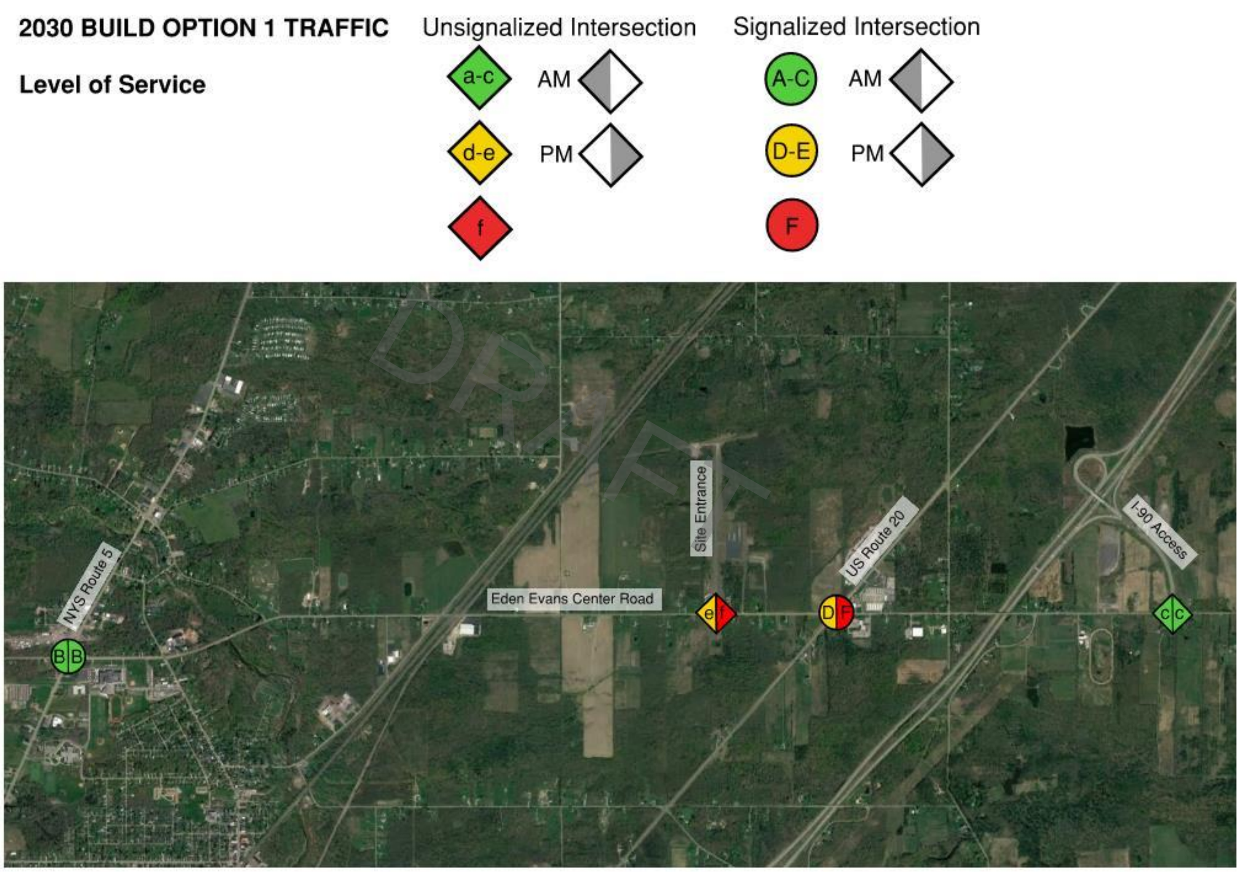

Figure 11: Option 1 Intersection Level of Service

Results of the level of service analysis for Option 1 indicate that for the morning peak hour, approaches at the unsignalized intersection at the I-90 Exit 57A and Site Access Road operate at LOS (c) or better. During the morning peak hour, the signalized intersection at NYS Route 5 and Beach Road operates at an overall LOS B with individual movements operating at LOS D or better. During the morning peak hour, the signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS D with most individual movements operating at LOS D or better. One exception is the westbound left/through/right movement which operates at LOS F.

As noted above, an overall intersection LOS D or better is generally considered acceptable at a signalized intersection. An overall intersection LOS (e) or better is considered acceptable at an unsignalized intersection. Therefore, during the morning peak hour, most intersections have an acceptable LOS. The exception is the westbound left/through/right movement which is a potential impact that may require mitigation.

Option 1 results for the evening peak hour indicate that most approaches at the unsignalized intersection at the I-90 Exit 57A and Site Access Road operate at LOS (c) or better. One exception is the southbound left movement at the Site Access Road which operates at LOS (f). The signalized intersection at NYS Route 5 and Beach Road operates at an overall LOS B with individual movements operating at LOS D or better. The signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS F with eastbound and westbound movements on Eden Evans Center Road operating at LOS F or better.

Therefore, during the morning peak hour, most intersections have an acceptable LOS. Exceptions include the exiting left turn movement from the Site Access Road and the eastbound and westbound movements on Eden Evans Center Road at US Route 20. These movements exhibit failing levels of service and may require mitigation.

As demonstrated by the queue analyses presented in Appendix B, all approaches have sufficient length to accommodate the required 95th percentile queue length.

2030 Option 2 Build Condition

Level of service and queue analyses were prepared for the Option 2 Build Scenario. Results of these analyses are summarized in the tables that are included in Appendix B – Level of Service and Queue Summary and discussed below. LOS results for Option 2 are illustrated in Figure 12.

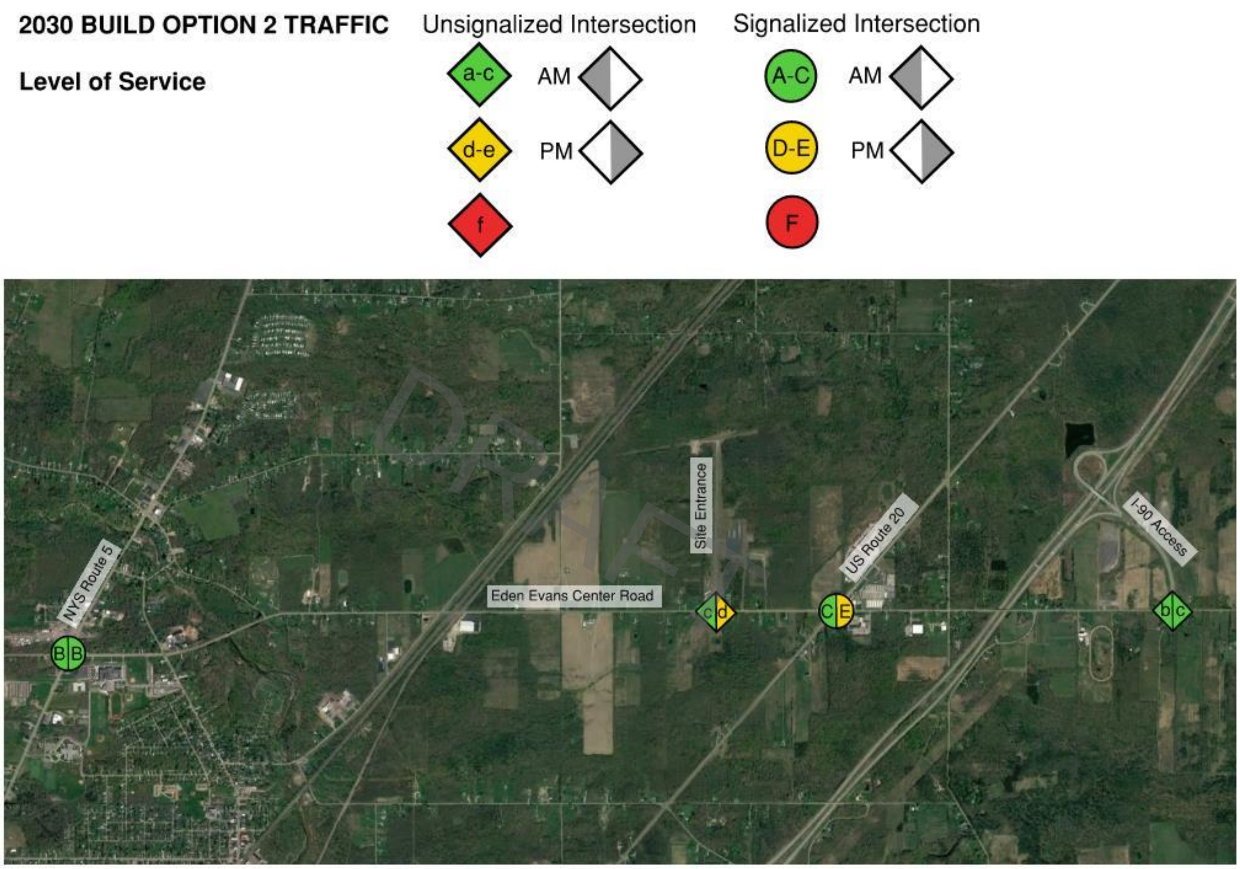

Figure 12: Option 2 Intersection Level of Service

Results of the level of service analysis for Option 2 indicate that for the morning peak hour, approaches at the unsignalized intersection at the I-90 Exit 57A and Site Access Road operate at LOS (c) or better. During the morning peak hour, the signalized intersection at NYS Route 5 and Beach Road operates at an overall LOS B with individual movements operating at LOS D or better. During the morning peak hour, the signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS C with most individual movements operating at LOS D or better.

As noted above, an overall intersection LOS D or better is generally considered acceptable at a signalized intersection. An overall intersection LOS (e) or better is considered acceptable at an unsignalized intersection. Therefore, during the morning peak hour, these intersections have an acceptable LOS.

Option 2 results for the evening peak hour indicate that most approaches at the unsignalized intersection at the I-90 Exit 57A and Site Access Road operate at LOS (d) or better. The signalized intersection at NYS Route 5 and Beach Road operates at an overall LOS B with individual movements operating at LOS D or better. The signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS E with eastbound movements on Eden Evans Center Road operating at LOS E and westbound movements on Eden Evans Center Road operating at LOS F.

Therefore, during the evening peak hour, most intersections have an acceptable LOS. Exceptions include the eastbound and westbound movements on Eden Evans Center Road at US Route 20. These movements exhibit failing levels of service and may require mitigation.

As demonstrated by the queue analyses presented in Appendix B, all approaches have sufficient length to accommodate the required 95th percentile queue length.

VII. Recommended Mitigation

2030 Option 1 Build Condition Mitigation

The following potential impacts were identified for Option 1.

- During the evening peak, the exiting left turn movement from the Site Access Road operates at LOS (f).
- During the evening peak, the eastbound and westbound movements on Eden Evans Center Road at US Route 20 operate at LOS F.

Mitigation measures for these locations include the following:

- Site Access Road – The exit approach would consist of two lanes including a dedicated left turn lane and dedicated right turn lane. In addition, a two phase semi-actuated traffic signal would be constructed at this intersection. Phase 1 timing for the Eden Evans Center Road approaches would be 50 seconds. Phase 2 timing for exiting site traffic would be 30 seconds.
- Eden Evans Center Road at US Route 20 – The eastbound and westbound approaches on Eden Evans Center Road would be modified to provide a dedicated left turn lane with a length of 200 feet. Protected/permissive turn phases would be provided for the left turn movements. In addition, existing signal timing would be optimized to provide an additional 5 seconds for the Eden Evans Center Road approaches and reducing the green time for the US Route 20 approaches by 5 seconds.

An updated level of service simulation was completed for Option 1 incorporating these mitigation measures. Results of this mitigation simulation are presented in Appendix B and summarized below.

With the addition of the proposed mitigation measures, the level of service associated with the Site Access Road exit improves from unsignalized LOS (f) to a signalized overall LOS C with the exiting left turns improving to LOS D during the evening peak hour. Proposed mitigation at the Eden Evans Center Road and US Route 20 intersection will improve the overall level of service from LOS F to LOS C with all movements operating at LOS D or better. Therefore, with implementation of these proposed mitigation measures, all potential impacts to traffic operations can be satisfactorily mitigated. LOS results for Option 1 with Mitigation are illustrated in Figure 13.

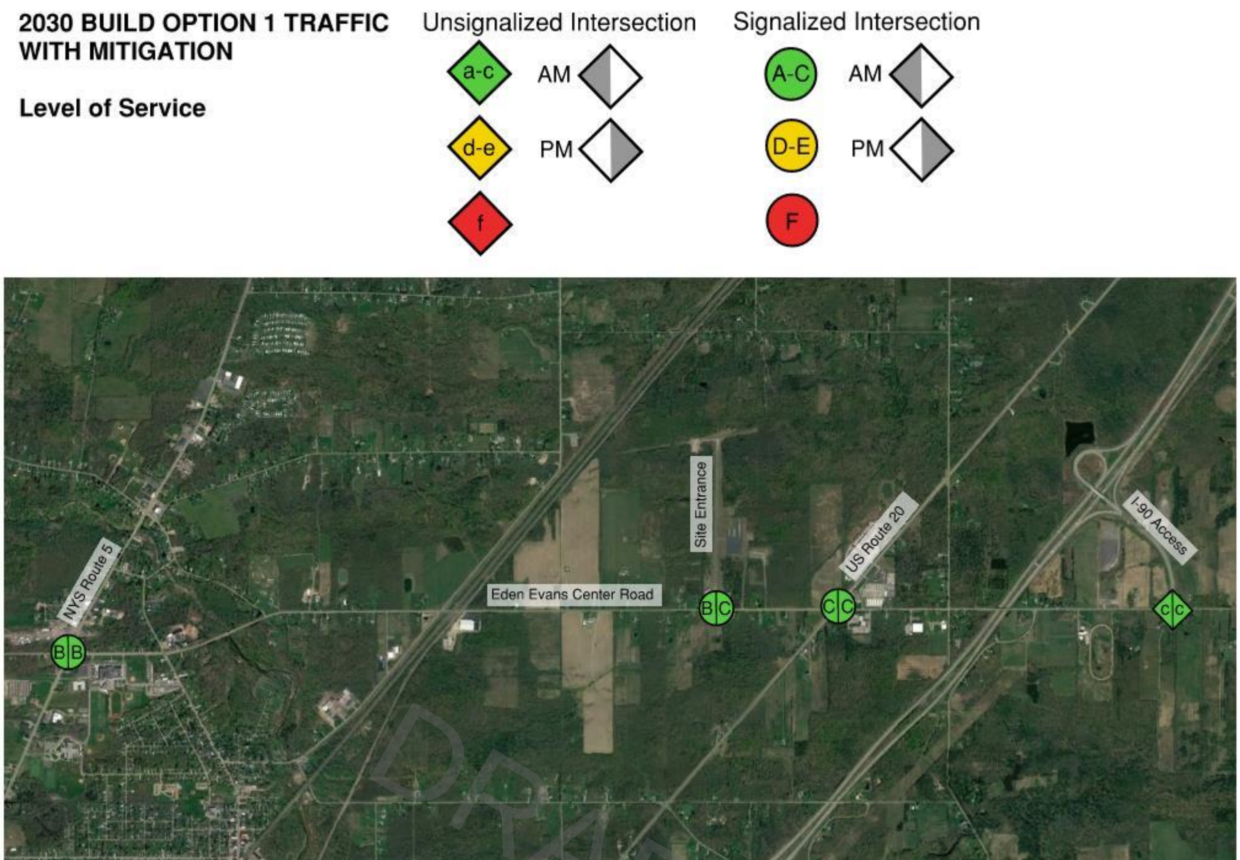

Figure 13: Option 1 with Mitigation Intersection Level of Service

2030 Option 2 Build Condition Mitigation

The following potential impacts were identified for Option 2.

- During the evening peak, the signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS E with eastbound movements on Eden Evans Center Road operating at LOS E and westbound movements on Eden Evans Center Road operating at LOS F.

Mitigation measures for this location includes the following:

- Eden Evans Center Road at US Route 20 – Existing signal timing would be optimized to provide an additional 10 seconds of green time for the Eden Evans Center Road approaches while reducing the green time for the US Route 20 approaches by 8 seconds as well as the eastbound left turn movement on Eden Evans Center Road by 2 seconds.

An updated level of service simulation was completed for Option 2 incorporating these mitigation measures. Results of this mitigation simulation are presented in Appendix B and summarized below.

With the addition of the proposed mitigation measures, the level of service associated with the Eden Evans Center Road and US Route 20 intersection will improve the overall level of service from LOS E to LOS D with all movements operating at LOS D or better. Therefore, with implementation of these proposed mitigation measures, all potential impacts to traffic operations can be satisfactorily mitigated. LOS results for Option 2 with signal timing adjustments are illustrated in Figure 14.

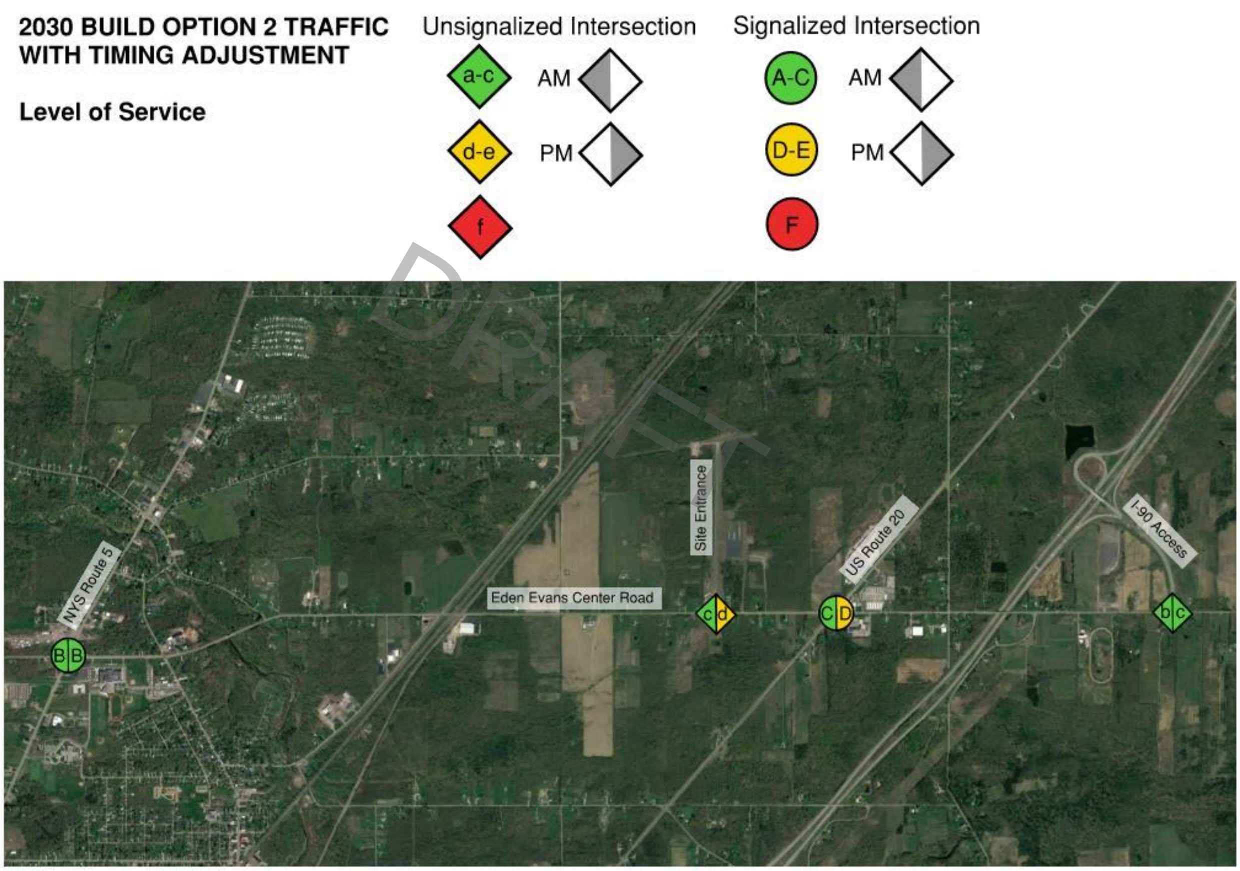

Figure 14: Option 2 with Signal Timing Adjustments Intersection Level of Service

VIII. Conclusions and Recommendations

Conclusions

This Traffic Impact Study was developed to support Generic Environmental Impact Assessment (GEIS) for the Erie County Agribusiness Park Development project. Vehicular access to the project site would be provided by improving/updating the existing site access road to Eden Evans Center Road.

In order to properly identify and evaluate the potential impacts to the transportation system resulting from the build out of the Project, traffic turning movement counts were collected at the following intersections on Thursday, April 15, 2021 and Tuesday April 20, 2021:

- Eden Evans Center Road and I-90 Interchange 48A Ramp Drive
- Eden Evans Center Road and Southwestern Boulevard (US Route 20)
- Eden Evans Center Road and Erie County Agribusiness Park Drive 1
- Beach Drive and Erie Road (NY Route 5)

Synchro Version 11 traffic modeling software was used to conduct six traffic operational analyses:

7. 2021 Existing Conditions;
8. 2030 Background Conditions;
9. 2030 Option 1 Build Conditions of the Project Site;
10. 2030 Option 2 Build Conditions of the Project Site
11. 2030 Option 1 Build Conditions of the Project Site with Mitigation; and,
12. 2030 Option 2 Build Conditions of the Project Site with Mitigation.

Level of Service (LOS) and queue analyses were prepared to establish a baseline for existing traffic operations at Study intersections. These existing condition traffic analyses show that the road network and accompanying intersections in the Study area currently operate at an Unsignalized LOS (b) or Signalized LOS C or better. There is sufficient storage available at all intersection approaches to accommodate the 95th Percentile Queues.

Future background traffic conditions were developed based on historic growth rates obtained from Greater Buffalo Niagara Transportation Council (GBNRTC) traffic volume data. Growth rates in the area vary between +2% per year to -3% per year between 2007 and 2020 and results in an average growth rate for recent years of -1%. Therefore, a more conservative growth rate of +0.5% was used to determine the total growth rate in background traffic for the full build year of 2030 is 3.5%.

Background condition traffic analyses show that the road network and accompanying intersections in the Study area will operate at an Unsignalized LOS (b) or Signalized LOS C or better. There is sufficient storage available at all intersection approaches to accommodate the 95th Percentile Queues.

Trip generation for the full build out was determined by using the ITE Trip Generation Manual, 11th Edition. Since this Traffic Impact Study has been prepared to support the Generic Environmental Impact Study (GEIS), specific land uses or tenants have not been identified. Therefore, generalized ITE Land Uses were selected to best represent the type and size of development that is envisioned for the Agribusiness Park. The Land Uses that were utilized to calculate trip generation volumes resulting from site development include, Land Use Code 130 Industrial Park, Land Use Code 157 High-Cube Cold Storage Warehouse and Land Use Code 770 Business Park.

Option 1, Full Build-Out, best advances the ILDC's goals and maximizes full build out of the site at approximately 1.89 million square feet of business or industrial park as well as cold storage facility space. Summarizing Option 1 Build Trip Generation, during the morning peak hour, the project site can be expected to generate a total of 654 trips, with 551 entering and 108 exiting. During the evening peak hour, the project site can be expected to generate a total of 637 trips, with 169 entering and 468 exiting.

Option 2 (Potential Wetland/Conservation Area Option) has less acreage available for development due to avoidance of site environmental constraints (i.e., wetlands). Option 2 build-out is expected to create approximately 931,000 square feet of business or industrial park as well as cold storage facility space. Summarizing Option 2 Build Trip Generation, during the morning peak hour, the project site can be expected to generate a total of 441 trips, with 373 entering and 68 exiting. During the evening peak hour, the project site can be expected to generate a total of 421 trips, with 110 entering and 311exiting.

Option 1 results for the evening peak hour indicate that most approaches at the unsignalized intersection at the I-90 Exit 57A and Site Access Road operate at LOS (c) or better. One exception is the southbound left movement at the Site Access Road which operates at LOS (f). The signalized intersection at NYS Route 5 and Beach Road operates at an overall LOS B with individual movements operating at LOS D or better. The signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS F. Therefore , the exiting left turn movement from the Site Access Road and the eastbound and westbound movements on Eden Evans Center Road at US Route 20 exhibit failing levels of service and may require mitigation. As demonstrated by the queue analyses presented in Appendix B, all approaches have sufficient length to accommodate the required 95th percentile queue length.

Option 2 results for the evening peak hour indicate that most approaches at the unsignalized intersection at the I-90 Exit 57A and Site Access Road operate at LOS (d) or better. The signalized intersection at NYS Route 5 and Beach Road operates at an overall LOS B with individual movements operating at LOS D or better. The signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS E with eastbound movements on Eden Evans Center Road operating at LOS E and westbound movements on Eden Evans Center Road operating at LOS F. Therefore, the eastbound and westbound movements on Eden Evans Center Road at US Route 20 exhibit failing levels of service and may require mitigation. As demonstrated by the queue analyses presented in Appendix B, all approaches have sufficient length to accommodate the required 95th percentile queue length.

2030 Option 1 Build Condition Mitigation

The following potential impacts were identified for Option 1.

- During the evening peak, the exiting left turn movement from the Site Access Road operates at LOS (f).
- During the evening peak, the eastbound and westbound movements on Eden Evans Center Road at US Route 20 operate at LOS F.

Mitigation measures for these locations include the following:

- Site Access Road – The exit approach would consist of two lanes including a dedicated left turn lane and dedicated right turn lane. In addition, a two phase semi-actuated traffic signal would be constructed at this intersection. Phase 1 timing for the Eden Evans Center Road approaches would be 50 seconds. Phase 2 timing for exiting site traffic would be 30 seconds.
- Eden Evans Center Road at US Route 20 – The eastbound and westbound approaches on Eden Evans Center Road would be modified to provide a dedicated left turn lane with a length of 200 feet. Protected/permissive turn phases would be provided for the left turn movements. In addition, existing signal timing would be optimized to provide an additional 5 seconds for the Eden Evans Center Road approaches and reducing the green time for the US Route 20 approaches by 5 seconds.

An updated level of service simulation was completed for Option 1 incorporating these mitigation measures. Results of this mitigation simulation are presented in Appendix B and summarized below.

With the addition of the proposed mitigation measures, the level of service associated with the Site Access Road exit improves from unsignalized LOS (f) to a signalized overall LOS C with the exiting left turns improving to LOS D during the evening peak hour. Proposed mitigation at the Eden Evans Center Road and US Route 20 intersection will improve the overall level of service from LOS F to LOS C with all movements operating at LOS D or better. Therefore, with implementation of these proposed mitigation measures, all potential impacts to traffic operations can be satisfactorily mitigated.

2030 Option 2 Build Condition Mitigation

The following potential impacts were identified for Option 2.

- During the evening peak, the signalized intersection at US Route 20 and Eden Evans Center Road operates at an overall LOS E with eastbound movements on Eden Evans Center Road operating at LOS E and westbound movements on Eden Evans Center Road operating at LOS F.

Mitigation measures for this location includes the following:

- Eden Evans Center Road at US Route 20 – Existing signal timing would be optimized to provide an additional 10 seconds of green time for the Eden Evans Center Road approaches while reducing the green time for the US Route 20 approaches by 8 seconds as well as the eastbound left turn movement on Eden Evans Center Road by 2 seconds.

An updated level of service simulation was completed for Option 2 incorporating these mitigation measures. Results of this mitigation simulation are presented in Appendix B and summarized below.

Recommendations

With the addition of the proposed mitigation measures Option 1 or Option 2, traffic on Eden Evans Center Road and associated intersections operation satisfactorily. Therefore, development of Option 1 and Option 2 should include implantation of traffic mitigation measures.

APPENDIX A

TRAFFIC COUNT DATA

TRI-STATE TRAFFIC DATA

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184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
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Evans, NY

Thursday, April 15, 2021
Location: 42.650172, -79.040871

Count Name: Beach Rd & Rte 5
Site Code:
Start Date: 04/15/2021
Page No: 1

Turning Movement Data

Start Time	Rt 5 Southbound						Beach Rd Westbound						Rt 5 Northbound						Beach Rd Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	40	18	0	0	59	2	4	8	1	0	15	26	60	2	0	0	88	3	5	7	0	0	15	177
7:15 AM	0	63	22	0	0	85	9	2	40	0	0	51	38	91	2	0	0	131	11	12	8	0	0	31	298
7:30 AM	2	31	9	0	0	42	13	4	23	0	0	40	25	76	9	0	0	110	3	9	6	0	0	18	210
7:45 AM	2	47	7	0	0	56	10	3	26	1	0	40	15	48	3	1	0	67	3	6	5	0	0	14	177
Hourly Total	5	181	56	0	0	242	34	13	97	2	0	146	104	275	16	1	0	396	20	32	26	0	0	78	862
8:00 AM	2	49	6	0	0	57	8	4	8	0	0	20	19	77	1	0	0	97	4	6	5	0	0	15	189
8:15 AM	1	50	4	0	0	55	3	5	18	0	1	26	22	72	0	0	0	94	6	2	5	0	0	13	188
8:30 AM	1	41	13	0	0	55	4	3	21	0	1	28	24	56	1	0	0	81	2	6	6	0	0	14	178
8:45 AM	0	53	8	0	0	61	7	0	13	0	0	20	26	57	0	0	0	83	3	5	1	0	0	9	173
Hourly Total	4	193	31	0	0	228	22	12	60	0	2	94	91	262	2	0	0	355	15	19	17	0	0	51	728
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	6	97	5	0	0	108	3	5	34	0	0	42	28	85	6	0	0	119	1	6	2	0	0	9	278
4:15 PM	4	92	4	0	0	100	11	5	40	1	1	57	24	81	3	0	0	108	4	4	4	0	0	12	277
4:30 PM	8	104	10	0	0	122	19	7	30	1	0	57	19	64	3	0	0	86	4	4	4	0	0	12	277
4:45 PM	7	83	8	0	0	98	8	9	42	0	0	59	16	68	13	0	0	97	8	0	4	0	0	12	266
Hourly Total	25	376	27	0	0	428	41	26	146	2	1	215	87	298	25	0	0	410	17	14	14	0	0	45	1098
5:00 PM	4	104	11	0	0	119	14	3	29	1	0	47	20	63	8	0	0	91	4	4	6	0	0	14	271
5:15 PM	11	83	19	0	0	113	10	5	31	0	0	46	24	58	4	0	0	86	1	2	5	0	0	8	253
5:30 PM	4	90	14	0	0	108	19	8	47	0	0	74	14	77	2	0	0	93	5	6	7	0	0	18	293
5:45 PM	8	90	6	0	0	104	8	7	18	0	0	33	18	44	2	0	0	64	3	3	0	0	0	6	207
Hourly Total	27	367	50	0	0	444	51	23	125	1	0	200	76	242	16	0	0	334	13	15	18	0	0	46	1024
Grand Total	61	1117	164	0	0	1342	148	74	428	5	3	655	358	1077	59	1	0	1495	65	80	75	0	0	220	3712
Approach %	4.5	83.2	12.2	0.0	-	-	22.6	11.3	65.3	0.8	-	-	23.9	72.0	3.9	0.1	-	-	29.5	36.4	34.1	0.0	-	-	-
Total %	1.6	30.1	4.4	0.0	-	36.2	4.0	2.0	11.5	0.1	-	17.6	9.6	29.0	1.6	0.0	-	40.3	1.8	2.2	2.0	0.0	-	5.9	-
Lights	59	1089	134	0	-	1282	136	67	390	3	-	596	325	1053	58	1	-	1437	60	76	73	0	-	209	3524
% Lights	96.7	97.5	81.7	-	-	95.5	91.9	90.5	91.1	60.0	-	91.0	90.8	97.8	98.3	100.0	-	96.1	92.3	95.0	97.3	-	-	95.0	94.9
Buses	2	8	26	0	-	36	11	1	21	2	-	35	25	4	0	0	-	29	1	2	1	0	-	4	104
% Buses	3.3	0.7	15.9	-	-	2.7	7.4	1.4	4.9	40.0	-	5.3	7.0	0.4	0.0	0.0	-	1.9	1.5	2.5	1.3	-	-	1.8	2.8
Trucks	0	20	4	0	-	24	1	6	17	0	-	24	8	20	1	0	-	29	4	2	1	0	-	7	84
% Trucks	0.0	1.8	2.4	-	-	1.8	0.7	8.1	4.0	0.0	-	3.7	2.2	1.9	1.7	0.0	-	1.9	6.2	2.5	1.3	-	-	3.2	2.3
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TRI-STATE TRAFFIC DATA
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610-466-1469
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Evans, NY

Thursday, April 15, 2021
Location: 42.650172, -79.040871

Count Name: Beach Rd & Rte 5
Site Code:
Start Date: 04/15/2021
Page No: 2

Rt 5 [SB]

Out	In	Total
1262	1282	2544
16	36	52
22	24	46
0	0	0
0	0	0
1300	**1342**	**2642**

59	1089	134	0	0
2	8	26	0	0
0	20	4	0	0
0	0	0	0	0
0	0	0	0	0
61	**1117**	**164**	**0**	**0**
R	T	L	U	P

Beach Rd [EB]

Out	In	Total
184	209	393
3	4	7
7	7	14
0	0	0
0	0	0
194	**220**	**414**

U	L	T	R	P
0	73	76	60	0
0	1	2	1	0
0	1	2	4	0
0	0	0	0	0
0	0	0	0	0
0	**75**	**80**	**65**	**0**

04/15/2021 7:00 AM
Ending At
04/15/2021 6:00 PM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

Beach Rd [WB]

R	T	L	U	P
136	67	390	3	0
11	1	21	2	0
1	6	17	0	0
0	0	0	0	0
0	0	0	0	3
148	**74**	**428**	**5**	**3**

Out	In	Total
538	596	1134
55	35	90
14	24	38
0	0	0
0	0	0
607	**655**	**1262**

U	L	T	R	P
1	58	1053	325	0
0	0	4	25	0
0	1	20	8	0
0	0	0	0	0
0	0	0	0	0
1	**59**	**1077**	**358**	**0**

1540	1437	2977
30	29	59
41	29	70
0	0	0
0	0	0
1611	**1495**	**3106**
Out	In	Total

Rt 5 [NB]

Turning Movement Data Plot

TRI-STATE TRAFFIC DATA

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Evans, NY

Thursday, April 15, 2021
Location: 42.650172, -79.040871

Count Name: Beach Rd & Rte 5
Site Code:
Start Date: 04/15/2021
Page No: 3

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Rt 5 Southbound						Beach Rd Westbound						Rt 5 Northbound						Beach Rd Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:15 AM	0	63	22	0	0	85	9	2	40	0	0	51	38	91	2	0	0	131	11	12	8	0	0	31	298
7:30 AM	2	31	9	0	0	42	13	4	23	0	0	40	25	76	9	0	0	110	3	9	6	0	0	18	210
7:45 AM	2	47	7	0	0	56	10	3	26	1	0	40	15	48	3	1	0	67	3	6	5	0	0	14	177
8:00 AM	2	49	6	0	0	57	8	4	8	0	0	20	19	77	1	0	0	97	4	6	5	0	0	15	189
Total	6	190	44	0	0	240	40	13	97	1	0	151	97	292	15	1	0	405	21	33	24	0	0	78	874
Approach %	2.5	79.2	18.3	0.0	-	-	26.5	8.6	64.2	0.7	-	-	24.0	72.1	3.7	0.2	-	-	26.9	42.3	30.8	0.0	-	-	-
Total %	0.7	21.7	5.0	0.0	-	27.5	4.6	1.5	11.1	0.1	-	17.3	11.1	33.4	1.7	0.1	-	46.3	2.4	3.8	2.7	0.0	-	8.9	-
PHF	0.750	0.754	0.500	0.000	-	0.706	0.769	0.813	0.606	0.250	-	0.740	0.638	0.802	0.417	0.250	-	0.773	0.477	0.688	0.750	0.000	-	0.629	0.733
Lights	5	180	39	0	-	224	29	12	75	0	-	116	89	286	15	1	-	391	19	32	23	0	-	74	805
% Lights	83.3	94.7	88.6	-	-	93.3	72.5	92.3	77.3	0.0	-	76.8	91.8	97.9	100.0	100.0	-	96.5	90.5	97.0	95.8	-	-	94.9	92.1
Buses	1	3	3	0	-	7	10	0	20	1	-	31	6	2	0	0	-	8	1	0	0	0	-	1	47
% Buses	16.7	1.6	6.8	-	-	2.9	25.0	0.0	20.6	100.0	-	20.5	6.2	0.7	0.0	0.0	-	2.0	4.8	0.0	0.0	-	-	1.3	5.4
Trucks	0	7	2	0	-	9	1	1	2	0	-	4	2	4	0	0	-	6	1	1	1	0	-	3	22
% Trucks	0.0	3.7	4.5	-	-	3.8	2.5	7.7	2.1	0.0	-	2.6	2.1	1.4	0.0	0.0	-	1.5	4.8	3.0	4.2	-	-	3.8	2.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Evans, NY

Thursday, April 15, 2021
Location: 42.650172, -79.040871

Count Name: Beach Rd & Rte 5
Site Code:
Start Date: 04/15/2021
Page No: 4

Peak Hour Data

04/15/2021 7:15 AM
Ending At
04/15/2021 8:15 AM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

Rt 5 [SB]

Out	In	Total
338	224	562
12	7	19
6	9	15
0	0	0
0	0	0
356	**240**	**596**

R	T	L	U	P
5	180	39	0	0
1	3	3	0	0
0	7	2	0	0
0	0	0	0	0
0	0	0	0	0
6	**190**	**44**	**0**	**0**

Beach Rd [EB]

Out	In	Total
32	74	106
1	1	2
1	3	4
0	0	0
0	0	0
34	**78**	**112**

U	L	T	R	P
0	23	32	19	0
0	0	0	1	0
0	1	1	1	0
0	0	0	0	0
0	0	0	0	0
0	**24**	**33**	**21**	**0**

Beach Rd [WB]

Out	In	Total
160	116	276
10	31	41
5	4	9
0	0	0
0	0	0
175	**151**	**326**

R	T	L	U	P
29	12	75	0	0
10	0	20	1	0
1	1	2	0	0
0	0	0	0	0
0	0	0	0	0
40	**13**	**97**	**1**	**0**

U	L	T	R	P
1	15	286	89	0
0	0	2	6	0
0	0	4	2	0
0	0	0	0	0
0	0	0	0	0
1	**15**	**292**	**97**	**0**

Out	In	Total
275	391	666
24	8	32
10	6	16
0	0	0
0	0	0
309	**405**	**714**

Rt 5 [NB]

Turning Movement Peak Hour Data Plot (7:15 AM)

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Evans, NY

Thursday, April 15, 2021
Location: 42.650172, -79.040871

Count Name: Beach Rd & Rte 5
Site Code:
Start Date: 04/15/2021

Turning Movement Peak Hour Data (4:00 PM)

	Rt 5 Southbound						Beach Rd Westbound						Rt 5 Northbound						Beach Rd Eastbound						
Start Time	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
4:00 PM	6	97	5	0	0	108	3	5	34	0	0	42	28	85	6	0	0	119	1	6	2	0	0	9	278
4:15 PM	4	92	4	0	0	100	11	5	40	1	1	57	24	81	3	0	0	108	4	4	4	0	0	12	277
4:30 PM	8	104	10	0	0	122	19	7	30	1	0	57	19	64	3	0	0	86	4	4	4	0	0	12	277
4:45 PM	7	83	8	0	0	98	8	9	42	0	0	59	16	68	13	0	0	97	8	0	4	0	0	12	266
Total	25	376	27	0	0	428	41	26	146	2	1	215	87	298	25	0	0	410	17	14	14	0	0	45	1098
Approach %	5.8	87.9	6.3	0.0	-	-	19.1	12.1	67.9	0.9	-	-	21.2	72.7	6.1	0.0	-	-	37.8	31.1	31.1	0.0	-	-	-
Total %	2.3	34.2	2.5	0.0	-	39.0	3.7	2.4	13.3	0.2	-	19.6	7.9	27.1	2.3	0.0	-	37.3	1.5	1.3	1.3	0.0	-	4.1	-
PHF	0.781	0.904	0.675	0.000	-	0.877	0.539	0.722	0.869	0.500	-	0.911	0.777	0.876	0.481	0.000	-	0.861	0.531	0.583	0.875	0.000	-	0.938	0.987
Lights	25	371	24	0	-	420	41	26	142	2	-	211	78	294	24	0	-	396	16	14	14	0	-	44	1071
% Lights	100.0	98.7	88.9	-	-	98.1	100.0	100.0	97.3	100.0	-	98.1	89.7	98.7	96.0	-	-	96.6	94.1	100.0	100.0	-	-	97.8	97.5
Buses	0	1	3	0	-	4	0	0	0	0	-	0	5	0	0	0	-	5	0	0	0	0	-	0	9
% Buses	0.0	0.3	11.1	-	-	0.9	0.0	0.0	0.0	0.0	-	0.0	5.7	0.0	0.0	-	-	1.2	0.0	0.0	0.0	-	-	0.0	0.8
Trucks	0	4	0	0	-	4	0	0	4	0	-	4	4	4	1	0	-	9	1	0	0	0	-	1	18
% Trucks	0.0	1.1	0.0	-	-	0.9	0.0	0.0	2.7	0.0	-	1.9	4.6	1.3	4.0	-	-	2.2	5.9	0.0	0.0	-	-	2.2	1.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Evans, NY

Thursday, April 15, 2021
Location: 42.650172, -79.040871

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Count Name: Beach Rd & Rte 5
Site Code:
Start Date: 04/15/2021
Page No: 6

Peak Hour Data

04/15/2021 4:00 PM
Ending At
04/15/2021 5:00 PM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

DRAFT

Rt 5 [SB]

Out	In	Total
349	420	769
0	4	4
4	4	8
0	0	0
0	0	0
353	**428**	**781**

R	T	L	U	P
25	371	24	0	0
0	1	3	0	0
0	4	0	0	0
0	0	0	0	0
0	0	0	0	0
25	**376**	**27**	**0**	**0**

Beach Rd [EB]

Out	In	Total
75	44	119
0	0	0
1	1	2
0	0	0
0	0	0
76	**45**	**121**

U	L	T	R	P
0	14	14	16	0
0	0	0	0	0
0	0	0	1	0
0	0	0	0	0
0	0	0	0	0
0	**14**	**14**	**17**	**0**

Beach Rd [WB]

Out	In	Total
118	211	329
8	0	8
4	4	8
0	0	0
0	0	0
130	**215**	**345**

R	T	L	U	P
41	26	142	2	0
0	0	0	0	0
0	0	4	0	0
0	0	0	0	0
0	0	0	0	1
41	**26**	**146**	**2**	**1**

Rt 5 [NB]

U	L	T	R	P
0	24	294	78	0
0	0	0	5	0
0	1	4	4	0
0	0	0	0	0
0	0	0	0	0
0	**25**	**298**	**87**	**0**

Out	In	Total
529	396	925
1	5	6
9	9	18
0	0	0
0	0	0
539	**410**	**949**

Turning Movement Peak Hour Data Plot (4:00 PM)

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Evans, NY

Thursday, April 15, 2021
Location: 42.65264, -78.985404

Count Name: Eden Evans Center Rd & Driveway
Site Code:
Start Date: 04/15/2021
Page No: 1

Turning Movement Data

Start Time	Driveway Southbound					Eden Evans Center Rd Westbound					Eden Evans Center Rd Eastbound					
	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	48	0	0	48	43	0	0	0	43	91
7:15 AM	0	0	0	0	0	0	51	0	0	51	68	0	0	0	68	119
7:30 AM	0	0	0	0	0	0	38	0	0	38	56	0	0	0	56	94
7:45 AM	0	0	0	0	0	0	37	0	0	37	45	0	0	0	45	82
Hourly Total	0	0	0	0	0	0	174	0	0	174	212	0	0	0	212	386
8:00 AM	0	0	0	0	0	0	30	0	0	30	34	0	0	0	34	64
8:15 AM	0	0	0	0	0	0	32	0	0	32	40	0	0	0	40	72
8:30 AM	0	0	0	0	0	0	24	0	0	24	44	0	0	0	44	68
8:45 AM	0	0	0	0	0	0	26	0	0	26	31	0	0	0	31	57
Hourly Total	0	0	0	0	0	0	112	0	0	112	149	0	0	0	149	261
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	49	0	0	49	44	0	0	0	44	93
4:15 PM	0	0	0	0	0	0	58	0	0	58	47	0	0	0	47	105
4:30 PM	0	0	0	0	0	0	71	0	0	71	41	0	0	0	41	112
4:45 PM	0	0	0	0	0	0	64	0	0	64	32	0	0	0	32	96
Hourly Total	0	0	0	0	0	0	242	0	0	242	164	0	0	0	164	406
5:00 PM	0	0	0	0	0	0	60	0	0	60	34	0	0	0	34	94
5:15 PM	0	0	0	0	0	0	64	0	0	64	43	0	0	0	43	107
5:30 PM	0	0	0	0	0	0	59	0	0	59	42	0	0	0	42	101
5:45 PM	0	0	0	0	0	0	45	0	0	45	38	0	0	0	38	83
Hourly Total	0	0	0	0	0	0	228	0	0	228	157	0	0	0	157	385
Grand Total	0	0	0	0	0	0	756	0	0	756	682	0	0	0	682	1438
Approach %	0.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	52.6	0.0	-	52.6	47.4	0.0	0.0	-	47.4	-
Lights	0	0	0	-	0	0	715	0	-	715	651	0	0	-	651	1366
% Lights	-	-	-	-	-	-	94.6	-	-	94.6	95.5	-	-	-	95.5	95.0
Buses	0	0	0	-	0	0	9	0	-	9	10	0	0	-	10	19
% Buses	-	-	-	-	-	-	1.2	-	-	1.2	1.5	-	-	-	1.5	1.3
Trucks	0	0	0	-	0	0	32	0	-	32	21	0	0	-	21	53
% Trucks	-	-	-	-	-	-	4.2	-	-	4.2	3.1	-	-	-	3.1	3.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Evans, NY

Thursday, April 15, 2021
Location: 42.65264, -78.985404

Count Name: Eden Evans Center Rd & Driveway
Site Code:
Start Date: 04/15/2021
Page No: 2

Driveway [SB]

Out	In	Total
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	**0**	**0**

R	L	U	P
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	**0**	**0**	**0**

Eden Evans Center Rd [EB]

Out	In	Total
715	651	1366
9	10	19
32	21	53
0	0	0
0	0	0
756	**682**	**1438**

U	L	T	P
0	0	651	0
0	0	10	0
0	0	21	0
0	0	0	0
0	0	0	0
0	**0**	**682**	**0**

Eden Evans Center Rd [WB]

Out	In	Total
651	715	1366
10	9	19
21	32	53
0	0	0
0	0	0
682	**756**	**1438**

R	T	U	P
0	715	0	0
0	9	0	0
0	32	0	0
0	0	0	0
0	0	0	0
0	**756**	**0**	**0**

04/15/2021 7:00 AM
Ending At
04/15/2021 6:00 PM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

Turning Movement Data Plot

TRI-STATE TRAFFIC DATA

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Evans, NY

Thursday, April 15, 2021
Location: 42.65264, -78.985404

Count Name: Eden Evans Center Rd & Driveway
Site Code:
Start Date: 04/15/2021
Page No: 3

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Driveway Southbound					Eden Evans Center Rd Westbound					Eden Evans Center Rd Eastbound					
	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	48	0	0	48	43	0	0	0	43	91
7:15 AM	0	0	0	0	0	0	51	0	0	51	68	0	0	0	68	119
7:30 AM	0	0	0	0	0	0	38	0	0	38	56	0	0	0	56	94
7:45 AM	0	0	0	0	0	0	37	0	0	37	45	0	0	0	45	82
Total	0	0	0	0	0	0	174	0	0	174	212	0	0	0	212	386
Approach %	0.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	45.1	0.0	-	45.1	54.9	0.0	0.0	-	54.9	-
PHF	0.000	0.000	0.000	-	0.000	0.000	0.853	0.000	-	0.853	0.779	0.000	0.000	-	0.779	0.811
Lights	0	0	0	-	0	0	161	0	-	161	201	0	0	-	201	362
% Lights	-	-	-	-	-	-	92.5	-	-	92.5	94.8	-	-	-	94.8	93.8
Buses	0	0	0	-	0	0	5	0	-	5	5	0	0	-	5	10
% Buses	-	-	-	-	-	-	2.9	-	-	2.9	2.4	-	-	-	2.4	2.6
Trucks	0	0	0	-	0	0	8	0	-	8	6	0	0	-	6	14
% Trucks	-	-	-	-	-	-	4.6	-	-	4.6	2.8	-	-	-	2.8	3.6
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Evans, NY

Thursday, April 15, 2021
Location: 42.65264, -78.985404

Count Name: Eden Evans Center Rd & Driveway
Site Code:
Start Date: 04/15/2021
Page No: 4

Driveway [SB]

Out	In	Total
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	**0**	**0**

R	L	U	P
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	**0**	**0**	**0**

Eden Evans Center Rd [EB]

Total	In	Out
362	201	161
10	5	5
14	6	8
0	0	0
0	0	0
386	**212**	**174**

U	L	T	P
0	0	201	0
0	0	5	0
0	0	6	0
0	0	0	0
0	0	0	0
0	**0**	**212**	**0**

Peak Hour Data

04/15/2021 7:00 AM
Ending At
04/15/2021 8:00 AM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

R	T	U	P
0	161	0	0
0	5	0	0
0	8	0	0
0	0	0	0
0	0	0	0
0	**174**	**0**	**0**

Eden Evans Center Rd [WB]

Out	In	Total
201	161	362
5	5	10
6	8	14
0	0	0
0	0	0
212	**174**	**386**

Turning Movement Peak Hour Data Plot (7:00 AM)

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Evans, NY

Thursday, April 15, 2021
Location: 42.65264, -78.985404

Count Name: Eden Evans Center Rd & Driveway
Site Code:
Start Date: 04/15/2021
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Driveway Southbound					Eden Evans Center Rd Westbound					Eden Evans Center Rd Eastbound					
	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
4:30 PM	0	0	0	0	0	0	71	0	0	71	41	0	0	0	41	112
4:45 PM	0	0	0	0	0	0	64	0	0	64	32	0	0	0	32	96
5:00 PM	0	0	0	0	0	0	60	0	0	60	34	0	0	0	34	94
5:15 PM	0	0	0	0	0	0	64	0	0	64	43	0	0	0	43	107
Total	0	0	0	0	0	0	259	0	0	259	150	0	0	0	150	409
Approach %	0.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	63.3	0.0	-	63.3	36.7	0.0	0.0	-	36.7	-
PHF	0.000	0.000	0.000	-	0.000	0.000	0.912	0.000	-	0.912	0.872	0.000	0.000	-	0.872	0.913
Lights	0	0	0	-	0	0	255	0	-	255	143	0	0	-	143	398
% Lights	-	-	-	-	-	-	98.5	-	-	98.5	95.3	-	-	-	95.3	97.3
Buses	0	0	0	-	0	0	0	0	-	0	1	0	0	-	1	1
% Buses	-	-	-	-	-	-	0.0	-	-	0.0	0.7	-	-	-	0.7	0.2
Trucks	0	0	0	-	0	0	4	0	-	4	6	0	0	-	6	10
% Trucks	-	-	-	-	-	-	1.5	-	-	1.5	4.0	-	-	-	4.0	2.4
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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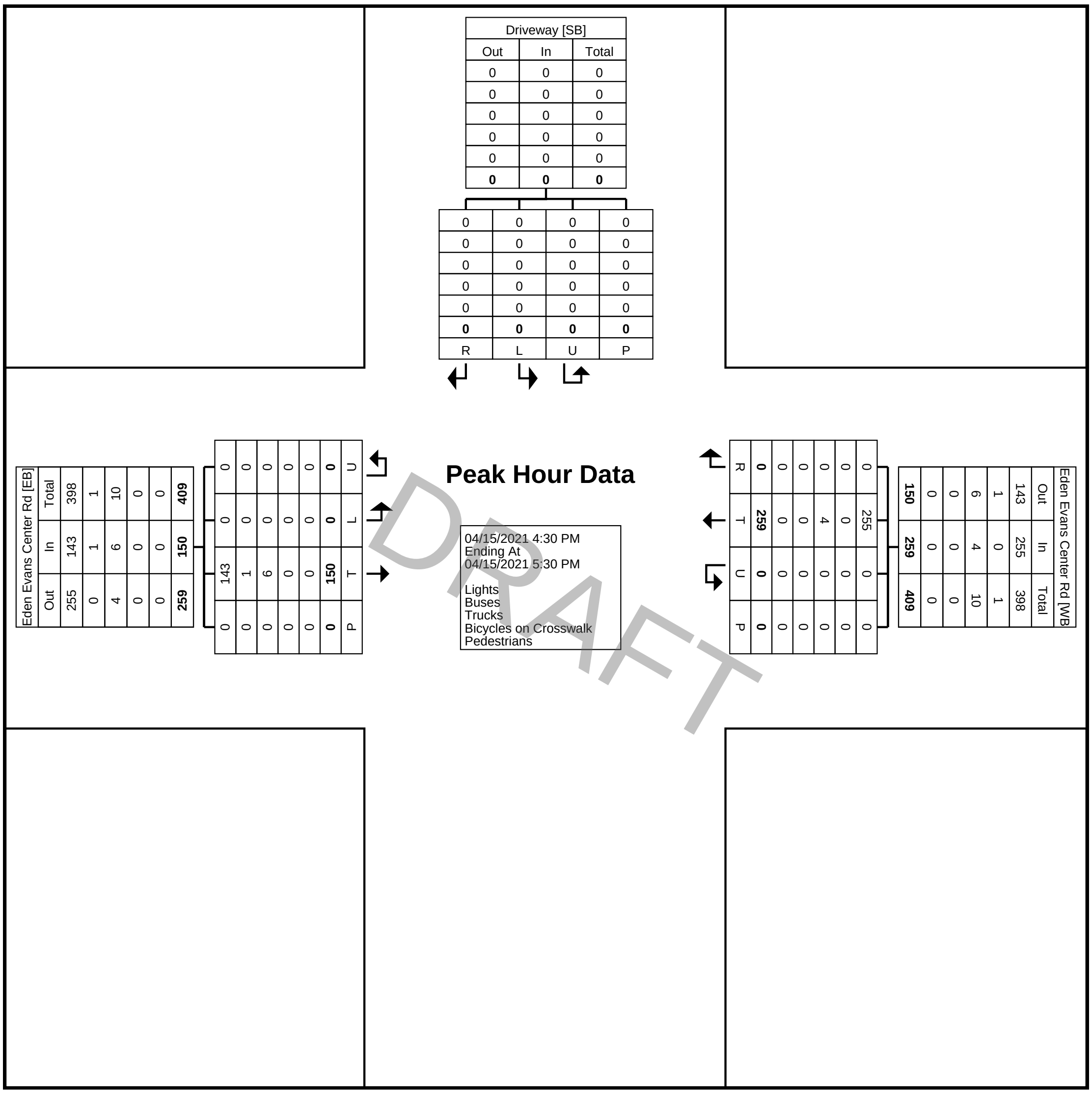
Evans, NY

Thursday, April 15, 2021
Location: 42.65264, -78.985404

Count Name: Eden Evans Center Rd & Driveway
Site Code:
Start Date: 04/15/2021
Page No: 6



Turning Movement Peak Hour Data Plot (4:30 PM)

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Evans, NY

Thursday, April 15, 2021
Location: 42.65254, -78.981328

Count Name: Eden Evans Center Rd & Rt 20
Site Code:
Start Date: 04/15/2021
Page No: 1

Turning Movement Data

Start Time	Rt 20							Eden Evans Center Rd							Rt 20							Eden Evans Center Rd							
	Southbound							Westbound							Northbound							Eastbound							
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	30	2	20	1	0	0	53	1	0	15	0	0	0	16	9	2	39	1	0	0	51	1	0	26	19	0	0	46	166
7:15 AM	24	5	34	2	0	0	65	0	0	19	8	0	0	27	11	1	47	1	0	0	60	0	0	34	25	0	0	59	211
7:30 AM	11	5	27	0	0	0	43	2	2	24	4	0	0	32	17	1	49	1	0	0	68	2	0	23	25	0	0	50	193
7:45 AM	11	3	37	2	0	0	53	1	3	21	9	0	0	34	12	3	37	1	0	0	53	4	0	35	19	0	0	58	198
Hourly Total	76	15	118	5	0	0	214	4	5	79	21	0	0	109	49	7	172	4	0	0	232	7	0	118	88	0	0	213	768
8:00 AM	10	5	29	2	0	0	46	2	0	14	4	0	0	20	13	2	37	0	0	0	52	0	0	15	19	0	0	34	152
8:15 AM	13	3	25	2	0	0	43	0	0	17	11	0	0	28	9	4	48	1	0	0	62	1	0	26	11	0	0	38	171
8:30 AM	6	2	28	2	0	0	38	0	1	16	6	0	0	23	6	1	42	0	0	0	49	1	1	30	17	0	0	49	159
8:45 AM	6	3	28	3	0	0	40	1	0	18	9	0	0	28	11	1	35	0	0	0	47	1	1	13	14	0	0	29	144
Hourly Total	35	13	110	9	0	0	167	3	1	65	30	0	0	99	39	8	162	1	0	0	210	3	2	84	61	0	0	150	626
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	22	0	90	1	0	0	113	1	2	26	26	0	0	55	11	1	53	0	0	0	65	1	0	24	21	0	0	46	279
4:15 PM	17	3	79	3	0	0	102	0	1	37	19	0	0	57	11	0	48	2	0	0	61	1	0	25	18	0	0	44	264
4:30 PM	25	5	73	5	0	0	108	2	3	36	22	0	0	63	8	3	42	2	0	0	55	3	2	16	19	0	0	40	266
4:45 PM	30	5	68	0	0	0	103	0	1	31	25	0	0	57	9	5	45	1	0	0	60	1	0	26	9	0	0	36	256
Hourly Total	94	13	310	9	0	0	426	3	7	130	92	0	0	232	39	9	188	5	0	0	241	6	2	91	67	0	0	166	1065
5:00 PM	28	7	60	6	0	0	101	2	1	28	20	0	0	51	13	1	58	2	0	0	74	1	1	13	20	0	0	35	261
5:15 PM	23	5	48	4	0	0	80	0	0	32	24	0	0	56	15	2	60	2	0	0	79	3	1	19	17	0	0	40	255
5:30 PM	16	8	52	1	0	0	77	1	1	33	19	0	0	54	5	2	46	0	0	0	53	0	1	24	19	0	0	44	228
5:45 PM	22	0	66	2	0	0	90	1	1	24	8	0	0	34	12	1	46	0	0	0	59	0	1	23	19	0	0	43	226
Hourly Total	89	20	226	13	0	0	348	4	3	117	71	0	0	195	45	6	210	4	0	0	265	4	4	79	75	0	0	162	970
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	294	61	764	36	0	0	1155	14	16	391	214	0	0	635	172	30	732	14	0	0	948	20	8	372	291	0	0	691	3429
Approach %	25.5	5.3	66.1	3.1	0.0	-	-	2.2	2.5	61.6	33.7	0.0	-	-	18.1	3.2	77.2	1.5	0.0	-	-	2.9	1.2	53.8	42.1	0.0	-	-	-
Total %	8.6	1.8	22.3	1.0	0.0	-	33.7	0.4	0.5	11.4	6.2	0.0	-	18.5	5.0	0.9	21.3	0.4	0.0	-	27.6	0.6	0.2	10.8	8.5	0.0	-	20.2	-
Lights	275	59	730	31	0	-	1095	11	12	368	193	0	-	584	150	27	685	14	0	-	876	19	8	351	279	0	-	657	3212
% Lights	93.5	96.7	95.5	86.1	-	-	94.8	78.6	75.0	94.1	90.2	-	-	92.0	87.2	90.0	93.6	100.0	-	-	92.4	95.0	100.0	94.4	95.9	-	-	95.1	93.7
Buses	5	0	1	0	0	-	6	0	0	5	3	0	-	8	0	0	2	0	0	-	2	1	0	6	3	0	-	10	26
% Buses	1.7	0.0	0.1	0.0	-	-	0.5	0.0	0.0	1.3	1.4	-	-	1.3	0.0	0.0	0.3	0.0	-	-	0.2	5.0	0.0	1.6	1.0	-	-	1.4	0.8
Trucks	14	2	33	5	0	-	54	3	4	18	18	0	-	43	22	3	45	0	0	-	70	0	0	15	9	0	-	24	191
% Trucks	4.8	3.3	4.3	13.9	-	-	4.7	21.4	25.0	4.6	8.4	-	-	6.8	12.8	10.0	6.1	0.0	-	-	7.4	0.0	0.0	4.0	3.1	-	-	3.5	5.6
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Evans, NY

Thursday, April 15, 2021
Location: 42.65254, -78.981328

TRI-STATE TRAFFIC DATA

www.TSTData.com
184 Baker Rd

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610-466-1469
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Count Name: Eden Evans Center Rd & Rt 20
Site Code:
Start Date: 04/15/2021
Page No: 2

04/15/2021 7:00 AM
Ending At
04/15/2021 6:15 PM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

Rt 20 [SB]

Out	In	Total
987	1095	2082
5	6	11
61	54	115
0	0	0
0	0	0
1053	**1155**	**2208**

R	T	L	U	P
334	730	31	0	0
5	1	0	0	0
16	33	5	0	0
0	0	0	0	0
0	0	0	0	0
355	**764**	**36**	**0**	**0**

Eden Evans Center Rd [EB]

Total	In	Out
1373	657	716
20	10	10
58	24	34
0	0	0
0	0	0
1451	**691**	**760**

U	L	T	R	P
0	279	351	27	0
0	3	6	1	0
0	9	15	0	0
0	0	0	0	0
0	0	0	0	0
0	**291**	**372**	**28**	**0**

Eden Evans Center Rd [WB]

Out	In	Total
559	584	1143
6	8	14
45	43	88
0	0	0
0	0	0
610	**635**	**1245**

R	T	L	U	P
23	368	193	0	0
0	5	3	0	0
7	18	18	0	0
0	0	0	0	0
0	0	0	0	0
30	**391**	**214**	**0**	**0**

U	L	T	R	P
0	14	685	177	0
0	0	2	0	0
0	0	45	25	0
0	0	0	0	0
0	0	0	0	0
0	**14**	**732**	**202**	**0**

Out	In	Total
950	876	1826
5	2	7
51	70	121
0	0	0
0	0	0
1006	**948**	**1954**

Rt 20 [NB]

DRAFT

Turning Movement Data Plot

TRI-STATE TRAFFIC DATA

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Evans, NY

Thursday, April 15, 2021
Location: 42.65254, -78.981328

Count Name: Eden Evans Center Rd & Rt 20
Site Code:
Start Date: 04/15/2021
Page No: 3

Turning Movement Peak Hour Data (7:00 AM)

	Rt 20 Southbound							Eden Evans Center Rd Westbound							Rt 20 Northbound							Eden Evans Center Rd Eastbound							
Start Time	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	30	2	20	1	0	0	53	1	0	15	0	0	0	16	9	2	39	1	0	0	51	1	0	26	19	0	0	46	166
7:15 AM	24	5	34	2	0	0	65	0	0	19	8	0	0	27	11	1	47	1	0	0	60	0	0	34	25	0	0	59	211
7:30 AM	11	5	27	0	0	0	43	2	2	24	4	0	0	32	17	1	49	1	0	0	68	2	0	23	25	0	0	50	193
7:45 AM	11	3	37	2	0	0	53	1	3	21	9	0	0	34	12	3	37	1	0	0	53	4	0	35	19	0	0	58	198
Total	76	15	118	5	0	0	214	4	5	79	21	0	0	109	49	7	172	4	0	0	232	7	0	118	88	0	0	213	768
Approach %	35.5	7.0	55.1	2.3	0.0	-	-	3.7	4.6	72.5	19.3	0.0	-	-	21.1	3.0	74.1	1.7	0.0	-	-	3.3	0.0	55.4	41.3	0.0	-	-	-
Total %	9.9	2.0	15.4	0.7	0.0	-	27.9	0.5	0.7	10.3	2.7	0.0	-	14.2	6.4	0.9	22.4	0.5	0.0	-	30.2	0.9	0.0	15.4	11.5	0.0	-	27.7	-
PHF	0.633	0.750	0.797	0.625	0.000	-	0.823	0.500	0.417	0.823	0.583	0.000	-	0.801	0.721	0.583	0.878	1.000	0.000	-	0.853	0.438	0.000	0.843	0.880	0.000	-	0.903	0.910
Lights	70	15	112	5	0	-	202	3	4	72	17	0	-	96	46	6	163	4	0	-	219	6	0	110	85	0	-	201	718
% Lights	92.1	100.0	94.9	100.0	-	-	94.4	75.0	80.0	91.1	81.0	-	-	88.1	93.9	85.7	94.8	100.0	-	-	94.4	85.7	-	93.2	96.6	-	-	94.4	93.5
Buses	3	0	0	0	0	-	3	0	0	2	3	0	-	5	0	0	0	0	0	-	0	1	0	2	2	0	-	5	13
% Buses	3.9	0.0	0.0	0.0	-	-	1.4	0.0	0.0	2.5	14.3	-	-	4.6	0.0	0.0	0.0	0.0	-	-	0.0	14.3	-	1.7	2.3	-	-	2.3	1.7
Trucks	3	0	6	0	0	-	9	1	1	5	1	0	-	8	3	1	9	0	0	-	13	0	0	6	1	0	-	7	37
% Trucks	3.9	0.0	5.1	0.0	-	-	4.2	25.0	20.0	6.3	4.8	-	-	7.3	6.1	14.3	5.2	0.0	-	-	5.6	0.0	-	5.1	1.1	-	-	3.3	4.8
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Evans, NY

Thursday, April 15, 2021
Location: 42.65254, -78.981328

Count Name: Eden Evans Center Rd & Rt 20
Site Code:
Start Date: 04/15/2021
Page No: 4

Peak Hour Data

04/15/2021 7:00 AM
Ending At
04/15/2021 8:00 AM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

Rt 20 [SB]

Out	In	Total
255	202	457
2	3	5
12	9	21
0	0	0
0	0	0
269	**214**	**483**

R	T	L	U	P
85	112	5	0	0
3	0	0	0	0
3	6	0	0	0
0	0	0	0	0
0	0	0	0	0
91	**118**	**5**	**0**	**0**

Eden Evans Center Rd [WB]

Out	In	Total
167	96	263
2	5	7
10	8	18
0	0	0
0	0	0
179	**109**	**288**

R	T	L	U	P
7	72	17	0	0
0	2	3	0	0
2	5	1	0	0
0	0	0	0	0
0	0	0	0	0
9	**79**	**21**	**0**	**0**

Eden Evans Center Rd [EB]

Out	In	Total
161	201	362
5	5	10
8	7	15
0	0	0
0	0	0
174	**213**	**387**

U	L	T	R	P
0	85	110	6	0
0	2	2	1	0
0	1	6	0	0
0	0	0	0	0
0	0	0	0	0
0	**88**	**118**	**7**	**0**

Rt 20 [NB]

U	L	T	R	P
0	4	163	52	0
0	0	0	0	0
0	0	9	4	0
0	0	0	0	0
0	0	0	0	0
0	**4**	**172**	**56**	**0**

Out	In	Total
135	219	354
4	0	4
7	13	20
0	0	0
0	0	0
146	**232**	**378**

Turning Movement Peak Hour Data Plot (7:00 AM)

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Evans, NY

Thursday, April 15, 2021
Location: 42.65254, -78.981328

Count Name: Eden Evans Center Rd & Rt 20
Site Code:
Start Date: 04/15/2021
Page No: 5

Turning Movement Peak Hour Data (4:00 PM)

	Rt 20 Southbound							Eden Evans Center Rd Westbound							Rt 20 Northbound							Eden Evans Center Rd Eastbound							
Start Time	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Int. Total
4:00 PM	22	0	90	1	0	0	113	1	2	26	26	0	0	55	11	1	53	0	0	0	65	1	0	24	21	0	0	46	279
4:15 PM	17	3	79	3	0	0	102	0	1	37	19	0	0	57	11	0	48	2	0	0	61	1	0	25	18	0	0	44	264
4:30 PM	25	5	73	5	0	0	108	2	3	36	22	0	0	63	8	3	42	2	0	0	55	3	2	16	19	0	0	40	266
4:45 PM	30	5	68	0	0	0	103	0	1	31	25	0	0	57	9	5	45	1	0	0	60	1	0	26	9	0	0	36	256
Total	94	13	310	9	0	0	426	3	7	130	92	0	0	232	39	9	188	5	0	0	241	6	2	91	67	0	0	166	1065
Approach %	22.1	3.1	72.8	2.1	0.0	-	-	1.3	3.0	56.0	39.7	0.0	-	-	16.2	3.7	78.0	2.1	0.0	-	-	3.6	1.2	54.8	40.4	0.0	-	-	-
Total %	8.8	1.2	29.1	0.8	0.0	-	40.0	0.3	0.7	12.2	8.6	0.0	-	21.8	3.7	0.8	17.7	0.5	0.0	-	22.6	0.6	0.2	8.5	6.3	0.0	-	15.6	-
PHF	0.783	0.650	0.861	0.450	0.000	-	0.942	0.375	0.583	0.878	0.885	0.000	-	0.921	0.886	0.450	0.887	0.625	0.000	-	0.927	0.500	0.250	0.875	0.798	0.000	-	0.902	0.954
Lights	91	13	297	7	0	-	408	3	4	127	85	0	-	219	38	7	180	5	0	-	230	6	2	86	64	0	-	158	1015
% Lights	96.8	100.0	95.8	77.8	-	-	95.8	100.0	57.1	97.7	92.4	-	-	94.4	97.4	77.8	95.7	100.0	-	-	95.4	100.0	100.0	94.5	95.5	-	-	95.2	95.3
Buses	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	0	2	0	0	-	2	0	0	2	0	0	-	2	5
% Buses	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.8	0.0	-	-	0.4	0.0	0.0	1.1	0.0	-	-	0.8	0.0	0.0	2.2	0.0	-	-	1.2	0.5
Trucks	3	0	13	2	0	-	18	0	3	2	7	0	-	12	1	2	6	0	0	-	9	0	0	3	3	0	-	6	45
% Trucks	3.2	0.0	4.2	22.2	-	-	4.2	0.0	42.9	1.5	7.6	-	-	5.2	2.6	22.2	3.2	0.0	-	-	3.7	0.0	0.0	3.3	4.5	-	-	3.6	4.2
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Evans, NY

Thursday, April 15, 2021
Location: 42.65254, -78.981328

Count Name: Eden Evans Center Rd & Rt 20
Site Code:
Start Date: 04/15/2021
Page No: 6

Peak Hour Data

04/15/2021 4:00 PM
Ending At
04/15/2021 5:00 PM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

Rt 20 [SB]

Out	In	Total
251	408	659
2	0	2
12	18	30
0	0	0
0	0	0
265	**426**	**691**

R	T	L	U	P
104	297	7	0	0
0	0	0	0	0
3	13	2	0	0
0	0	0	0	0
0	0	0	0	0
107	**310**	**9**	**0**	**0**

Eden Evans Center Rd [EB]

Total	In	Out
394	158	236
3	2	1
11	6	5
0	0	0
0	0	0
408	**166**	**242**

U	L	T	R	P
0	64	86	8	0
0	0	2	0	0
0	3	3	0	0
0	0	0	0	0
0	0	0	0	0
0	**67**	**91**	**8**	**0**

Eden Evans Center Rd [WB]

Out	In	Total
138	219	357
2	1	3
8	12	20
0	0	0
0	0	0
148	**232**	**380**

R	T	L	U	P
7	127	85	0	0
0	1	0	0	0
3	2	7	0	0
0	0	0	0	0
0	0	0	0	0
10	**130**	**92**	**0**	**0**

Rt 20 [NB]

U	L	T	R	P
0	5	180	45	0
0	0	2	0	0
0	0	6	3	0
0	0	0	0	0
0	0	0	0	0
0	**5**	**188**	**48**	**0**

Out	In	Total
390	230	620
0	2	2
20	9	29
0	0	0
0	0	0
410	**241**	**651**

Turning Movement Peak Hour Data Plot (4:00 PM)

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Evans, NY

Tuesday, April 20, 2021
Location: 42.652528, -78.955004

Count Name: Eden Evans Center Rd/I-90 Access Spur
Site Code:
Start Date: 04/20/2021
Page No: 1

Turning Movement Data

Start Time	I-90 Access Southbound					Eden Evans Center Rd Westbound					Eden Evans Center Rd Eastbound					
	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	20	3	0	0	23	11	16	0	0	27	8	66	0	0	74	124
7:15 AM	34	8	0	0	42	14	13	0	0	27	4	66	0	0	70	139
7:30 AM	26	6	0	0	32	11	11	0	0	22	5	73	0	0	78	132
7:45 AM	33	10	0	0	43	5	5	0	0	10	7	46	0	0	53	106
Hourly Total	113	27	0	0	140	41	45	0	0	86	24	251	0	0	275	501
8:00 AM	28	4	0	0	32	14	8	0	0	22	12	45	0	0	57	111
8:15 AM	27	5	0	0	32	10	7	0	0	17	11	40	0	0	51	100
8:30 AM	20	5	0	0	25	9	11	0	0	20	8	41	0	0	49	94
8:45 AM	27	3	0	0	30	10	14	0	0	24	6	37	0	0	43	97
Hourly Total	102	17	0	0	119	43	40	0	0	83	37	163	0	0	200	402
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	66	10	0	0	76	8	12	0	0	20	19	54	0	0	73	169
4:15 PM	51	7	0	0	58	4	12	0	0	16	14	32	0	0	46	120
4:30 PM	61	14	0	0	75	7	10	0	0	17	17	47	0	0	64	156
4:45 PM	66	9	1	0	76	4	14	0	0	18	7	29	0	0	36	130
Hourly Total	244	40	1	0	285	23	48	0	0	71	57	162	0	0	219	575
5:00 PM	65	5	0	0	70	6	9	0	0	15	11	41	0	0	52	137
5:15 PM	39	14	0	0	53	8	13	0	0	21	12	36	0	0	48	122
5:30 PM	46	8	1	0	55	4	10	0	0	14	3	30	0	0	33	102
5:45 PM	38	11	0	0	49	6	9	0	0	15	12	24	0	0	36	100
Hourly Total	188	38	1	0	227	24	41	0	0	65	38	131	0	0	169	461
6:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	648	122	2	0	772	131	174	0	0	305	156	707	0	0	863	1940
Approach %	83.9	15.8	0.3	-	-	43.0	57.0	0.0	-	-	18.1	81.9	0.0	-	-	-
Total %	33.4	6.3	0.1	-	39.8	6.8	9.0	0.0	-	15.7	8.0	36.4	0.0	-	44.5	-
Lights	605	108	2	-	715	121	168	0	-	289	147	670	0	-	817	1821
% Lights	93.4	88.5	100.0	-	92.6	92.4	96.6	-	-	94.8	94.2	94.8	-	-	94.7	93.9
Buses	3	4	0	-	7	0	5	0	-	5	5	1	0	-	6	18
% Buses	0.5	3.3	0.0	-	0.9	0.0	2.9	-	-	1.6	3.2	0.1	-	-	0.7	0.9
Trucks	40	10	0	-	50	10	1	0	-	11	4	36	0	-	40	101
% Trucks	6.2	8.2	0.0	-	6.5	7.6	0.6	-	-	3.6	2.6	5.1	-	-	4.6	5.2
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Evans, NY

Tuesday, April 20, 2021
Location: 42.652528, -78.955004

TRI-STATE TRAFFIC DATA
www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

04/20/2021 7:00 AM
Ending At
04/20/2021 6:15 PM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

I-90 Access [SB]

Out	In	Total
793	715	1508
1	7	8
46	50	96
0	0	0
0	0	0
840	**772**	**1612**

R	L	U	P
605	108	2	0
3	4	0	0
40	10	0	0
0	0	0	0
0	0	0	0
648	**122**	**2**	**0**

Eden Evans Center Rd [EB]

Total	In	Out
1590	817	773
14	6	8
81	40	41
0	0	0
0	0	0
1685	**863**	**822**

U	L	T	P
0	670	147	0
0	1	5	0
0	36	4	0
0	0	0	0
0	0	0	0
0	**707**	**156**	**0**

Eden Evans Center Rd [WB]

R	T	U	P
121	168	0	0
0	5	0	0
10	1	0	0
0	0	0	0
0	0	0	0
131	**174**	**0**	**0**

Out	In	Total
255	289	544
9	5	14
14	11	25
0	0	0
0	0	0
278	**305**	**583**

DRAFT

Turning Movement Data Plot

Evans, NY

Tuesday, April 20, 2021
Location: 42.652528, -78.955004

TRI-STATE TRAFFIC DATA
www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Eden Evans Center Rd/I-90 Access Spur
Site Code:
Start Date: 04/20/2021

Turning Movement Peak Hour Data (7:00 AM)

	I-90 Access Southbound					Eden Evans Center Rd Westbound					Eden Evans Center Rd Eastbound					
Start Time	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	20	3	0	0	23	11	16	0	0	27	8	66	0	0	74	124
7:15 AM	34	8	0	0	42	14	13	0	0	27	4	66	0	0	70	139
7:30 AM	26	6	0	0	32	11	11	0	0	22	5	73	0	0	78	132
7:45 AM	33	10	0	0	43	5	5	0	0	10	7	46	0	0	53	106
Total	113	27	0	0	140	41	45	0	0	86	24	251	0	0	275	501
Approach %	80.7	19.3	0.0	-	-	47.7	52.3	0.0	-	-	8.7	91.3	0.0	-	-	-
Total %	22.6	5.4	0.0	-	27.9	8.2	9.0	0.0	-	17.2	4.8	50.1	0.0	-	54.9	-
PHF	0.831	0.675	0.000	-	0.814	0.732	0.703	0.000	-	0.796	0.750	0.860	0.000	-	0.881	0.901
Lights	107	20	0	-	127	40	39	0	-	79	23	243	0	-	266	472
% Lights	94.7	74.1	-	-	90.7	97.6	86.7	-	-	91.9	95.8	96.8	-	-	96.7	94.2
Buses	0	2	0	-	2	0	5	0	-	5	1	1	0	-	2	9
% Buses	0.0	7.4	-	-	1.4	0.0	11.1	-	-	5.8	4.2	0.4	-	-	0.7	1.8
Trucks	6	5	0	-	11	1	1	0	-	2	0	7	0	-	7	20
% Trucks	5.3	18.5	-	-	7.9	2.4	2.2	-	-	2.3	0.0	2.8	-	-	2.5	4.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TRI-STATE TRAFFIC DATA
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184 Baker Rd

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Evans, NY

Tuesday, April 20, 2021
Location: 42.652528, -78.955004

I-90 Access [SB]

Out	In	Total
283	127	410
1	2	3
8	11	19
0	0	0
0	0	0
292	**140**	**432**

R	L	U	P
107	20	0	0
0	2	0	0
6	5	0	0
0	0	0	0
0	0	0	0
113	**27**	**0**	**0**

Eden Evans Center Rd [EB]

Out	In	Total
146	266	412
5	2	7
7	7	14
0	0	0
0	0	0
158	**275**	**433**

U	L	T	P
0	243	23	0
0	1	1	0
0	7	0	0
0	0	0	0
0	0	0	0
0	**251**	**24**	**0**

Peak Hour Data

04/20/2021 7:00 AM
Ending At
04/20/2021 8:00 AM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

Eden Evans Center Rd [WB]

R	T	U	P
40	39	0	0
0	5	0	0
1	1	0	0
0	0	0	0
0	0	0	0
41	**45**	**0**	**0**

Out	In	Total
43	79	122
3	5	8
5	2	7
0	0	0
0	0	0
51	**86**	**137**

Turning Movement Peak Hour Data Plot (7:00 AM)

TRI-STATE TRAFFIC DATA

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Evans, NY

Tuesday, April 20, 2021
Location: 42.652528, -78.955004

Count Name: Eden Evans Center Rd/I-90 Access Spur
Site Code:
Start Date: 04/20/2021
Page No: 5

Turning Movement Peak Hour Data (4:00 PM)

Start Time	I-90 Access Southbound					Eden Evans Center Rd Westbound					Eden Evans Center Rd Eastbound					
	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
4:00 PM	66	10	0	0	76	8	12	0	0	20	19	54	0	0	73	169
4:15 PM	51	7	0	0	58	4	12	0	0	16	14	32	0	0	46	120
4:30 PM	61	14	0	0	75	7	10	0	0	17	17	47	0	0	64	156
4:45 PM	66	9	1	0	76	4	14	0	0	18	7	29	0	0	36	130
Total	244	40	1	0	285	23	48	0	0	71	57	162	0	0	219	575
Approach %	85.6	14.0	0.4	-	-	32.4	67.6	0.0	-	-	26.0	74.0	0.0	-	-	-
Total %	42.4	7.0	0.2	-	49.6	4.0	8.3	0.0	-	12.3	9.9	28.2	0.0	-	38.1	-
PHF	0.924	0.714	0.250	-	0.938	0.719	0.857	0.000	-	0.888	0.750	0.750	0.000	-	0.750	0.851
Lights	233	39	1	-	273	19	48	0	-	67	55	153	0	-	208	548
% Lights	95.5	97.5	100.0	-	95.8	82.6	100.0	-	-	94.4	96.5	94.4	-	-	95.0	95.3
Buses	1	0	0	-	1	0	0	0	-	0	1	0	0	-	1	2
% Buses	0.4	0.0	0.0	-	0.4	0.0	0.0	-	-	0.0	1.8	0.0	-	-	0.5	0.3
Trucks	10	1	0	-	11	4	0	0	-	4	1	9	0	-	10	25
% Trucks	4.1	2.5	0.0	-	3.9	17.4	0.0	-	-	5.6	1.8	5.6	-	-	4.6	4.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Evans, NY

Tuesday, April 20, 2021
Location: 42.652528, -78.955004

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
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Count Name: Eden Evans Center Rd/I-90 Access Spur
Site Code:
Start Date: 04/20/2021

I-90 Access [SB]

Out	In	Total
173	273	446
0	1	1
13	11	24
0	0	0
0	0	0
186	**285**	**471**

R	L	U	P
233	39	1	0
1	0	0	0
10	1	0	0
0	0	0	0
0	0	0	0
244	**40**	**1**	**0**

Eden Evans Center Rd [EB]

Out	In	Total
281	208	489
1	1	2
10	10	20
0	0	0
0	0	0
292	**219**	**511**

U	L	T	P
0	153	55	0
0	0	1	0
0	9	1	0
0	0	0	0
0	0	0	0
0	**162**	**57**	**0**

Peak Hour Data

04/20/2021 4:00 PM
Ending At
04/20/2021 5:00 PM

Lights
Buses
Trucks
Bicycles on Crosswalk
Pedestrians

Eden Evans Center Rd [WB]

Out	In	Total
94	67	161
1	0	1
2	4	6
0	0	0
0	0	0
97	**71**	**168**

R	T	U	P
19	48	0	0
0	0	0	0
4	0	0	0
0	0	0	0
0	0	0	0
23	**48**	**0**	**0**

Turning Movement Peak Hour Data Plot (4:00 PM)

APPENDIX B

LOS AND QUEUE SUMMARY

Proposed ECIDA Agri-Business Park - Intersection Level of Service Summary
Morning Peak Hour

Intersection	**2021 Existing**	**2030 Background**	**2030 Build Option #1**	**2030 Build Option #2**	**2030 Build w/ Mitigation Option #1**	**2030 Build w/ Timing Adj. Option #2**
Eden Evans Center Road @ Thruway Exit 57A						
EB Left	a(8)	a(8)	a(7)	a(8)	a(8)	a(8)
EB Through	a(0)	a(0)	a(0)	a(0)	a(0)	a(0)
WB Through/Right	a(0)	a(0)	a(0)	a(0)	a(0)	a(0)
SB Left/Right	b(12)	b(12)	c(18)	b(15)	c(18)	b(15)
Eden Evans Center Road @ US Route 20	**C(21)**	**C(21)**	**D(51)**	**C(30)**	**C(30)**	**C(28)**
EB Left					B(17)	
EB (Left)/Through/Right	B(18)	B(19)	D(49)	C(26)	B(13)	C(26)
WB Left					C(22)	
WB (Left)/Through/Right	C(31)	C(32)	F(95)	D(44)	D(46)	D(36)
NB Left	B(15)	B(16)	C(21)	B(19)	C(25)	C(22)
NB Through/Right	B(19)	C(21)	C(23)	C(24)	C(26)	C(26)
SB Left	B(16)	B(16)	B(16)	B(17)	B(19)	C(21)
SB Through/Right	B(16)	B(17)	C(23)	C(22)	C(27)	C(25)
Eden Evans Center Road @ Site Access					**B(11)**	
EB Left/Through	-	-	a(3)	a(2)	B(11)	a(2)
WB Through/Right	-	-	a(0)	a(0)	A(9)	a(0)
SB Left	-	-	e(41)	c(23)	C(30)	c(23)
SB Right	-	-	b(12)	b(11)	B(12)	b(11)
Beach Road @ NYS Route 5	**B(16)**	**B(17)**	**B(17)**	**B(17)**	**B(17)**	**B(17)**
EB Left	C(23)	C(23)	C(23)	C(23)	C(23)	C(23)
EB Through/Right	C(33)	C(34)	D(38)	D(37)	D(38)	D(37)
WB Left	C(28)	C(28)	C(30)	C(29)	C(30)	C(29)
WB Through/Right	B(15)	B(15)	B(15)	B(15)	B(15)	B(15)
NB Left	A(8)	A(8)	A(9)	A(9)	A(9)	A(9)
NB Through/Right	B(14)	B(15)	B(14)	B(14)	B(14)	B(14)
SB Left	A(9)	A(9)	A(10)	A(9)	A(10)	A(9)
SB Through/Right	B(12)	B(12)	B(12)	B(12)	B(12)	B(12)

A(9) – Signalized Level of Service (Average Delay per Vehicle in Seconds) – Synchro
a(9) – Unsignalized Level of Service (Average Delay per Vehicle in Seconds) – Synchro

Proposed ECIDA Agri-Business Park - Intersection Level of Service Summary
Evening Peak Hour

Intersection	2021 Existing	2030 Background	2030 Build Option #1	2030 Build Option #2	2030 Build w/ Mitigation Option #1	2030 Build w/ Timing Adj. Option #2
Eden Evans Center Road @ Thruway Exit 57A						
EB Left	a(8)	a(8)	a(7)	a(8)	a(9)	a(8)
EB Through	a(0)	a(0)	a(0)	a(0)	a(0)	a(0)
WB Through/Right	a(0)	a(0)	a(0)	a(0)	a(0)	a(0)
SB Left/Right	b(12)	b(12)	c(24)	c(17)	c(24)	c(17)
Eden Evans Center Road @ US Route 20	**C(30)**	**C(31)**	**F(105)**	**E(58)**	**C(27)**	**D(42)**
EB Left					C(21)	
EB (Left)/Through/Right	B(19)	B(20)	F(185)	E(71)	B(19)	D(45)
WB Left					C(34)	
WB (Left)/Through/Right	D(50)	D(53)	F(137)	F(104)	C(34)	D(48)
NB Left	B(16)	B(16)	B(18)	B(17)	B(20)	C(24)
NB Through/Right	B(20)	B(20)	B(20)	C(21)	C(21)	C(25)
SB Left	B(16)	B(16)	B(16)	B(16)	B(18)	C(21)
SB Through/Right	C(29)	C(30)	C(34)	C(33)	D(35)	D(48)
Eden Evans Center Road @ Site Access					**C(21)**	
EB Left/Through	-	-	a(1)	a(1)	B(11)	a(1)
WB Through/Right	-	-	a(0)	a(0)	B(12)	a(0)
SB Left	-	-	f(126)	d(32)	D(44)	d(32)
SB Right	-	-	b(12)	b(11)	A(6)	b(11)
Beach Road @ NYS Route 5	**B(15)**	**B(15)**	**B(18)**	**B(16)**	**B(18)**	**B(16)**
EB Left	C(23)	C(23)	C(23)	C(23)	C(23)	C(23)
EB Through/Right	C(25)	C(25)	C(26)	C(25)	C(26)	C(25)
WB Left	C(32)	C(33)	D(47)	D(40)	D(47)	D(40)
WB Through/Right	B(16)	B(16)	B(16)	B(16)	B(16)	B(16)
NB Left	A(7)	A(7)	A(7)	A(7)	A(7)	A(7)
NB Through/Right	B(11)	B(11)	B(11)	B(11)	B(11)	B(11)
SB Left	A(7)	A(7)	A(7)	A(7)	A(7)	A(7)
SB Through/Right	B(11)	B(12)	B(12)	B(12)	B(12)	B(12)

A(9) – Signalized Level of Service (Average Delay per Vehicle in Seconds) – Synchro
a(9) – Unsignalized Level of Service (Average Delay per Vehicle in Seconds) – Synchro

Proposed ECIDA Agri-Business Park - Queue Summary
Morning Peak Hour

Intersection	Available Storage	2021 Existing	2030 Background	2030 Build Option #1	2030 Build Option #2	2030 Build w/ Mitigation Option #1	2030 Build w/ Timing Adj. Option #2
Eden Evans Center Road @ Thruway Exit 57A							
EB Left	130	15	18	23	20	23	20
EB Through	-	0	0	0	0	0	0
WB Through/Right	-	0	0	0	0	0	0
SB Left/Right	-	23	25	113	73	113	73
Eden Evans Center Road @ US Route 20							
EB Left						76	
EB (Left)/Through/Right	-	153	164	413	291	144	193
WB Left						29	
WB (Left)/Through/Right	-	119	126	498	354	387	265
NB Left	115	9	9	33	25	37	30
NB Through/Right	-	160	172	174	173	194	204
SB Left	100	9	10	10	10	11	11
SB Through/Right	-	119	127	195	172	223	208
Eden Evans Center Road @ Site Access							
EB Left/Through	-	-	-	13	8	190	8
WB Through/Right	-	-	-	0	0	188	0
SB Left	-	-	-	58	23	72	23
SB Right	-	-	-	3	3	18	3
Beach Road @ NYS Route 5							
EB Left	100	27	28	29	28	29	28
EB Through/Right	-	49	52	66	62	66	62
WB Left	-	87	91	103	99	103	99
WB Through/Right	-	33	35	37	36	37	36
NB Left	150	13	13	14	13	14	13
NB Through/Right	-	114	121	135	132	135	132
SB Left	150	26	27	36	33	36	33
SB Through/Right	-	61	64	66	65	66	65

Available Storage and Queue Lengths in Feet
95th Percentile Queue Lengths from Synchro Analysis

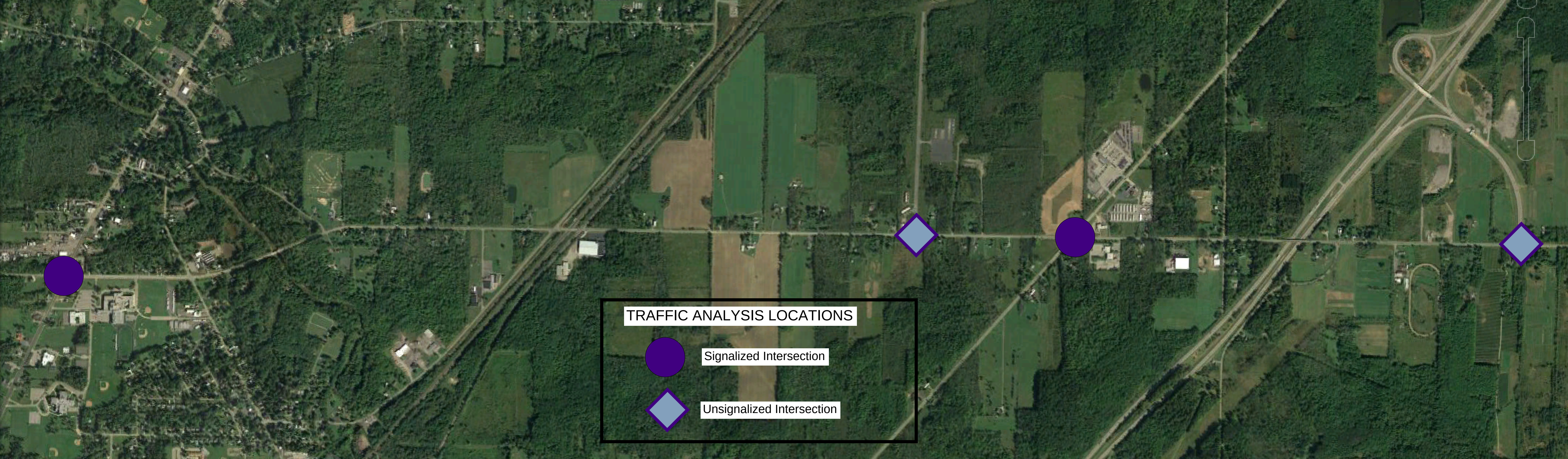
Proposed ECIDA Agri-Business Park - Queue Summary
Evening Peak Hour

Intersection	Available Storage	2021 Existing	2030 Background	2030 Build Option #1	2030 Build Option #2	2030 Build w/ Mitigation Option #1	2030 Build w/ Timing Adj. Option #2
Eden Evans Center Road @ Thruway Exit 57A							
EB Left	130	10	10	35	25	35	25
EB Through	-	0	0	0	0	0	0
WB Through/Right	-	0	0	0	0	0	0
SB Left/Right	-	43	45	135	85	135	85
Eden Evans Center Road @ US Route 20							
EB Left						116	
EB (Left)/Through/Right	-	149	155	746	552	261	403
WB Left						102	
WB (Left)/Through/Right	-	318	340	489	445	223	357
NB Left	115	9	10	18	15	20	19
NB Through/Right	-	162	168	168	168	187	199
SB Left	100	14	14	14	14	15	16
SB Through/Right	-	314	333	373	360	459	476
Eden Evans Center Road @ Site Access							
EB Left/Through	-	-	-	3	3	125	3
WB Through/Right	-	-	-	0	0	202	0
SB Left	-	-	-	405	128	329	128
SB Right	-	-	-	15	8	34	8
Beach Road @ NYS Route 5							
EB Left	100	21	21	22	22	22	22
EB Through/Right	-	36	38	40	39	40	39
WB Left	-	130	135	220	177	220	177
WB Through/Right	-	55	56	67	64	67	64
NB Left	150	17	17	17	17	17	17
NB Through/Right	-	106	110	114	113	114	113
SB Left	150	25	18	20	19	20	19
SB Through/Right	-	59	122	123	123	123	123

Available Storage and Queue Lengths in Feet
95th Percentile Queue Lengths from Synchro Analysis

APPENDIX C

SYNCHRO TRAFFIC ANALYSIS OUTPUT


TRAFFIC ANALYSIS LOCATIONS
Signalized Intersection
Unsignalized Intersection