LeRoy Airport (5G0)
Environmental Assessment - DRAFT

Prepared For:
LeRoy Aviation Services, Inc.
January 2021

Prepared By:
Passero Associates

PASSERO ASSOCIATES
engineering architecture

AIP# 3-36-0221-29-19

State PIN# 4914.28

This Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the responsible FAA official.

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Chapter 1:
Purpose and Need

1.1 Purpose and Need Introduction

This Environmental Assessment assesses the environmental impacts of Obstruction Removal at LeRoy Airport in LeRoy, NY. The Obstruction Removal will be known as the Proposed Action throughout this report, and FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* (July 16, 2015), Section 3-1.2, requires an Environmental Assessment (EA) be prepared for a Proposed Action when the initial review of the Proposed Action indicates that:

1. *"It is not categorically excluded;*
2. *It is normally categorically excluded but, in this instance, involves at least one extraordinary circumstance that may significantly impact the human environment; or*
3. *The action is not one known normally to require an EIS and is not categorically excluded."*

The Obstruction Removal is not categorically excluded and is not known to normally require an EIS.

This EA will evaluate potential environmental impacts of the Proposed Action in accordance with the National Environmental Policy Act (NEPA), FAA Order 1050.1F, FAA Order 5050.4B, and FAA Environmental Desk Reference.

1.2 Airport and Project Background

LeRoy Airport, hereinafter referred to as "5G0" or the "Airport" is a public-use facility in the Town of LeRoy, Genesee County, NY. Located in New York's Western Region, 5G0 is under 21 miles from Downtown Rochester and about 48 miles from Downtown Buffalo. Privately-owned and operated by LeRoy Aviation Services Inc, and categorized as "unclassified" by the FAA, the Airport consists of one runway, Runway 10-28, which is 3,854 feet long x 60 feet wide. The runway is marked with non-precision markings, and each runway end has an RNAV non-precision instrument approach.

All airports must maintain clear runway approaches. However, the instrument approach charts for each runway end at LeRoy Airport (see **Appendix A**) currently read that the instrument approach procedures are "NA at night." The procedures are unavailable at night because there are obstructions penetrating the visual 20:1 surface. The visual 20:1 surface, also called the Runway End Siting (RES) surface, is an imaginary surface that must have all penetrations mitigated[1] to allow night instrument approaches. Also, it determines where a runway threshold begins. Since there are no displaced thresholds on either runway end at 5G0, the thresholds begin at each end of the runway. Therefore, and based on design standards, the visual 20:1 surface begins 200 feet prior to the threshold and slopes upward at a 20:1 angle; for each horizontal 20 feet, the surface rises 1 foot. Since this surface determines threshold location, obstructions penetrating it could cause a displaced threshold.

Furthermore, to comply with the FAA memorandum from August 18, 2015 titled, *Reminder of Responsibilities for FAA Personnel and Airport Sponsors for Protecting Approach and Departure Surfaces*, we completed a full obstruction study for the Airport in 2019. This study showed us and the Airport the RES obstructions and obstructions to other surfaces, which are described throughout this report.

The obstruction study identified what objects are penetrating the Federal Aviation Regulations (FAR) Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace* and the FAA Advisory Circular

[1] Mitigated means that the surface must not have any obstruction penetrations or that penetrations are lit.

150/5300-13 design surfaces (e.g., RES surface, departure surface, and glidepath qualification surface (GQS), as defined in Table 3-2, as amended). The obstruction study also included looking at obstructions to the Precision Approach Path Indicator Obstacle Clearance Surface (PAPI OCS).

The obstruction study looked at more surfaces than are relevant to this EA. **Table 1-1** shows the relevant surfaces to this EA surfaces that have obstructions.

Table 1-1: Applicable surfaces to this EA

Surface	Consequence
RES	Night instrument approaches are unavailable
GQS	Vertical instrument approaches are unavailable
PAPI OCS	PAPI may be placed out of service

1.3 AIP Justification

LeRoy Airport is privately owned and is identified as an "unclassified airport" within the National Plan of Integrated Airport Systems (NPIAS). As such, FAA funding is limited to a one-time opportunity for an obstruction removal project. Because of this, the Airport would like to approach the obstruction removal in a way that either permanently removes the obstructions or, especially regarding trees, prevents them from growing back and penetrating the surface for as long as possible.

According to the AIP Handbook, obstruction removal must be a permanent solution. Therefore, the Airport must have access to the lands the off-airport obstructions[2] are on prior to receiving a grant for obstruction removal. Access to the lands can be either through purchasing the land in fee simple or obtaining an easement over them. Both options are eligible projects.

Once the easements are in place or the land is purchased, removing obstructions is an eligible project if the obstructions are penetrating surfaces in the Airport Design Advisory Circular (AC 150/2300-13) or 14 CFR part 77. Removing obstructions to any of the surfaces in **Table 1-1** qualifies for eligibility.

1.4 Purpose and Need

The purpose of obstruction mitigation is to clear the approaches and departures to each end of the primary runway.

The need is that there are obstructions to the approaches and departures at 5G0, which makes those operations unsafe. Additionally, as an unclassified airport, 5G0 will take this time to use its one-time opportunity for AIP-funded obstruction removal to remove as many trees and other obstructions as it can. Furthermore, 5G0 must comply with the FAA Memorandum from August 2015, which is mentioned above; and must comply with FAA Grant Assurance 20 "Hazard Removal and Mitigation".

[2] Only lands where there are obstructing trees need easements because trees can grow. Obstructions such as poles can be lit, which is a permanent solution.

1.5 Goals and Proposed Action

Based on the purpose and need and evaluation of the alternatives (**Chapter 2**), the Sponsor has developed goals for this project and a resulting proposed action.

1.5.1 Goals

When the project is completed, the Airport would like to have accomplished:

- Restoring night instrument operations
- Obtaining eligibility for vertically guided instrument approaches
- Ensuring PAPI can remain in service
- Clearing as many tree obstructions as possible to a point where it would be impossible or take a long time for them to grow back, which is necessary because this obstruction removal project is the Airport's only opportunity to receive federal funds to remove any obstructions.

1.5.2 Proposed Action

After combining all those goals together, LeRoy Aviation Services, Inc, owner of LeRoy Airport, requests federal funding approval for the following projects:

- Mitigate all visual 20:1 surface obstructions off each runway end;
- Remove all GQS obstructions off each runway end;
- Mitigate all PAPI OCS obstructions off each runway end; and
- Acquire necessary avigation easements over private lands or acquire in fee simple private lands to accomplish the off-airport obstruction removal.

Despite these goals and the proposed action, the Sponsor is aware that there are still some unknowns surrounding the project, including if the Sponsor can get permission from private landowners to remove/mitigate all the obstructions. The Sponsor nor this EA factor that into consideration; instead, this EA only evaluates the environmental consequences of the proposed action and other alternatives. Based on discussions with landowners in the design phase, the alternative that is ultimately chosen may be changed from the one chosen in this EA; the alternative that is ultimately chosen would result in fewer obstructions being removed due to the Sponsor being unable to access all necessary lands. Thus, the ultimately chosen alternative would have fewer environmental impacts than the alternative chosen in this EA.

Chapter 2:
Alternatives and Proposed Action

2.1 Alternatives and Proposed Action Introduction

This EA is prepared to determine whether the Proposed Action or its alternatives have potential to significantly affect the environment. This chapter provides detailed descriptions of the alternatives to aid decision makers in choosing a development option that meets the Purpose and Need of the Proposed Action. To satisfy NEPA requirements, this EA considers the No Build Alternative to provide decision makers a baseline for comparing the impacts of each alternative.

2.2 Obstruction Mitigation Alternatives

LeRoy Airport has obstructions to both runway ends. Instrument procedures off both runway ends are unavailable at night because of obstructions to the visual 20:1 surface. There are also obstructions to the GQS and PAPI OCS surfaces. To restore night instrument approaches and prevent displaced thresholds on both runway ends, it is critical that these obstructions are mitigated. Additionally, removing the obstructions generally increases aircraft and community safety.

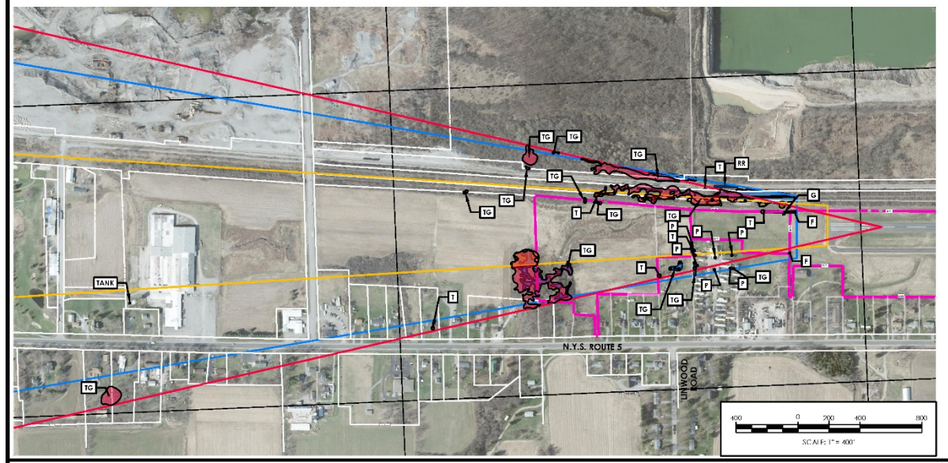
Furthermore, as a private airport, 5G0 only has one opportunity to receive AIP funds for an obstruction removal project. We took this into account when deriving the alternatives.

2.2.1 Alternative 1: No Build

The No Build Alternative is depicted in **Figure 2-1**. In this alternative, the obstructions are not removed and continue to penetrate the visual 20:1 surface. The airport stays in its current state with obstructions and no night approaches.

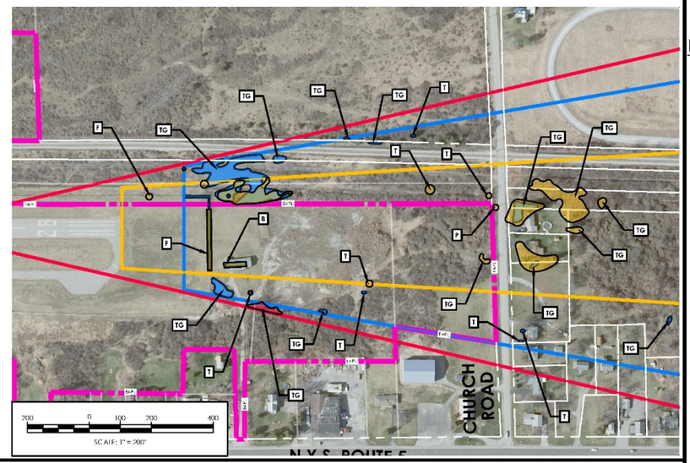
This alternative does not only not meet the Purpose and Need, but it also isn't viable. Since there are approach obstructions, the airport *cannot* stay in its current state with instrument approaches. If the No Build Alternative were to be carried out, the runway thresholds must be displaced (Alternative 4). However, to meet the NEPA requirements, Alternative 1 is carried throughout this report only as a baseline comparison.

RUNWAY 10 END

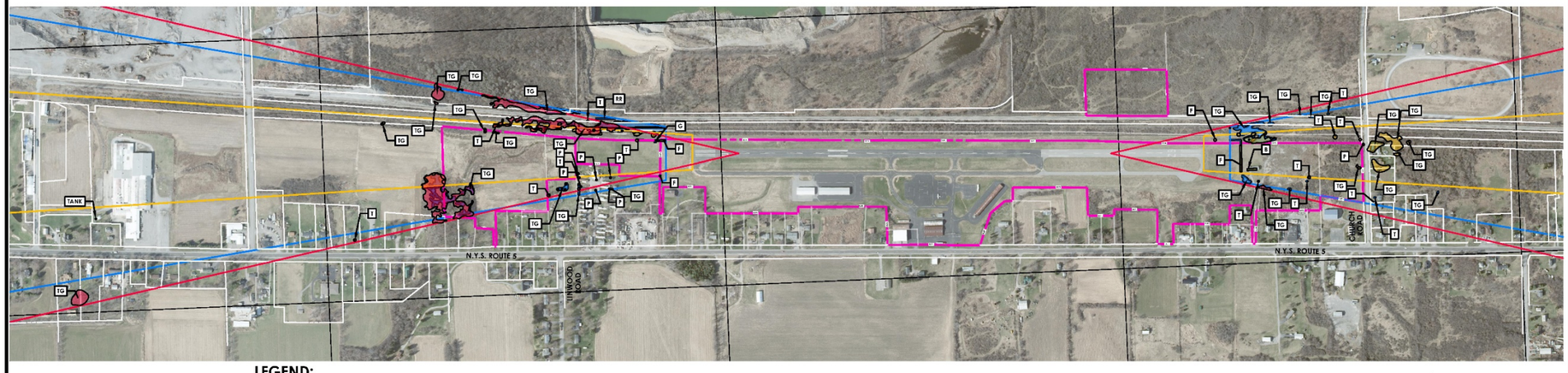


MAGNETIC NORTH 11°12'W (2018)
TRUE NORTH

RUNWAY 28 END



ALL AREAS



LEGEND:

- EXISTING AIRPORT PROPERTY LINE (EAPL)
- RES SURFACE
- GQS SURFACE
- PAPI OCS SURFACE
- PROPERTY LINES
- EXISTING FENCE
- RES OBSTRUCTIONS (TO REMAIN)
- GQS OBSTRUCTIONS (TO REMAIN)
- PAPI OCS OBSTRUCTIONS (TO REMAIN)
  RUNWAY 10: 1.75°
  RUNWAY 28: 2.25°

KEY:

T	TREE
TG	TREE GROUP
P	POLE
GR	GROUND
TANK	TANK
F	FENCE
RR	RAIL ROAD
B	BUILDING

MAGNETIC NORTH 11°12'W (2018)
TRUE NORTH
SCALE: 1" = 400'

NOTES:

1. OBSTRUCTIONS FROM 2019 OBSTRUCTION STUDY
2. PAPI GLIDE PATH FOR RUNWAY 10: 3.00°
3. PAPI GLIDE PATH FOR RUNWAY 28: 3.50°

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Principal-in-Charge
Project Manager — Lisa Chueng
Designed by — Wayne Zilen

Revisions

No.	Date	By	Description

Alternative 1:
No Build

Enviromental Assesment

LeRoy Airport (5G0)

Town/City: LeRoy
County: Genesee State: New York

Project No.
92000034.0042

Drawing No.
Figure 2-1

Date
January 2021

2.2.2 Alternative 2: Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS

Alternative 2 is depicted in **Figure 2-2**. In this alternative, all visual 20:1 surface and PAPI OCS obstructions off both runway ends are mitigated. Applying the guidance in *Engineering Brief #91, Management of Vegetation in the Airport Environment*, the 20:1 surface was lowered by 13 feet to identify potential obstructions. This alternative negates the need for displaced thresholds while allowing night instrument approached restrictions to be lifted. Plus, with the PAPI OCS clear, the PAPI can, if necessary, be used as mitigation to RES obstructions.

All trees and tree groups are to be removed or lowered. All poles are to be lit with obstruction lights. The fence off Runway 10 is anticipated to be lit, while the fence off Runway 28 is anticipated to be moved below the approach surface and lit. Unless the off-airport obstructions, especially the trees, are already under an easement, the Airport must work with the respective landowners to take down the trees or acquire the land through avigation easements or fee simple.

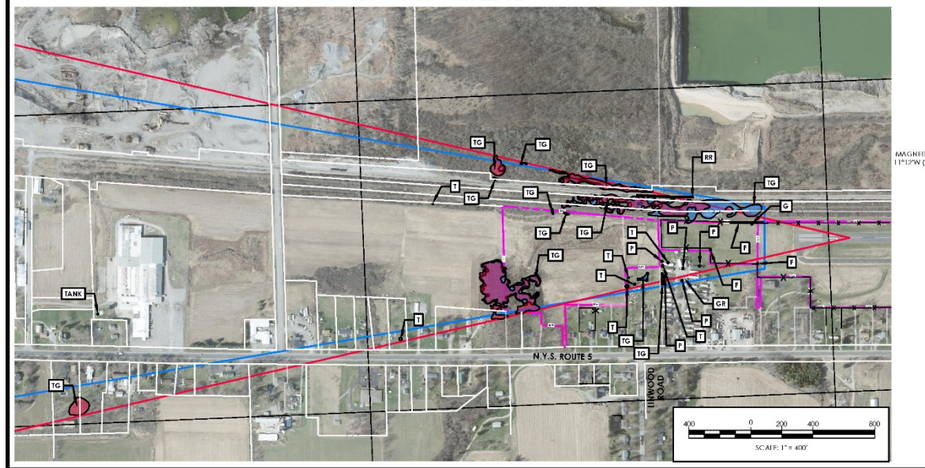
Since the airport only has this one chance to remove these obstructions the airport would prefer to cut tree obstructions as close to the ground as possible.

This alternative meets the purpose and need of the obstruction removal. However, it does not meet all the Sponsor's goals. While this alternative removes trees to restore night instrument approaches and clear the PAPI OCS, it does not clear the GQS obstructions. Therefore, the airport will be unable to improve its nonprecision instrument approach from the LP to an LPV.

For this alternative to be accomplished the following is needed:

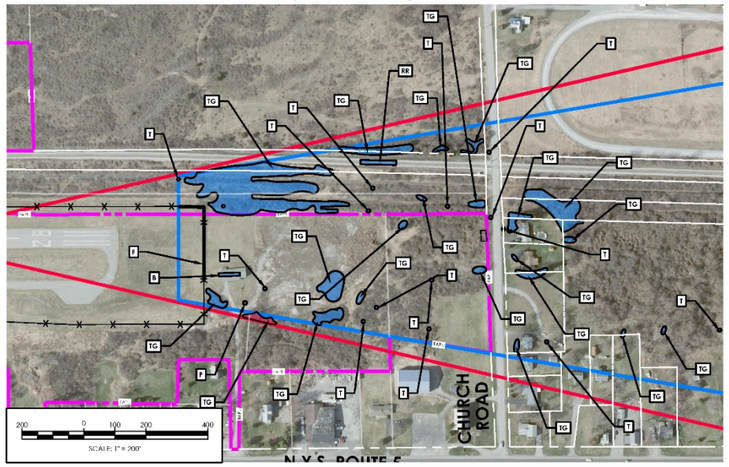
- Acquire land (fee simple or easement) over 18 parcels, not including airport-owned parcels
- Remove/trim approximately 7.7 acres of trees
  - Acquire one-time access easement from three railroad companies to remove/trim their respective tree obstructions
- Remove/trim an additional 22 individual trees
- Light airport fence off both runway ends
- Light 5 poles
  - Any building obstruction within 50 feet of a pole obstruction can be mitigated through lighting the pole as long as the building's elevation is lower than the pole's.
    - Applicable for all 7 buildings that are not currently lit
- Install 2 lit poles—one off each runway end—by the railroad tracks to mark potential train car obstructions

RUNWAY 10 END



MAGNETIC NORTH 11°12'W (2018)
TRUE NORTH

RUNWAY 28 END



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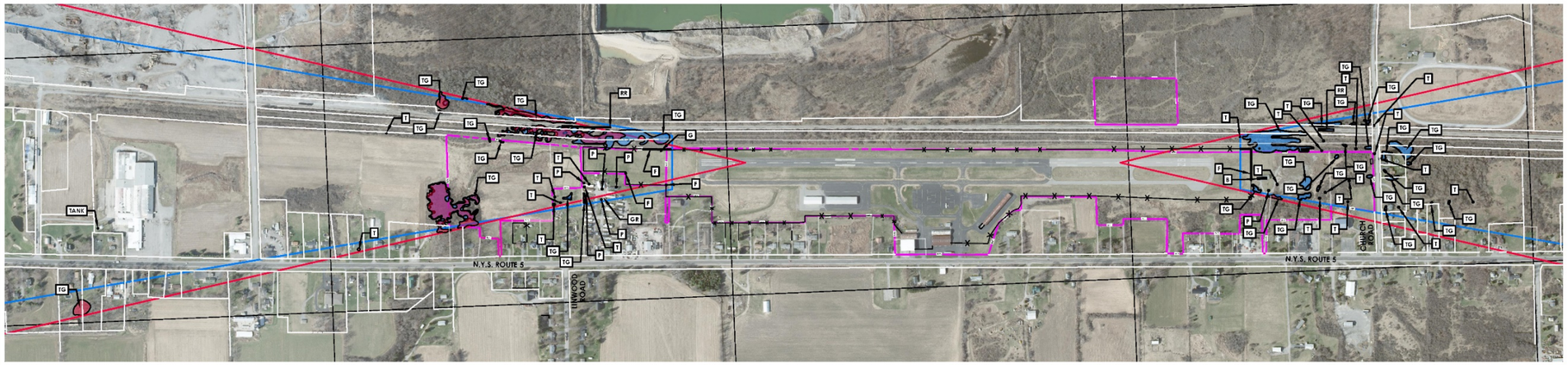

LEGEND:

- EXISTING AIRPORT PROPERTY LINE (EAPL)
- RES SURFACE
- PAPI OCS SURFACE
- PROPERTY LINES
- EXISTING FENCE
- RES OBSTRUCTIONS (TO BE MITIGATED)
- PAPI OCS OBSTRUCTIONS (TO BE MITIGATED)
  RUNWAY 10: 1.75°
  RUNWAY 28: 2.25°

KEY:

T	TREE
TG	TREE GROUP
P	POLE
GR	GROUND
TANK	TANK
F	FENCE
RR	RAIL ROAD
B	BUILDING

MAGNETIC NORTH 11°12'W (2018)
TRUE NORTH
400 0 200 400 800
SCALE: 1" = 400'

NOTES:

1. OBSTRUCTIONS FROM 2019 OBSTRUCTION STUDY.
2. RES SURFACE LOWERED 13' TO ACCOUNT FOR FUTURE GROWTH (BASED ON FAA EB 91 MANAGEMENT OF VEGETATION IN AIRPORT ENVIRONMENT).
3. PAPI GLIDE PATH FOR RUNWAY 10: 3.00°
4. PAPI GLIDE PATH FOR RUNWAY 28: 3.50°

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Project Manager Lisa Chueng
Designed by Wayne Zian

Revisions

No	Date	By	Description

Alternative 2:
Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS

Enviromental Assesment

LeRoy Airport (5G0)

Town/City: LeRoy
County: Genesee State: New York

Project No.
92000034.0042

Drawing No.
Figure 2-2

Date
January 2021

2.2.3 Alternative 3: Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface and PAPI OCS

Alternative 3 is depicted in **Figure 2-3**. In this alternative, all visual 20:1 surface, GQS, and PAPI OCS obstructions off both runway ends are mitigated. Applying the guidance in *Engineering Brief #91, Management of Vegetation in the Airport Environment*, the 20:1 surface was lowered by 13 feet to protect against potential obstructions. This alternative negates the need for displaced thresholds while allowing night instrument approached restrictions to be lifted. It also allows the airport to be eligible to obtain vertically guided instrument approaches. Plus, with the PAPI OCS clear, the PAPI can, if necessary, be used as mitigation to RES obstructions.

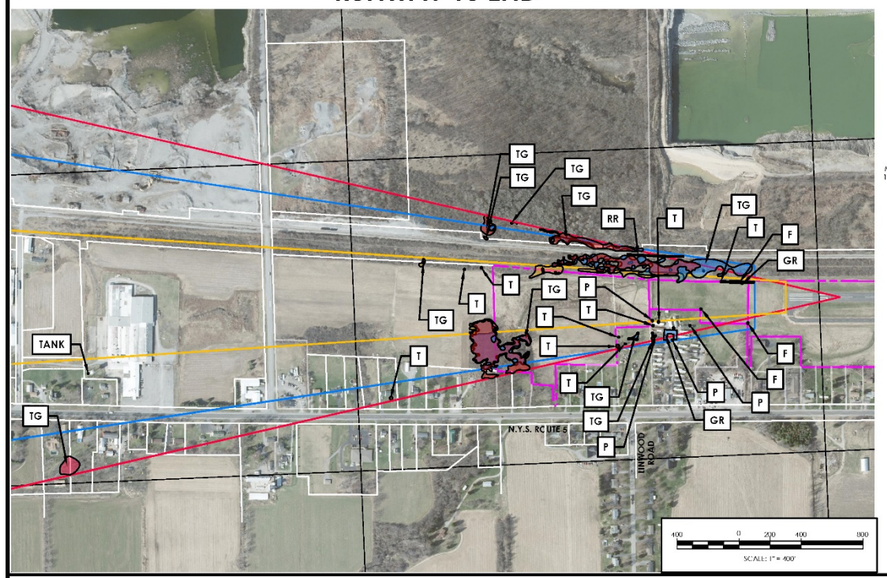
This alternative meets the purpose and need and the Sponsor's goals and is the preferred alternative. All trees and tree groups are to be removed or lowered. Fences within the 20:1 slope but not within GQS boundaries will be lit. The northern part of the fence off Runway 10 will be lit, and the part of the fence on airport property off Runway 28 will be relocated to be under the GQS surface. The existing house on airport property off Runway 28 would require relocation outside the GQS surface; poles are to be lit with obstruction lights. Unless the off-airport obstructions, especially the trees, are already under an easement, the Airport must work with the respective landowners to take down the trees or acquire the land through avigation easements or fee simple.

Since the airport only has this one chance to remove these obstructions the airport would prefer to cut tree obstructions as close to the ground as possible.

For this alternative to be accomplished the following is needed:

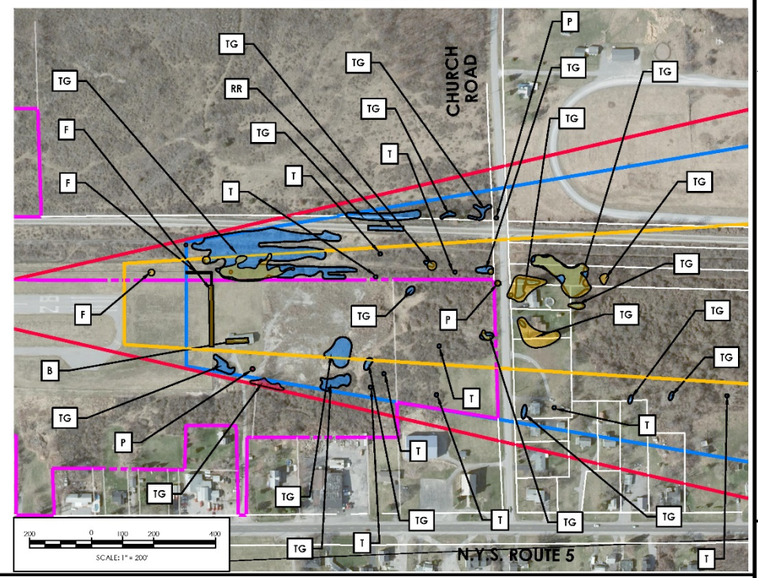
- Acquire land (fee simple or easement) over 18 parcels, not including airport-owned parcels
- Remove/trim approximately 8 acres of trees
  - Acquire one-time access easement from three railroad companies to remove/trim their respective tree obstructions
- Remove/trim an additional 24 individual trees
- Remove and relocate part of airport fence obstructing GQS off each runway end
- Light airport fence off each runway end where it obstructs the 20:1 surface but not the GQS
- Lower pole obstructing GQS off Runway 10
- Lower pole obstructing GQS off Runway 28
- Light 3 poles obstructing the 20:1 surface but not the GQS
  - Any building obstruction within 50 feet of a pole obstruction can be mitigated through lighting the pole as long as the building's elevation is lower than the pole's.
    - Applicable for all 7 buildings that are not currently lit
- Relocate airport-owned house obstructing the GQS off Runway 28
- Light 1 tank obstructing the 20:1 surface but not the GQS
- Install 2 lit poles—one off each runway end—by the railroad tracks to mark potential train cars obstructing the 20:1 surface but not the GQS

RUNWAY 10 END



MAGNETIC NORTH 11°12'W (2018) — TRUE NORTH

RUNWAY 28 END



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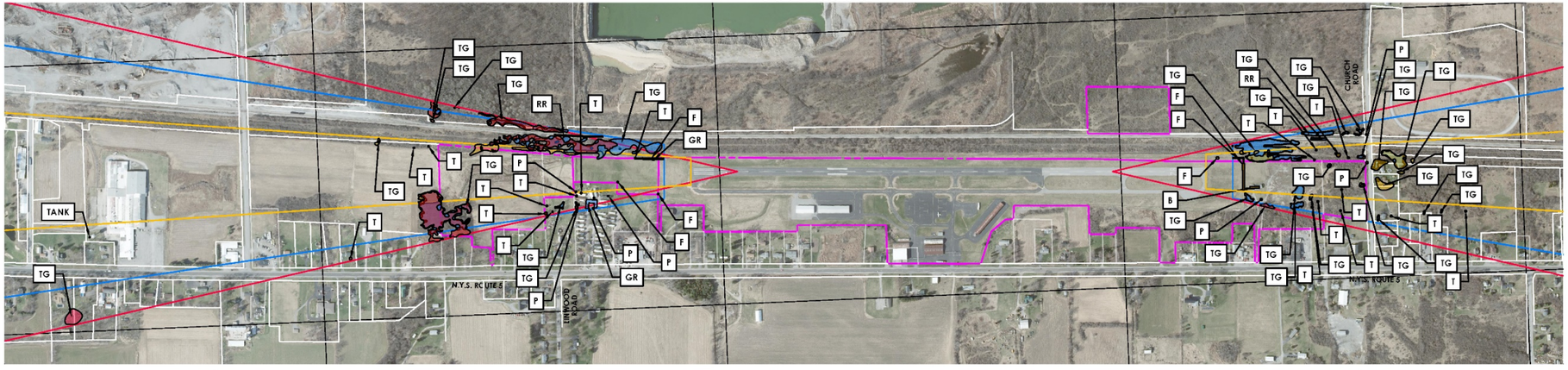

LEGEND:

- AIRPORT PROPERTY LINE
- PROPERTY LINES
- RES SURFACE
- GQS SURFACE
- PAPI OCS SURFACE
- RES OBSTRUCTIONS (TO BE MITIGATED)
- GQS OBSTRUCTIONS (TO BE REMOVED)
- PAPI OCS OBSTRUCTIONS (TO BE MITIGATED)
  RUNWAY 10: 1.75°
  RUNWAY 28: 2.25°

KEY:

T	TREE	F	FENCE
TG	TREE GROUP	RR	RAILROAD
P	POLE	B	BUILDING
GR	GROUND	TANK	TANK

MAGNETIC NORTH 11°12'W (2018) — TRUE NORTH

SCALE: 1" = 400'

NOTES:

1. OBSTRUCTIONS FROM 2019 OBSTRUCTION STUDY.
2. RES SURFACE LOWERED 13' TO ACCOUNT FOR FUTURE GROWTH (BASED ON FAA EB 91 MANAGEMENT OF VEGETATION IN AIRPORT ENVIRONMENT).
3. GQS SURFACE LOWERED 13' TO ACCOUNT FOR FUTURE GROWTH (BASED ON FAA EB 91 MANAGEMENT OF VEGETATION IN AIRPORT ENVIRONMENT).
4. PAPI GLIDE PATH FOR RUNWAY 10: 3.00°
5. PAPI GLIDE PATH FOR RUNWAY 28: 3.50°

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Principal-in-Charge: -
Project Manager: Lisa Chueng
Designed by: Wayne Zien

Revisions

No.	Date	By	Description

Alternative 3: Clear/Mitigate Obstructions Penetrating the Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS

Enviromental Assesment

LeRoy Airport (5G0)

Town/City: LeRoy
County: Genesee — State: New York

Project No.
92000034.0042

Drawing No.
Figure 2-3

Date
January 2021

2.2.4 Alternative 4: Displace Thresholds

Alternative 4 is depicted in **Figure 2-4**. If the obstructions cannot be mitigated, the next option is to displace the runway thresholds. This shifts the visual 20:1 surface so that it is no longer obstructed.

For each runway end, we take the obstruction that most penetrates the visual 20:1 surface (from Alternative 2)—the critical obstruction—and then shift the surface in towards the runway such that it is moved enough to clear the critical obstruction. If the critical obstruction is a tree, we shift the surface even further to allow room for future tree growth; the surface shifts so that it is 10 feet above the tree. If the critical obstruction is a pole then no adjustment was made.

Due to the displaced thresholds, the landing length on the runway is shortened. This can have operational and safety impacts.

Table 2-1 shows the respective critical tree obstruction for each runway end and the resulting displacement. **Table 2-2** shows the respective critical pole obstruction for each runway end and the resulting displacement.

Table 2-1: Critical Tree Obstructions Resulting in Displaced Thresholds

ID	Obstruction Description	Runway End	Obstruction Penetration Amount	Resulting Displacement
21R	Tree Group	10	59’	1,567’
38R	Tree	28	26’	633’

The landing distance for Runway 10 shortens to 2,287 feet, and the landing distance for Runway 28 shortens to 3,221 feet.

Table 2-2: Critical Pole Obstructions Resulting in Displaced Thresholds

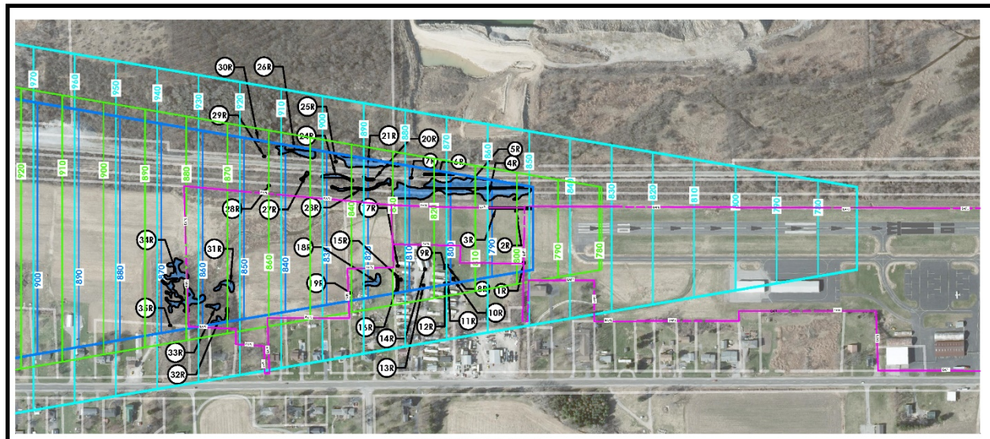
ID	Obstruction Description	Runway End	Obstruction Penetration Amount	Resulting Displacement
13R	Pole	10	16’	131’
40R	Pole	28	26’	633’

The landing distance for Runway 10 shortens to 3,723 feet, and the landing distance for Runway 28 shortens to 3,221 feet.

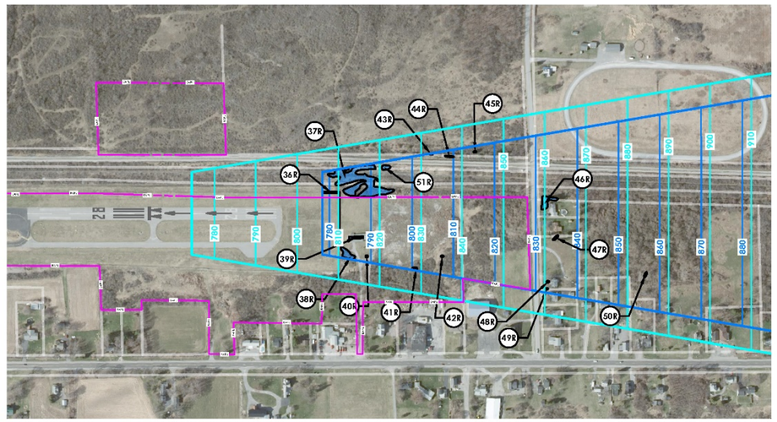
This alternative meets the purpose and need of the obstruction removal. However, it does not meet all the Sponsor’s goals. This alternative only addresses restoring night instrument operations. It is a temporary solution because other trees that remain below the surface will eventually grow to be future obstructions. Furthermore, shortening the runway length affects landing operations safety and operational efficiency. This is a last resort alternative but meets the purpose and need, so it is carried forward. This alternative is only implemented if the airport cannot remove tree obstructions in accordance with the preferred alternative.

For this alternative to be accomplished the following is needed:

- Relight Runway 10-28
- Remark Runway 10-28
- Relocate PAPI



RUNWAY 10 END



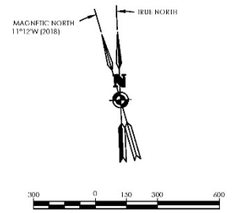
RUNWAY 28 END

	CRITICAL TREE OBSTRUCTIONS		
	CRITICAL TREE OBSTRUCTION	DISPLACED THRESHOLD	LANDING DISTANCE AVAILABLE
RUNWAY 10	21R	1567'	2287'
RUNWAY 28	38R	633'	3221'

	CRITICAL POLE OBSTRUCTIONS		
	CRITICAL POLE OBSTRUCTION	DISPLACED THRESHOLD	LANDING DISTANCE AVAILABLE
RUNWAY 10	13R	131'	3723'
RUNWAY 28	40R	633'	3221'

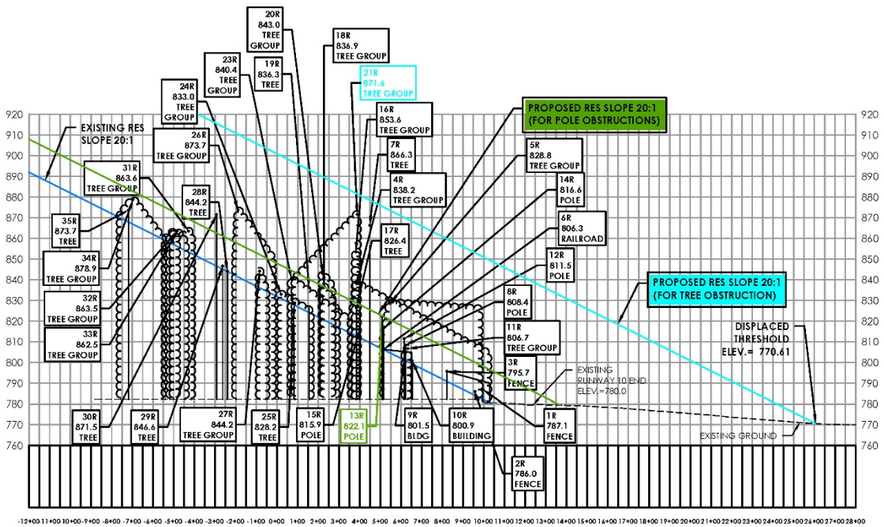
CRITICAL OBSTRUCTION NOTES:

1. OBSTRUCTIONS FROM 2019 OBSTRUCTION STUDY.

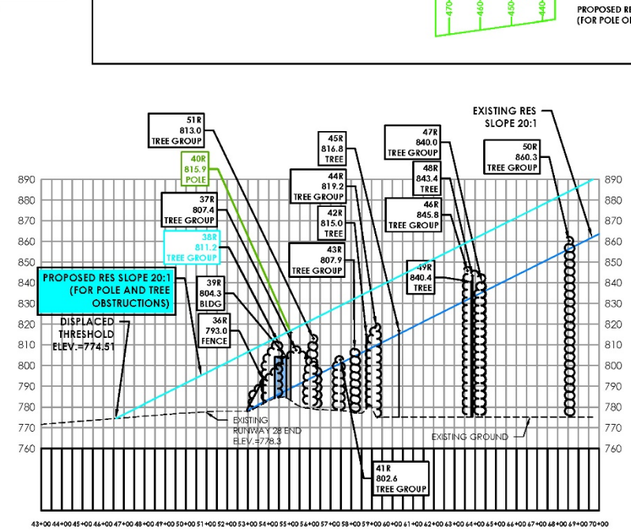


LEGEND:

- AIRPORT PROPERTY LINE
- PROPERTY LINE
- FORMER OBSTRUCTIONS
- EXISTING RES SURFACE
- PROPOSED RES SURFACE (FOR TREE OBSTRUCTIONS)
- PROPOSED RES SURFACE (FOR POLE OBSTRUCTIONS)



RES RUNWAY 10 PROFILE
SCALE: HORIZONTAL - 1" =300'
VERTICAL - 1: =30'



RES RUNWAY 28 PROFILE
SCALE: HORIZONTAL - 1" = 300'
VERTICAL - 1 = 30'

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Project Manager Lisa Chueng
Designed by Wayne Zian

Revisions

No.	Date	By	Description

Alternative 4:
Displaced Thresholds

Enviromental Assesment

LeRoy Airport (5G0)
Town/City: LeRoy
County: Genesee State: New York

Project No.
92000034.0042

Drawing No.
Figure 2-4

Date
January 2021

2.3 Alternatives Matrix

An evaluation of the alternatives is provided in **Table 2-3**.

Table 2-3: Alternatives Evaluation Matrix

	Obstruction Removal			
	Alternative 1 (No Build)	Alterative 2 (Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS)	Alternative 3 (Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface and PAPI OCS)	Alternative 4 (Displace Threshold)
Compliance with Design Standards	No – There are 20:1 obstructions	Yes	Yes	Yes
Operation Limitations	Yes – Runway thresholds will need to be displaced	No	No	Yes – Runway landing distances shortened
Existing Easements	No	Yes-negotiations with landowners is required	Yes-negotiations with landowners is required	No
Require New Easements	No	Yes	Yes	No
Number of Landowners Involved	None	11 private landowners 2 Railroad Companies	18 private landowners 2 Railroad Companies	None
Development/ Mitigation Costs[3]	$0	$400,000	$617,000	$250,000
Implementation Feasibility	Can be easily implemented	Requires landowner permission	Requires landowner permission	Requires reconfiguration of runway lights, markings, etc.
Meets Purpose and Need	No	Yes	Yes	Yes

[3]Costs for planning purposes only, easement negotiations were calculated at $20,000/each and tree removal at $10,000/ac.

2.4 Dismissed Alternatives

If certain alternatives are not viable for any reason prior to an environmental analysis, they can be dismissed here. However, if there is only one alternative to the No Build Alternative, the former cannot be dismissed.

In this EA, all alternatives are viable; none are dismissed.

2.5 Alternatives Carried Forward for Detailed Review

Table 2-4 details the alternatives that are carried forward into Chapter 4, Environmental Consequences.

Table 2-4: Alternatives Carried Forward

Alternative	Analysis
Alternative 1: No Action	For baseline comparison only; doesn't meet the purpose and need.
Alternative 2: Mitigate Obstructions Penetrating the Visual 20:1 Surface and PAPI OCS	The approaches to the airport are safer and the runway thresholds do not have to be displaced. The PAPI can be used as visual 20:1 surface mitigation since the OCS is clear. This alternative meets the purpose and need.
Alternative 3: Mitigate Obstructions Penetrating the Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS	The approaches to the airport are safer and the runway thresholds do not have to be displaced. The airport is eligible for vertically guided instrument approaches. The PAPI can be used as visual 20:1 surface mitigation since the OCS is clear. This alternative meets the purpose and need and is the preferred alternative.
Alternative 4: Displaced Threshold	This is the last resort option. If the other options become unfeasible then the thresholds will be displaced. This alternative meets the purpose and need.

Each of these alternatives is analyzed in this environmental assessment. **Chapter 3**, *Affected Environment*, examines which aspects of the environment may be impacted, and **Chapter 4**, *Environmental Consequences*, analyzes the impacts each alternative has on the affected environment.

Chapter 3:
Affected Environment

3.1 Affected Environment Introduction

FAA published environmental guidelines, specifically from FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* (July 16, 2015) and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, outline requirements for an environmental assessment. As a Federal Agency, the FAA is required under NEPA to prepare an environmental assessment for major federal actions that have potential to affect the environment. FAA Order 1050.1F Chapter 4, and the FAA Environmental Desk Reference identify the environmental categories that may be impacted from the proposed action. This chapter provides an overview of whether those categories may be affected within the Proposed Action impacted area. Initial documentation for each environmental category will be assessed here, with **Chapter 4,** *Environmental Consequences,* containing more formal documentation if the Proposed Action, or viable alternatives, are anticipated to affect said environmental category. This chapter was prepared using research obtained by Passero Associates.

3.2 Regional Setting

LeRoy Airport (5G0) is located in the Village of LeRoy, Genesee County, western New York (see **Figure 3-1)**. Based on the U.S. Census American Community Survey, in 2017 the population in the Village of LeRoy was 4,260 residents, and Genesee County had a population of 58,537 residents.

3.2.1 LeRoy Airport

5G0 is a public-use facility, owned and operated by LeRoy Aviation Services, Inc. The latest FAA NPIAS report has identified the Airport as “unclassified.” It is designed to accommodate single-engine and multi-engine aircraft. The most recent Master Record, recorded on February 25, 2019, documents the Airport having 27 based aircraft and approximately 14,660 operations per year.

The Sponsor owns 84.7 acres of land, of which 64.9 acres is designated for airport operations. 5G0 has one asphalt runway, denoted as Runway 10-28. Runway 10-28 measures 3,854 feet long by 60 feet wide. The airport is located at 42° 58’ 52.6130” N, 77° 56’ 06.8930” W, at an elevation of 780.3 feet above mean sea level. **Figure 3-2** shows the immediate location map of the airport, with the airport location identified.

3.3 Surrounding Area

5G0 is located just south of the Rochester and Southern Railroad line and is accessible via East Main Road. East Main Road connects with S.R. 19 to the west, and S.Rtes. 36 and 383 to the east. 5G0 resides on prime farmland and farmland of statewide importance. North of the railroad is a quarry, while east, south and west are scattered residential areas.

The Airport and its surrounding area can be seen in **Figure 3-3**.

Figure 3-1: Genesee County Outline

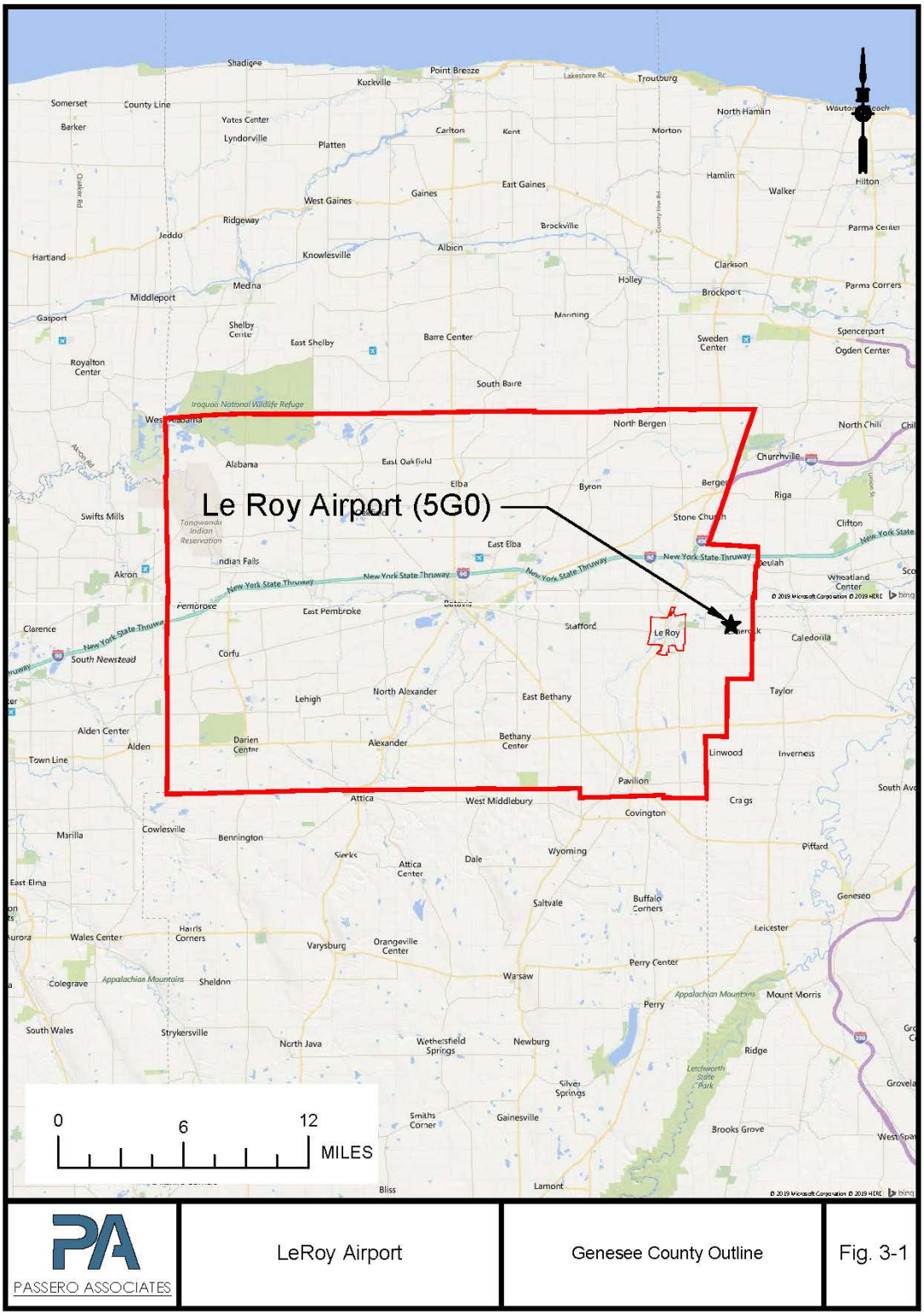


Figure 3-2: Location Map

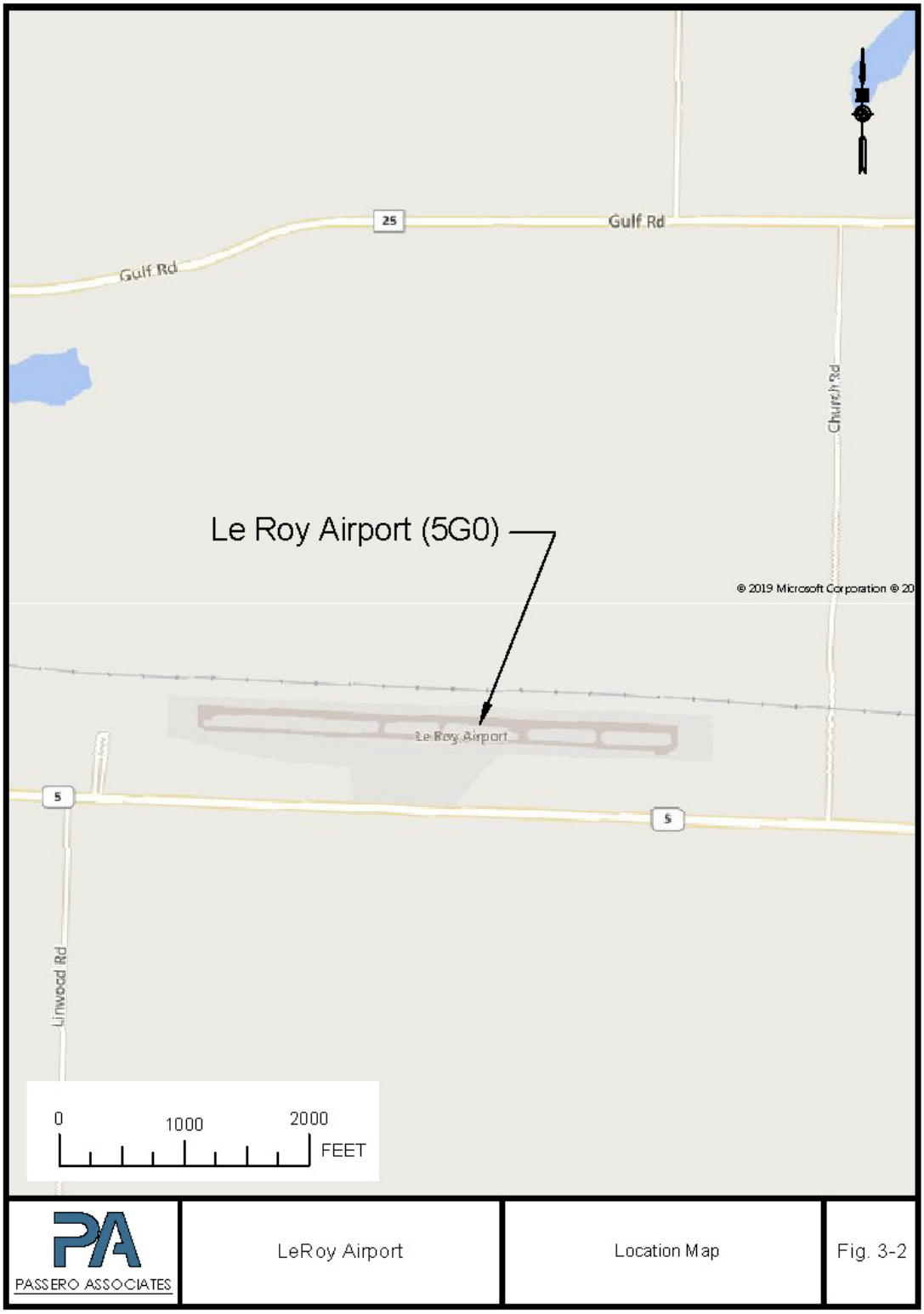
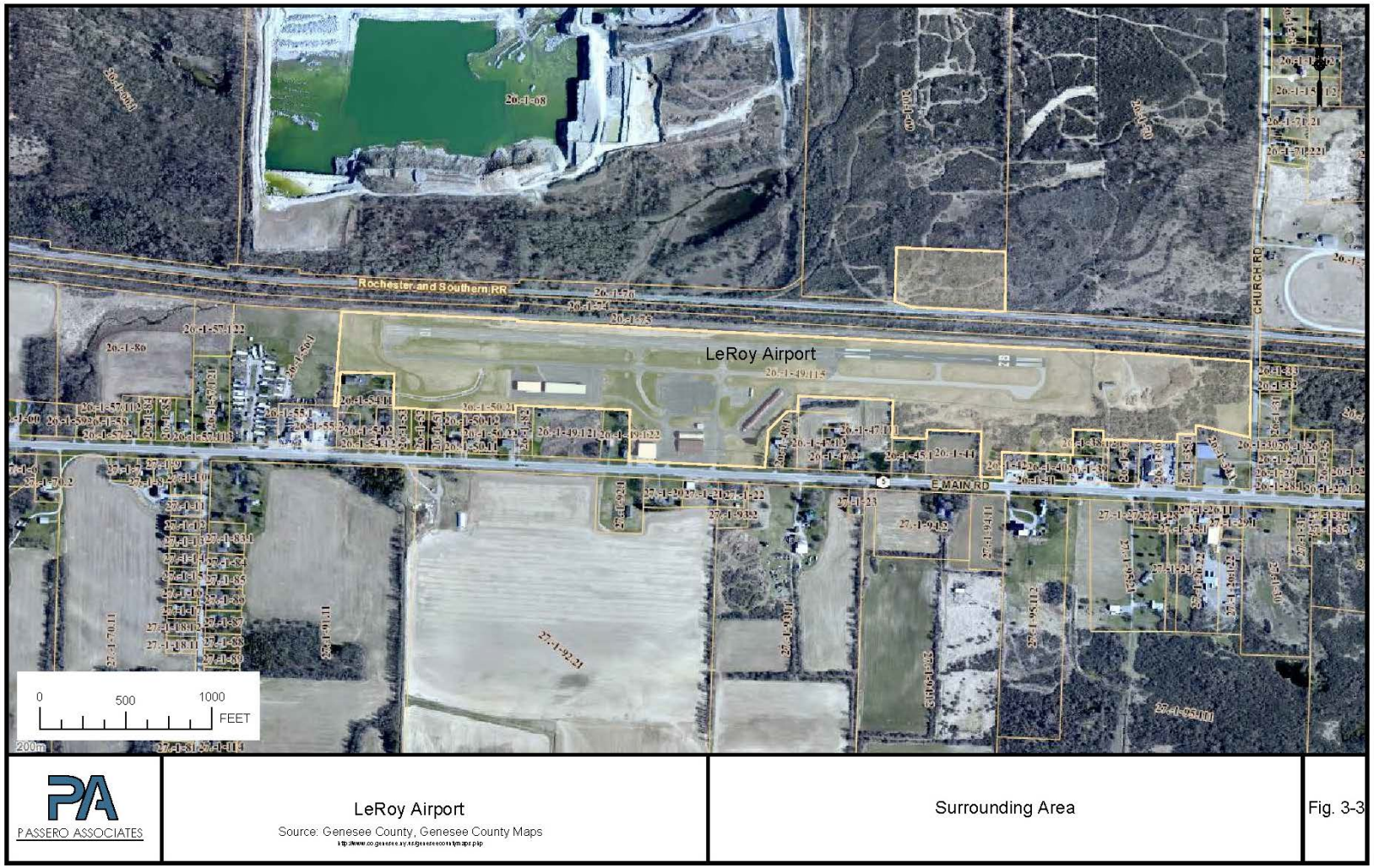


Figure 3-3: Surrounding Area



3.4 Environmental Categories

The FAA Desk Reference and FAA Order 1050.1F define environmental categories that need to be evaluated when analyzing the environmental effects of the alternatives. If, based on existing published information, any of the alternatives could potentially affect an environmental category, it will be noted, and additional documentation will be referenced to **Chapter 4**, *Environmental Consequences.*

3.4.1 Air Quality

Air quality is regulated by two primary laws: the Clean Air Act (CAA), and the National Environmental Policy Act (NEPA). The Clean Air Act (CAA) established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), Ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), and sulfur dioxide (SO_2). The NAAQS *de minimus* levels[4] for these pollutants can be found in **Table 3-1**.

Table 3-1: De Minimis Levels

Pollutant	Tons/year
CO	100
NO_2	100
O_3	100
PM_{10}	100
$PM_{2.5}$	100
SO_2	100

Source: EPA

The U.S. Environmental Protection Agency (USEPA) has oversight for the CAA. Evaluating air quality seeks to answer: will the Proposed Action cause or create a reasonably foreseeable emission increase?

The FAA's *Aviation Emissions and Air Quality Handbook, Version 3,* guides the process of determining if an air quality assessment is necessary. The first step is to define the projects. The second step is to determine if FAA involvement is required. The third step is to determine if the projects will increase emissions. The final step is to determine attainment/nonattainment status[5]. **Table 3-2** details these steps with regards to the projects in this environmental assessment.

Table 3-2: Steps Determining Necessity of Air Quality Assessment

Step	Comment
1. Define Projects	Off-Airport Obstruction Removal
2. FAA Involvement	AIP Grants
3. Projects Emissions'	Construction for Off-Airport Obstruction Removal may increase emissions
4. Attainment/Nonattainment Status	Genesee County is in attainment for all criteria pollutants

Source: FAA Aviation Emissions and Air Quality Handbook, Version 3

[4] *De Minimus* Levels are the criteria pollutants' air quality thresholds set by the NAAQS that counties must abide by to stay an attainment area. See footnote #2 for a definition of "attainment."

[5] An area is considered to be in attainment if concentrations of criteria pollutants are below the *de minimus* levels established by the NAAQS. If the concentration of one or more criteria pollutants in a geographic area is found to exceed the *de minimus* levels, the area may be considered to be a nonattainment area. The area can be in nonattainment for one pollutant and in attainment for others.

Since the projects in the EA are funded by the FAA and construction for the project may increase emissions an emissions inventory is required to be prepared and disclosed.

Therefore, additional documentation can be found in **Chapter 4,** *Environmental Consequences.*

3.4.2 Biological Resources

The Endangered Species Act of 1973, 16 USC Section 1531-1544, protects Federally listed endangered or threatened species and their critical habitats. FAA Order 1050.1F, Appendix A, Section 8, *Fish, Wildlife, and Plants,* states that "…*Section 7 of the Endangered Species Act (ESA), as amended, applies to Federal agency actions and sets forth requirements for consultation to determine if the proposed action may affect an endangered or threatened species. If an agency determines that an action may affect a threatened or endangered species, then Section 7(a)(2) requires the lead agency, to consult with the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS), as appropriate, to ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of any Federally listed endangered or threatened species or result in the destruction or adverse modification of critical habitat."*

Biological resources include terrestrial and aquatic plant and animal species; game and non-game species; special status species, including state- or federally listed threatened or endangered species.

National Marine Sanctuaries and Wilderness Areas

There are no National Marine Sanctuaries or Wilderness areas in or near the project area.

Therefore, no further documentation is warranted.

NYS Natural Heritage Requirements

To meet NYS Natural Heritage requirements, the NYS Environmental Resource Mapper was reviewed for rare animals and plants. According to the New York Natural Heritage Program, "*if your project site does not fall within an area displayed in the Rare Plants and Rare Animals layer [on the NYS Environmental Resource Mapper], then New York Natural Heritage has no records to report in the vicinity of your project site, and you do not need to submit a request for a project screening."* The NYS Environmental Resource Mapper has revealed that there are rare plants and rare animals within the area around 5G0 (see **Appendix B**).

Therefore, Natural Heritage review is required, and further documentation can be found in **Chapter 4,** *Environmental Consequences.*

Threatened and Endangered Species

IPaC from the U.S. Fish & Wildlife Service identifies federally listed threatened and endangered species within a specific area. For the area of the Proposed Action, IPaC did not identify any threatened or endangered species (see **Appendix B)**.

Therefore, no additional documentation is warranted.

Migratory Birds

IPaC identified five migratory birds in the Proposed Project Area, listed in **Table 3-3**.

Table 3-3: Migratory Birds

Migratory Bird	Habitat
Bald Eagle (Haliaeetus leucocephalus)	Forested areas adjacent to large bodies of water
Bobolink (Dolichonyx oryzivorus)	Eastern hayfields and meadows, tall grass and prairies
Wood Thrush (Hylocichla mustelina)	Forests, especially those that have American beech, sweet gum, red maple, black gum, eastern hemlock, flowering dogwood, American hornbeam, oaks and pines.
Snowy Owl (Bubo scandiacus)	Tundra of the Great Plains. Treeless places (e.g., fenceposts, hay bale, building, telephone pole, grain elevator).
Golden-winged Warbler (Vermivora chrysoptera)	Tangled, shrubby habitats such as regenerating clearcuts, wet thickets, tamarack bogs, and aspen or willow stands.

Source: USFWS IPaC, Cornell Lab of Ornithology.

Since these birds may be found in the proposed action area and the proposed action includes tree removal, the birds may be impacted. Therefore, additional documentation can be found in **Chapter 4:** Environmental Consequences.

3.4.3 Climate

Greenhouse Gases (GHG) affect the global climate. GHG emissions from anthropogenic sources, such as burning fossil fuels, can contribute to climate change, thus warming the planet. CO_2 is the most important anthropogenic GHG because it is a long-lived gas that remains in the atmosphere for up to 100 years.

During tree removal, CO_2 emissions are expected to slightly increase from construction vehicles.

However, these increases are anticipated to be minimal and not significantly affect the climate. Therefore, no further documentation is warranted.

3.4.4 Coastal Resources

Coastal resources include natural resources occurring within coastal water and their adjacent shore lands. Coastal resources include islands, transitional and intertidal areas, salt marshes, wetlands, floodplains, estuaries, beaches, dunes, barrier islands and coral reefs, as well as fish and wildlife and their respective habitats within these areas. It also includes the coastlines of the Atlantic and Pacific Oceans, the Great Lakes and the Gulf of Mexico.

A review of New York State's Geographic Information Gateway indicates that 5G0 does not lie within coastal boundaries. There are no coastal barriers or coral reef ecosystems located on or adjacent to the airport property.

Therefore, no further documentation is warranted.

3.4.5 Department of Transportation Action, Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 (DOT Act) provides that *"…the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife refuge of national, state, or local significance or land from an historic site of national, state, or local significance as determined by the officials having jurisdiction thereof, unless there is no feasible and prudent alternative to the use of such land and such program, and the project includes all possible planning to minimize harm resulting from the use.*"

A property must be a significant resource for Section 4(f) to apply. Section 4(f) protects those historic or archeological properties that are listed as eligible for inclusion on the National Register of Historic Places (NRHP). Section 4(f) also protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites.

Initial review of the New York Protected Areas Database shows no Section 4(f) facilities near 5G0, including parks, recreational areas, and wildlife refuges, that would be affected by the Proposed Action.. Regarding places of significance around 5G0, the NRHP database revealed one site – Marion Steam Shovel site – approximately 0.8 miles north of 5G0, but outside the project area.

Because there are no Section 4(f) sites within the project area of 5G0, no further documentation is warranted.

3.4.6 Farmlands

The Farmland Protection Policy Act (FPPA) regulates Federal actions with the potential to convert important farmland to non-agricultural uses. It defines prime, unique, statewide, and locally important farmlands:

Prime farmland is land having the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimal use of fuel, fertilizer, pesticides, or products.

Unique farmland is land used for producing high-value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture necessary to produce high quality crops or high yields of crops.

Statewide and locally important farmland is land that has been designated as "important" by either a state government (state Secretary of Agriculture or higher office), by county commissioners or by an equivalent elected body.

Determining and classifying these farmlands requires an analysis of the soils of the area. 5G0 is located on farmlands of statewide importance and the airport is adjacent to lands that are prime farmland.

The *Web Soil Survey* tool from the Natural Resources Conservation Service (NRCS) was used to classify the surrounding farmlands. The soils/farmlands in and around the airport can be seen in **Appendix B.** Based on the data, the Proposed Actions will occur on or within farmlands of statewide importance.

5G0 resides on land that is both prime farmland and not prime farmland, and the Airport location is included within Agricultural District 3, within Genesee County (see **Appendix B**)**.** Based on the latest Land Use map for the Village of LeRoy, 5G0 is in a Public Services district.

As Off-Airport Obstruction Removal may impact farmlands, additional documentation can be found in **Chapter 4***, Environmental Consequences.*

3.4.7 Hazardous Materials, Solid Waste, and Pollution Prevention

This subsection examines waste streams that would be generated by a project; potential hazardous materials that could be used during construction and operations of a project; potential to encounter existing hazardous materials at contaminated sites during construction; and potential to interfere with any ongoing remediation of existing contaminated sites within the project area. This section seeks to address if the project uses lands that contain hazardous materials or causes potential contamination from hazardous materials; generates significant amounts of solid waste; or produces an appreciable different quantity or type of hazardous waste.

Hazardous Materials include hazardous waste, hazardous substances, and hazardous materials, defined below, as they are defined in FAA 1050.1F Desk Reference.

Hazardous waste is a type of solid waste defined under the implementing regulations of RCRA. A hazardous waste (see 40 CFR § 261.3) is a solid waste that possesses at least one of the following four characteristics: ignitibility, corrosivity, reactivity, or toxicity as defined in 40 CFR part 261 subpart C or is listed in one of four lists in 40 CFR part 261 subpart D.

Hazardous substance is a term broadly defined under Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Hazardous substances can include: compounds, mixtures, solutions, hazardous air pollutants or chemicals. Reference to the applicable regulations is necessary to determine a hazardous substance. Hazardous substances under CERCLA excludes petroleum products.

Hazardous material is any substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce.

Solid Waste is defined as any discarded material that meets specific regulatory requirements, as defined in Resource Conservation and Recovery Act (RCRA).

Pollution prevention describes methods used to avoid, prevent, or reduce pollutant discharges or emissions through strategies such as using fewer toxic inputs, redesigning products, altering manufacturing and maintenance processes, and conserving energy.

A search of the NYSDEC hazardous sites (see **Appendix B**) revealed a water discharge site within the Proposed Action area, but this is not anticipated to be impacted. A fuel spill search also did not reveal any fuel spills within the Proposed Action area either.

Review of the EPA Resource Conservation and Recovery Act (RCCA) 2020 Corrective Action Baseline did not reveal any sites within the project area. The EPA National Priorities List (NPL) didn't reveal any sites within the project area. There are no Toxic Release Inventory sites within the proposed project area.

Finally, minimal solid waste is anticipated from the Proposed Action, as the project does not involve significant construction or creating conditions likely to produce large increases in solid waste collection or disposal. Waste generated from construction activities will be disposed of appropriately in local landfills.

Based on this information, no further documentation is warranted.

3.4.8 Historical, Architectural, Archeological and Cultural Resources

There are four primary Acts to consider when evaluating potential impacts to Historical, Architectural, Archeological, and Cultural Resources.

The National Historic Preservation Act (NHPA) of 1966, as amended, establishes the Advisory Council on Historic Preservation and the National Register of Historic Places (NRHP) within the National Park Service. Section 106 requires Federal agencies to consider the effect of their undertaking on properties on or eligible for inclusion in the NRHP. Section 110 governs Federal agencies' responsibilities to preserve and use historic buildings.

The Archeological and Historic Preservation Act of 1974 provides for the preservation of historic American sites, buildings, objects and antiquities of national significance.

The Archeological Resources Protection Act prohibits unauthorized excavation of archeological resources on Federal or Indian land, establishing standards for permissible excavation by permit.

The Native American Graves Protection and Repatriation Act deals with the disposition of cultural items, including human remains, by a federally funded repository.

Section 106: Historic Resources

Based on a review of the National Register of Historic Places, there are no historic properties within the project area.

Therefore, no additional documentation is warranted.

Section 110: Historical Buildings

Based on review of the National Park Service online database there are no historic buildings or landmarks near the project area.

Therefore, no additional documentation is warranted.

Archeological Sensitive Areas

A review of the Cultural Resource Information System (CRIS) from New York's State Historic Preservation Office (SHPO) shows that 5G0 and its surrounding areas are located within an archeological sensitive area.

Therefore, additional documentation can be found in **Chapter 4:** *Environmental Consequences***.**

Tribal Resources
A review of EPA Indian Nations for Region 2 revealed no tribes are located on the project area.

Therefore, no additional documentation is warranted.

3.4.9 Land Use

The compatibility of existing and planned land uses with an aviation or aerospace proposal is usually associated with noise impacts. This section seeks to address impacts to land use, other than noise, such as disruption to communities, relocation of residences to businesses, or impacts to natural resource areas. Included in this section is the potential for the project to be located near or to create a wildlife hazard, as defined in FAA Advisory Circular 150/5200-33.

The Proposed Action entails obstruction removal off airport property. Because the Sponsor does not own the properties adjacent to 5G0, the sponsor will need to acquire the land either in fee simple or through avigation easements to remove the off-airport obstructions.

Land acquisition falls under a "Socioeconomic" effect, so more information on this can be found in **Section 3.4.12,** *Socioeconomics, Environmental Justice and Children's Environmental Health and Safety Risks*.

Other than land acquisition, there are no other anticipated effects to land use. Therefore, no additional documentation is warranted.

3.4.10 Natural Resources and Energy Supply

Natural resources and energy supply provide an evaluation of a project's consumption of natural resources (such as water, asphalt, aggregate, wood, etc.) and use of energy supplies (such as coal for electricity; natural gas for heating; and fuel for aircraft, commercial space launch vehicles, or other ground vehicles).

Because the proposed action does not consist of construction of on-airport facilities, there will not be a significant consumption of the natural resources and energy supply of 5G0. Therefore, no additional documentation is warranted.

3.4.11 Noise and Noise-Compatible Land Use

Noise
Noise may be defined as unwanted sound. All sound comes from a sound source. The sound energy produced by a source is transmitted through the air in sound waves, creating the sound we hear. Sound pressure levels are measured in decibel (dB). Because decibels are logarithmic quantities, combining decibels is unlike common arithmetic. For example, if two sound sources each produce 100 dB operating individually and they are then operated together, they produce 103 dB – not the 200 decibels we might expect. For every doubling of the number of equal sources, the sound pressure level goes up another 3 decibels. A tenfold increase in the number of sources makes the sound pressure level go up by 10 dB.

The FAA determined the cumulative exposure of individuals to noise energy resulting from aviation activities must be established in terms of yearly day/night average sound level (DNL) as the FAA's primary metric. The DNL is a noise measure used to describe the average sound level over a 24-hour

period. In computing DNL, an extra weight of 10 dB is assigned to noise occurring between the hours of 10 pm to 7 am to account for increased annoyance when ambient noise levels are lower and people are trying to sleep. DNL may be determined for individual locations or expressed in noise contours connecting points of equal DNL levels. The DNL is used to determine compatible land use, and potential effects on other environmental resources. It is noted that DNL is an average noise level and not a single aircraft operation.

Both the Department of Housing and Urban Development (HUD) and FAA (14 CFR Part 150) define 65 dB DNL as the threshold of noise incompatibility with residential and other noise sensitive land uses. The 65 dB DNL contour defines the area of potential significant impact. The "threshold of significance" is determined when a location of incompatible land use is exposed to a project-related increase in noise level of DNL 1.5 dB or more, and that location lies within the 65 dB DNL noise contour for the "action" condition, then the location is significantly impacted by noise.

Obstruction removal will take place off 5G0's property and will last a total of about 90 days which may impact noise temporarily. There is no anticipated increase in aircraft operations or any permanent noise increases.

Therefore, no further documentation is warranted.

Compatible Land Use

This compatible land use relates to noise. No land use types in or surrounding the airport are changing. While there may a slight increase in noise, though not enough to require a noise analysis, all land uses affected are compatible with the airport.

Therefore, no further documentation is warranted.

3.4.12 Socioeconomics, Environmental Justice and Children's Environmental Health and Safety Risks

Executive Order 12898, which was enacted in 1994, requires that an Environmental Justice evaluation be conducted for all transportation projects that are undertaken, funded, or approved by the Federal Aviation Administration (FAA) to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, and social and economic effects, on minority populations and low-income populations.

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, requires Federal agencies to "*make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children*" (FAA, 2006).

This category seeks to address if the proposed project will cause alteration in surface traffic patterns, or noticeable change to the level of service; cause induced socioeconomic impacts to the surrounding community, such as changes in business and economic activity; have a disproportionate impact on minority and/or low-income communities; or lead to a disproportionate health and safety risk to children.

Socioeconomics

According to the 2017 U.S. Census American Community Survey, the population of the Village of LeRoy is 4,391, the Town of LeRoy is 7,641, and Genesee County is 60,079. The Airport is about 2.5 miles from downtown Le Roy, the main population center of the surrounding area.

Table 3-4 shows the median income in the Village of Le Roy, Town of Leroy, and Genesee County

Table 3-4: Median Incomes

Municipality	Median Household Income
Village of LeRoy	$44,408
Town of LeRoy	$53,882
Genesee County	$54,033

Source: US Census American Factfinder, 2017 U.S. Census American Community Survey

The Proposed Action does not require relocation of businesses, alter surface transportation or disrupt communities. They will not create an appreciable change in employment.

However, land acquisition, either in fee simple or through avigation easements, is necessary to access trees on private property for removal.

Therefore, further documentation can be found in **Chapter 4:** *Environmental Consequences.*

Environmental Justice

Review of the New York State Department of Environmental Conservation environmental justice map indicates that the airport is not in an Environmental Justice area. The New York State Department of Environmental Conservation has defined potential environmental justice areas in DEC Commissioner Policy 29 on Environmental Justice and Permitting (CP-29). "*Potential EJ Areas are 2000 U.S. Census block groups of 250 to 500 households each that, in the 2000 Census, had populations that met or exceeded at least one of the following statistical thresholds:*

1. *At least 51.1% of the population in an urban area reported themselves to be members of minority groups; or*
2. *At least 33.8% of the population in a rural area reported themselves to be members of minority groups; or*
3. *At least 23.59% of the population in an urban or rural area had household incomes below the federal poverty level."*

Based on the criteria above, there are no potential environmental justice areas around the project area.

Therefore, no additional documentation is warranted.

Children's Health and Safety

The project will not create products or substances that will impact children. There are no schools, parks, or children's health clinics in the Proposed Project Area. **Table 3-5** shows the number of children (<18 years old) in the surrounding areas. No impact to children is anticipated.

Table 3-5: Children (under 18 years old) in the Surrounding Areas

Municipality	Number of Children
Village of LeRoy	1,017
Town of LeRoy	1,671
Genesee County	12,159

Source: US Census American Factfinder, 2017 U.S. Census American Community Survey

Therefore, no additional documentation is warranted.

3.4.13 Visual Effects

Visual effects deal broadly with the extent to which the Proposed Actions or alternatives would either: 1) produce light emissions that create annoyance or interfere with activities; or 2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment.

Light Emissions

Since some of the obstructions included within the project are existing poles and fences, mitigation measures for these obstacles entail installing obstruction lights. Furthermore, some of the noted obstructions are already lit with existing Obstruction Lights.

As obstruction lights are permanently on, they can produce lighting impacts to nearby developments. Therefore, additional documentation can be found in **Chapter 4,** *Environmental Consequences.*

Visual Impacts

The proposed action will selectively remove trees that are obstructions. Buffer trees will remain between the residential areas and the airport.

Therefore, no additional documentation is warranted.

3.4.14 Water Resources

This section addresses all water resources including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers.

The Clean Water Act of 1977 applies to both surface and subsurface waters. Impacts to water quality are not considered significant if a project meets state and federal water quality standards.

Wetlands

Wetlands are governed by the federal government and/or the states. Federal wetlands are under the jurisdiction of the USFWS. In New York State, state regulated wetlands are under the jurisdiction of the DEC, and the wetlands are mapped under the state's Freshwater Wetlands Act. Usually, but not always, federal and state wetlands overlap.

Initial review of the NYSDEC Environmental Resource Mapper showed that there are no state regulated wetlands in or around 5G0. A review of the National Wetland Inventory (NWI) Database identified a freshwater forested/shrub wetland in the Proposed Action Area off airport property past Runway 10.[6]

[6] The NWI Database also identified a freshwater forested/shrub wetland right at the Runway 28 end, but this has been filled and is not in the Proposed Action area.

(see **Appendix B**).

Therefore, a wetland delineation is needed, and further documentation can be found in **Chapter 4,** *Environmental Consequences.*

Floodplains

Executive Order 11988 directs Federal agencies to take actions to reduce the risk of flood loss; minimize flood impacts on human safety, health and welfare; and restore and preserve the natural and beneficial values served by floodplains.

The Federal Emergency Management Agency (FEMA) map, Map 3602800004B, was reviewed for the Proposed Action area. 5G0 lies within Zone C, which is an area of minimal flooding. However, the banks of Mud Creek, which runs through areas of proposed tree removal, is classified as Zone A, which is an area within the 100-year flood plain.

Because portions of 5G0 and the project area fall within Zone A, additional analysis will be included in **Chapter 4,** *Environmental Consequences.*

Surface Waters

As shown in **Appendix B**, 5G0 and the project area have rivers present. Mud Creek and a tributary of Mud Creek run through the Airport and project area by the Runway 10 end. Mud Creek is included in the wetland delineation report. Therefore, further documentation can be found in **Chapter 4,** *Environmental Consequences.*

Groundwater

The EPA defines a Sole Source Aquifer as an aquifer that "*supplies at least 50 percent of the drinking water for its service area [and] there are no reasonable available drinking water sources should the aquifer become contaminated*." Review of the EPA Sole Source Aquifers database indicates there are no EPA-designated Sole Source Aquifers in the project area.

The NYSDEC defines primary aquifers as those aquifers that are "*highly productive aquifers presently utilized as sources of water supply by major municipal water supply systems."* The airport does not sit on top of a primary aquifer.

Therefore, no additional documentation is warranted.

Wild and Scenic Rivers

The Wild and Scenic Rivers Act, as amended, describes those river segments designated or eligible to be included in the Wild and Scenic Rivers System. According to the National Park Service Wild and Scenic Rivers website, there are no protected river bodies near 5G0.

Therefore, no additional documentation is warranted.

3.5 Environmental Categories Carried Forward for Review

Based on the information in this chapter, only the following categories, as shown in **Table 3-6**, will be carried forward into the environmental consequences section. These are the categories that could potentially be affected by the Proposed Actions or reasonable alternatives. The other categories not

carried through are not anticipated to have any environmental effects. For each environmental category below, the Proposed Action and reasonable alternatives document why the category is affected, and will be further described in Chapter 4, Environmental Consequences.

Table 3-6: Environmental Impact Categories Carried Forward for Review

Environmental Category	Justification
Air Quality	Tree removal construction
Biological Resources	Tree removal
Farmlands	Tree removal on relevant soils
Historical, Architectural, Archeological and Cultural Resources	In archeologically sensitive area
Socioeconomics	Land acquisition for tree removal
Visual Effects	Mitigation: Light Fences and Poles with Obstruction Lights
Water Resources: Wetlands	Wetlands in project area
Water Resources: Floodplains	Riverbanks are Zone A
Water Resources: Surface Water	River (Mud Creek) flows though project area

Chapter 4:
Environmental Consequences

4.1 Environmental Consequences Introduction

This chapter explains the potential environmental impacts the alternatives will have on the categories that were identified in **Table 3-6**. Each alternative is evaluated to determine if it has a significant impact on associated environmental categories that were carried forward.

4.2 Air Quality

This section evaluates the emission increases of six criteria pollutants to the National Ambient Air Quality Standards (NAAQS). Under NEPA, federal agencies are required to assess what impacts an airport's federal actions may have on air quality and the human environment. Off-Airport Obstruction Removal may increase emissions due to construction, and the alternatives that include construction may have similar air quality impacts. Plus, the airport is in an attainment area for the criteria pollutants.

Alternative 1: No Build

Alternative 1 is anticipated to have no effect on air quality since there will be no construction.

Alternative 2: Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS

Alternative 2 includes tree removal. As part of the NEPA process, the alternative's impacts on air quality are assessed by evaluating the impacts of the alternative on the criteria pollutants. The anticipated construction schedule is 90 days. An EPA MOVES (Motor Vehicle Emission Simulator) analysis was conducted for Genesee County for non-road logging equipment utilizing both gas and diesel fuel. The results of the analysis, found in **Table 4-1**, conclude there is no significant anticipated increase to the criteria pollutants from the proposed construction during this timeframe.

Alternative 3: Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS

Alternative 3 includes tree removal. As part of the NEPA process, the alternative's impacts on air quality are assessed by evaluating the impacts of the alternative on the criteria pollutants. The anticipated construction schedule is 90 days. An EPA MOVES (Motor Vehicle Emission Simulator) analysis was conducted for Genesee County for non-road logging equipment utilizing both gas and diesel fuel. The results of the analysis, found in **Table 4-1**, conclude there is no significant anticipated increase to the criteria pollutants from the proposed construction during this timeframe.

Table 4-1: Operational Emissions Inventory Results

Source	Tons Per Year					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emissions from Logging Equipment	0.03	0.00	0.00	0.00	0.00	0.00
De Minimis Levels[7]	100	100	100	100	100	100

Source: EPA MOVES2014a, EDMS 5.1
Note: Alternatives 2 and 3 have the same emissions effects

Alternative 4: Displace Thresholds

Alternative 4 is anticipated to have little air quality impact since the construction is limited to relighting and remarking the runway.

From this analysis, the *de minimus* levels are not anticipated to be exceeded. In summary, no significant impacts on air quality are anticipated from any alternative.

[7] *De Minimus* Levels are air quality thresholds set by the EPA that counties must abide by to remain an attainment area.

4.3 Biological Resources

There were no identified endangered/threatened species from the IPAC report. Thus, no mitigation is required regarding those species.

Table 4-2 shows the migratory birds potentially in the area and their respective habitats and breeding seasons.

Table 4-2:Migratory Birds

Migratory Bird	Habitat	Breeding Season
Bald Eagle (Haliaeetus leucocephalus)	Forested areas adjacent to large bodies of water	Dec 1 – Aug 31
Bobolink (Dolichonyx oryzivorus)	Eastern hayfields and meadows, tall grass and prairies	May 21-July 31
Wood Thrush (Hylocichla mustelina)	Forests, especially those that have American beech, sweet gum, red maple, black gum, eastern hemlock, flowering dogwood, American hornbeam, oaks and pines.	May 10 – Aug 31
Snowy Owl (Bubo scandiacus)	Tundra of the Great Plains. Treeless places (e.g., fenceposts, hay bale, building, telephone pole, grain elevator).	Not likely breeding in project area
Golden-winged Warbler (Vermivora chrysoptera)	Tangled, shrubby habitats such as regenerating clearcuts, wet thickets, tamarack bogs, and aspen or willow stands.	May 1 – July 20

Source: USFWS IPaC

Alternative 1: No Build

Alternative 1 is anticipated to have no effect on biological resources since there will be no construction.

Alternative 2: Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS

Alternative 2 includes tree removal. However, all tree removal will take place outside of breeding season, likely between September and November.

Alternative 3: Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS

Alternative 3 includes tree removal. While this alternative requires removing more trees than is required in Alternative 2, still, all tree removal will take place outside of breeding season, likely between September and November.

Alternative 4: Displace Thresholds

Alternative 4 is anticipated to have no effect on biological resources since there will be no construction.

In summary, no significant impacts to biological resources are anticipated from any alternative. The alternatives that include tree removal include removing those trees outside of breeding season.

4.4 Farmlands

The eastern half of the airfield sits on land that is "Not Prime Farmland" while the other half sits on "Prime Farmland" and "Farmland of Statewide Importance". Additionally, lands to the south of the Airport are Agricultural District 3 lands (see **Appendix B**). Correspondence with NY Agriculture and Markets indicated impact of greater than 10 acres of property within the Agriculture District would require Filing a Notice of Intent. As the alternatives are to remove trees and not convert agricultural land, and the acres of tree removal for each alternative *within the district* is fewer than 10 acres, no permit is required for any alternative.

Alternative 1: No Build

The No Build Alternative would not affect farmlands because there would be no interactions with said lands.

Alternative 2: Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS

Alternative 2 includes tree removal off the ends of Runway 10-28. Although these trees sit on prime farmland, the project does not anticipate converting farmland to non-agricultural use. Tree removal will not impact the soils, so the Farmland Protection Policy Act is not relevant, and coordination with the Natural Resources Conservation Service is not necessary either.

Alternative 3: Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS

Alternative 3 includes more tree removal off the ends of Runway 10-28 than does Alternative 2. Still, although these trees sit on prime farmland, the project does not anticipate converting farmland to non-agricultural use. Tree removal will not impact the soils, so the Farmland Protection Policy Act is not relevant, and coordination with the Natural Resources Conservation Service is not necessary either.

Alternative 4: Displace Thresholds

Alternative 4 is anticipated to have no effect on farmlands since there will be no interactions with said lands.

In summary, there are no significant impacts anticipated on farmlands from any alternative.

4.5 Historical, Architectural, Archeological and Cultural Resources

The airport lies within an archeologically sensitive area per SHPO CRIS site. As such, Archeological Consultants Experts performed a Phase 1A research of the proposed project area, (see **Appendix D)** to determine the impact to archeological resources. A Phase 1A resource study was completed for the airport property during the Master Plan, and the finding of No Effect letter can be viewed in Appendix D as well.

Alternative 1: No Build

The No Build Alternative does not involve any tree removal, thus there is no impact to archeological resources.

Alternative 2: Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS

Alternative 2 includes removing trees off each runway end. Most of the project area has been previously disturbed. However, there are a few areas where proposed tree removal is to occur that have not been

disturbed. In those areas, cutting trees to the ground will not impact any resources, and no further study is required. However, if trees in those areas are removed using heavy equipment that may cause rutting, then additional field research is required in that area and submitted to SHPO for their determination. At this time, it is anticipated that trees will be selectively removed and trimmed to the ground.

Alternative 3: Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS
Alternative 3 includes removing trees off each runway end. Most of the project area has been previously disturbed. However, there are a few areas where proposed tree removal is to occur that have not been disturbed. In those areas, cutting trees to the ground will not impact any resources, and no further study is required. However, if trees in those areas are removed using heavy equipment that may cause rutting, then additional field research is required in that area and submitted to SHPO for their determination At this time, it is anticipated that trees will be selectively removed and trimmed to the ground.

Alternative 4: Displace Thresholds
Alternative 4 does not involve any tree removal, thus there is no impact to archeological resources.

In summary, there are no significant impacts anticipated on archeological resources from any alternative.

4.6 Socioeconomics

To access the tree obstructions over private lands, the Airport must purchase those lands, either through fee simple or avigation easements. While purchasing the lands through fee simple transfers ownership of the land to the Airport, acquiring avigation easements does not; it usually allows the land uses below the easements to be unchanged because the easement elevations are determined only so obstructions don't penetrate the necessary surface.

Alternative 1: No Build
The No Build Alternative would not affect socioeconomics because no transfer of property is needed.

Alternative 2: Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS
Alternative 2 includes removing trees off the ends of Runway 10-28. To access these trees, the Airport must have control over the lands. There are 18 parcels the Airport must access to remove trees.

If any lands are to be purchased in fee simple, they will be purchased at market rate after negotiated agreements. The Airport will not purchase any lands whose respective owners do not want to sell those lands.

If avigation easements are used to access the trees, no land use changes to these privately-owned lands are anticipated. There are utility corridors and railroads to the north of the airport that only allow one-time access easements as opposed to permanent easements. These will be sought to remove trees within these corridors. The airport has successfully worked in the past with these utility and railroad companies.

Alternative 3: Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS
Alternative 3 includes removing trees off the ends of Runway 10-28. To access these trees, the Airport must have control over the lands. There are 18 parcels the Airport must access to remove trees.

If any lands are to be purchased in fee simple, they will be purchased at market rate after negotiated agreements. The Airport will not purchase any lands whose respective owners do not want to sell those lands.

If avigation easements are used to access the trees, no land use changes to these privately-owned lands are anticipated. There are utility corridors and railroads to the north of the airport that only allow one-time access easements as opposed to permanent easements. These will be sought to remove trees within these corridors. The airport has successfully worked in the past with these utility and railroad companies.

Alternative 4: Displace Thresholds
Alternative 4 is anticipated to have no effect on socioeconomics since no transfer of property is needed.

In summary, there are no significant impacts anticipated on socioeconomics from any alternative.

4.7 Visual Effects

Although most of the obstructions included in the Proposed Action are trees, some of the other obstructions are structures/poles. Mitigation measures for structure/pole obstructions include installing obstruction lights or installing new lit poles for when lighting the structures is unfeasible.

Alternative 1: No Build
Alternative 1 will not cause light emission impacts; thus, no significant visual effects are anticipated.

Alternative 2: Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS
Alternative 2 requires mitigating structures/pole obstructions by installing obstructions lights. Five existing poles must be lit, and two new poles must be installed and lit. Plus, the airport fence needs to be lit off each runway end.

Coordination with the utility company is required to light the poles. These steady burn lights are bright enough for pilots to see during poor visibility conditions but are scattered enough throughout the project area to not be a nuisance to the surrounding landowners. If there is a light concern for nearby residences, baffles can be installed to protect against light bleed. Finally, any additional concerns from landowners will be addressed on a case by case basis.

Alternative 3: Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS
Alternative 3 requires mitigating structures/pole obstructions by installing obstructions lights. Three existing poles must be lit, and two new poles must be installed and lit. Plus, the airport fence needs to be lit off each runway end. An obstructing water tank needs to be lit as well.

Coordination with the utility company is required to light the poles. These steady burn lights are bright enough for pilots to see during poor visibility conditions but are scattered enough throughout the project area to not be a nuisance to the surrounding landowners. If there is a light concern for nearby residences, baffles can be installed to protect against light bleed. Finally, any additional concerns from landowners will be addressed on a case by case basis.

Alternative 4: Displace Thresholds
Displacing the thresholds takes away the need for any obstruction mitigation. Thus, no light emission impacts are anticipated.

In summary, Off-Airport Obstruction Removal is not anticipated to cause significant visual effects (light emission) impacts from any alternative.

4.8 Water Resources: Wetlands

As identified in Chapter 3, a federal wetland exists in the project area, northwest of Runway 10. In December 2019, Lu Engineers conducted a wetland delineation of this wetland, called Wetland A, and the delineation was submitted to the Army Corps of Engineer (ACOE) in May 2020 (see **Appendix E**). The ACOE determined that Wetland A is not regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Therefore, ACOE authorization is not required for work in the wetland (see **Appendix E**). This wetland is only impacted in Alternatives 2 and 3.

Alternative 1: No Build
Alternative 1 will not impact trees in the wetland, therefore there is no anticipated impact.

Alternative 2: Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS
Alternative 2 requires removing trees within Wetland A. Based on the wetland delineation report and the ACOE's Jurisdictional Determination, trees within the wetland can be removed without ACOE authorization.

Alternative 3: Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS
Alternative 3 requires removing trees within Wetland A. Based on the wetland delineation report and the ACOE's Jurisdictional Determination, trees within the wetland can be removed without ACOE authorization.

Alternative 4: Displace Thresholds
Displacing the thresholds takes away the need for any obstruction mitigation. Thus, there is no impact to the wetland.

In summary, there are no significant impacts anticipated on wetlands from any alternative.

4.9 Water Resources: Floodplains

There is a Class A floodplain, or base floodplain, around Mud Creek, which passes through the airport property in two places: under Runway 10 and in a treed area on airport property. Executive Order 11988. Floodplain Management, "*requires Federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of 100-year floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.*" A floodplain's purpose is to provide essential habitat for wildlife, improve water quality, and protect human communities.

Alternative 1: No Build
The No Build Alternative would not affect the floodplain because there will be no tree removal.

Alternative 2: Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS
Alternative 2 requires removing trees off Runway 10 near the floodplain. The trees in this area will only be trimmed to the ground so to maintain the stabilized bank of the floodplain and not change its function.

Alternative 3: Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS
Alternative 3 requires removing trees off Runway 10 near the floodplain. The trees in this area will only be trimmed to the ground so to maintain the stabilized bank of the floodplain and not change its function.

Alternative 4: Displace Thresholds
Alternative 4 is anticipated to have no effect on floodplains since there will be no tree removal.

In summary, there are no significant impacts anticipated on floodplains from any alternative as the bank of Mud Creek will remain intact.

4.10 Water Resources: Surface Water

Mud Creek and a tributary of Mud Creek run through the Airport and project area by the Runway 10 end. The Lu Engineers wetland delineation included Mud Creek, and the ACOE determined that Mud Creek is a Water of the United States (WOUS). Therefore, Mud Creek is regulated under Section 404 of the Clean Water Act and ACOE authorization is required for work regarding discharging or filling material into the creek (see **Appendix E**).

Alternative 1: No Build
The No Build Alternative would not affect surface waters because there will be no tree removal and no extra runoff into the streams.

Alternative 2: Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS
Alternative 2 includes removing trees off Runway 10. Since Mud Creek is a WOUS, additional coordination with the ACOE is necessary in the design phase to limit impacts to it. Still, we anticipate taking mitigation actions such as using a silt fence to reduce runoff into the stream and manually removing any trees on and around the bank of Mud Creek to maintain the bank's stability. These trees on the banks will only be trimmed to the ground.

Alternative 3: Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface, and PAPI OCS
Alternative 3 includes removing trees off Runway 10. Since Mud Creek is a WOUS, additional coordination with the ACOE is necessary in the design phase to limit impacts to it. Still, we anticipate taking mitigation actions such as using a silt fence to reduce runoff into the stream and manually removing any trees on and around the bank of Mud Creek to maintain the bank's stability. These trees on the banks will only be trimmed to the ground.

Alternative 4: Displace Thresholds
Alternative 4 is anticipated to have no effect on surface waters since there will be no tree removal and no extra runoff into the streams.

In summary, there are no significant impacts anticipated on surface waters from any alternative with the appropriate mitigation measures in place.

4.11 Cumulative Impacts

NEPA regulations (40 CFR 1508.7) defines cumulative impacts as "*…the impact on the environment, which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency, Federal and non-Federal, or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time*."

The cumulative impact assessment examined actions conducted both at the airport and within the surrounding environment going back three years and looking forward five years. Information regarding projects was obtained from airport grant histories.

Table 4-3: Past Projects

Fiscal Year	Work Description
2016	Acquire Land for Development, Improve Airport Drainage, Rehabilitate Airport Beacons, Rehabilitate Runway - 10/28, Rehabilitate Runway Lighting - 10/28
2017	Remove Obstructions [Non-Hazard APP or DEP]

These past airport projects were rehabilitation and obstruction removal projects that were covered under previous categorical exclusions. Given the short duration of the projects, the cumulative impacts are insignificant.

Table 4-4: Proposed Projects

Fiscal Year	Work Description
2019	Environmental Assessment for Obstruction Removal
2020	Replace Existing T-Hangar, Rehabilitate Parallel Taxiway with Radius Improvements (Design and Construction)
2021	Land and Easement Acquisition for Obstruction Removal (Primary Surface and RW 10-28 Approaches), Rehabilitate Transient Aircraft Apron and Taxiway "C" (Design & Construction)
2022	Acquire Land for Runway 10 RPZ (Harper Trailer Park), Obstruction Removal - Primary Surface and R/W 10-28 App. (Relocate Fence; Trees on RR and Church Road; Obstruction Lights; Relocate former Mancuso House), Fuel Farm Improvements
2023	Construct Hangar (Quonset Hut) Improvements (Bi-Fold Door; Insulation; Electric Service and Lights)
2024	AWOS (Design and Construction)

The rehabilitation and construction projects will produce emissions. However, given the duration of those projects, their emission impacts are not likely to exceed *de minimus* standards. These projects occur on previously disturbed areas as well. Thus, no additional archaeological impact is anticipated.

No proposed project will convert land to or from farmlands. The projects will be compatible with existing land uses and zoning laws and are unlikely to create long-term noise beyond temporary construction impacts.

Outside of the proposed hangars listed in the Five-Year CIP, there is no additional development that could trigger socioeconomic impacts.

Cumulatively, the past and proposed projects for the airport are not anticipated to cause a significant impact to the environment.

4.12 Mitigation Measures

Mitigation measures to be undertaken as part of the obstruction removal process include:

- Silt fence along Mud Creek to protect from siltation during the tree removal process
- Cut trees to the ground and do not remove stumps along the floodplain to stabilize the bank
- Cut trees to the ground and do not remove stumps near Mud Creek
- Remove trees outside of the migratory bird breading season (Sept 1 – Nov 30)

4.13 Permits

Permits required for the Proposed Action include:

- NYSDEC SPDES permit since the project will result in more than one acre of soil disturbance.
- ACOE Nationwide Permit 14 for wetland impacts around and in Mud Creek, if necessary

No permitting activities took place as part of this EA process. Permits will be obtained during the design phase.

4.14 Public Participation

This EA will include a public participation process as follows:

- Public notice published in local newspaper regarding availability of this document to review, as well as digitally available on consultant's website
- 30-day review and public comment period for the Draft EA
- Publish Final EA for FAA consideration
- Publish findings in local newspaper for public review and digitally on consultant's website.

4.15 Alternative and Environmental Summaries

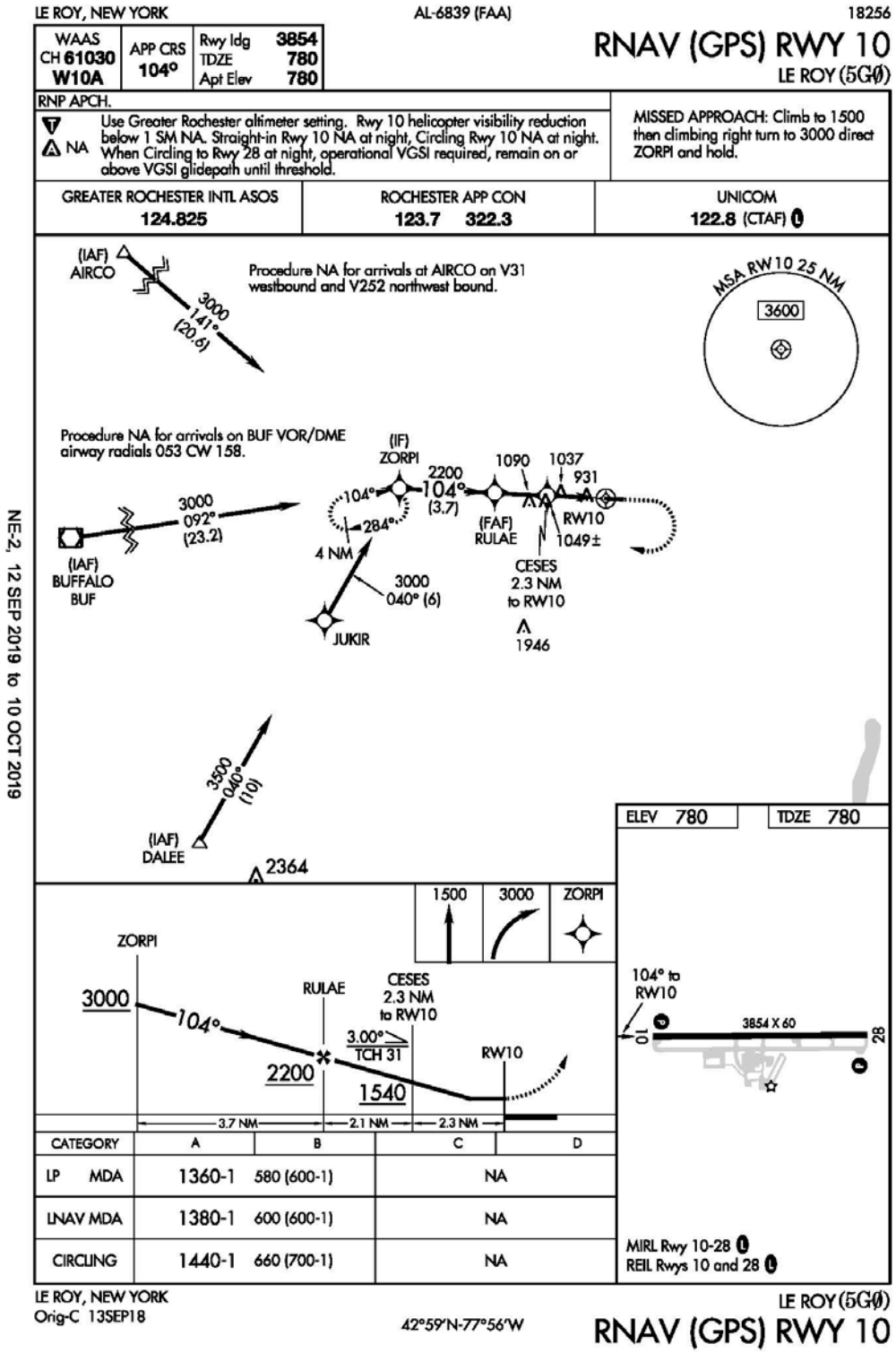
Table 4-5 summarizes which environmental categories are impacted by which alternatives. In the table, "None" refers to the alternative not affecting the environmental category in any way. "No Significant Impacts" refers to an alternative that may impact the environment, but after further investigation the impacts were determined not to be significant enough to warrant further analysis in an Environmental Impact Statement.

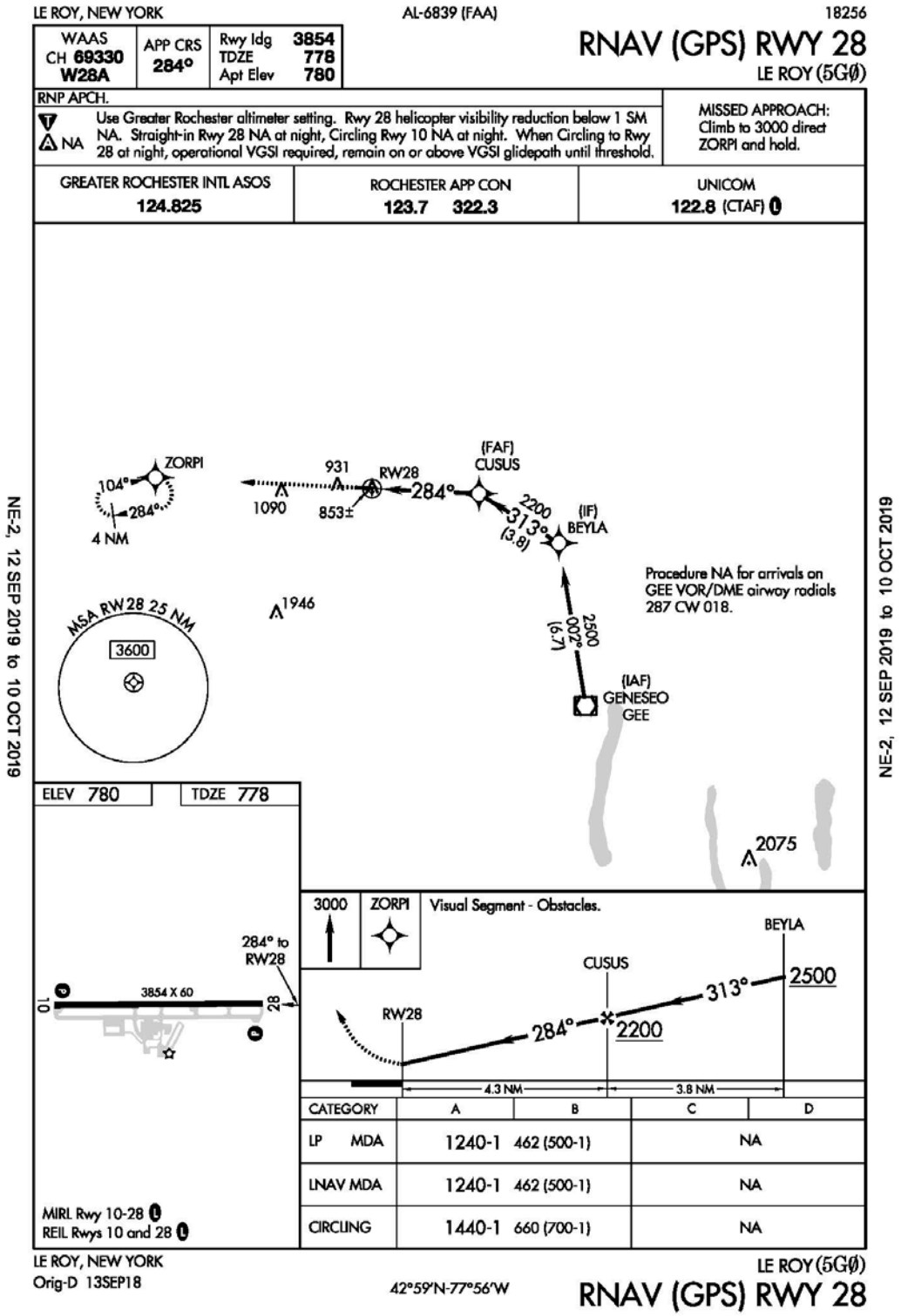
Table 4-5: Environmental Summary: Off-Airport Obstruction Removal

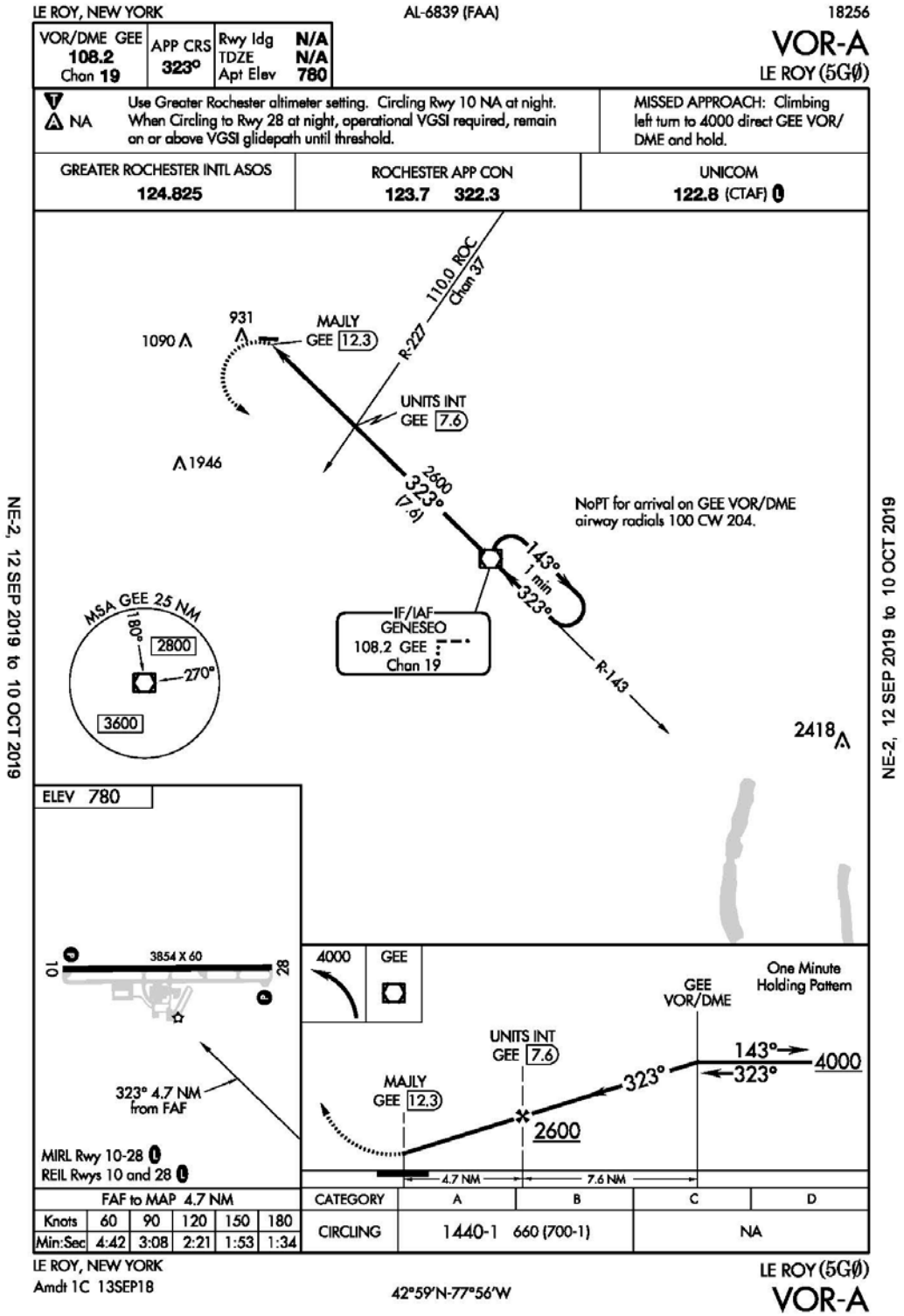
ENVIRONMENTAL RESOURCES	Alternative 1 (No Build)	Alterative 2 (Mitigate Obstructions Penetrating Visual 20:1 Surface and PAPI OCS)	Alternative 3 (Mitigate Obstructions Penetrating Visual 20:1 Surface, 30:1 GQS Surface and PAPI OCS)	Alternative 4 (Displace Threshold)
Air Quality	None	No Significant Impacts	No Significant Impacts	None
Biological Resources	None	No Significant Impacts	No Significant Impacts	None
Climate	None	None	None	None
Coastal Resources	None	None	None	None
Department of Transportation, Section 4f	None	None	None	None
Farmlands	None	No Significant Impacts	No Significant Impacts	None
Hazardous Materials, Solid Waste, and Pollution Prevention	None	None	None	None
Historical, Architectural, Archeological and Cultural Resources	None	No Significant Impacts	No Significant Impacts	None
Land Use	None	None	None	None
Natural Resources and Energy Supply	None	None	None	None
Noise and Noise-Compatible Land Use	None	None	None	None
Socioeconomics, Environmental Justice, and Children's Environmental health and Safety Risks	None	No Significant Impacts	No Significant Impacts	None
Visual Effects	None	No Significant Impacts	No Significant Impacts	None
Water Resources: Wetlands	None	No Significant Impacts	No Significant Impacts	None
Water Resources: Floodplains	None	No Significant Impacts	No Significant Impacts	None
Water Resources: Surface Water	None	No Significant Impacts	No Significant Impacts	None

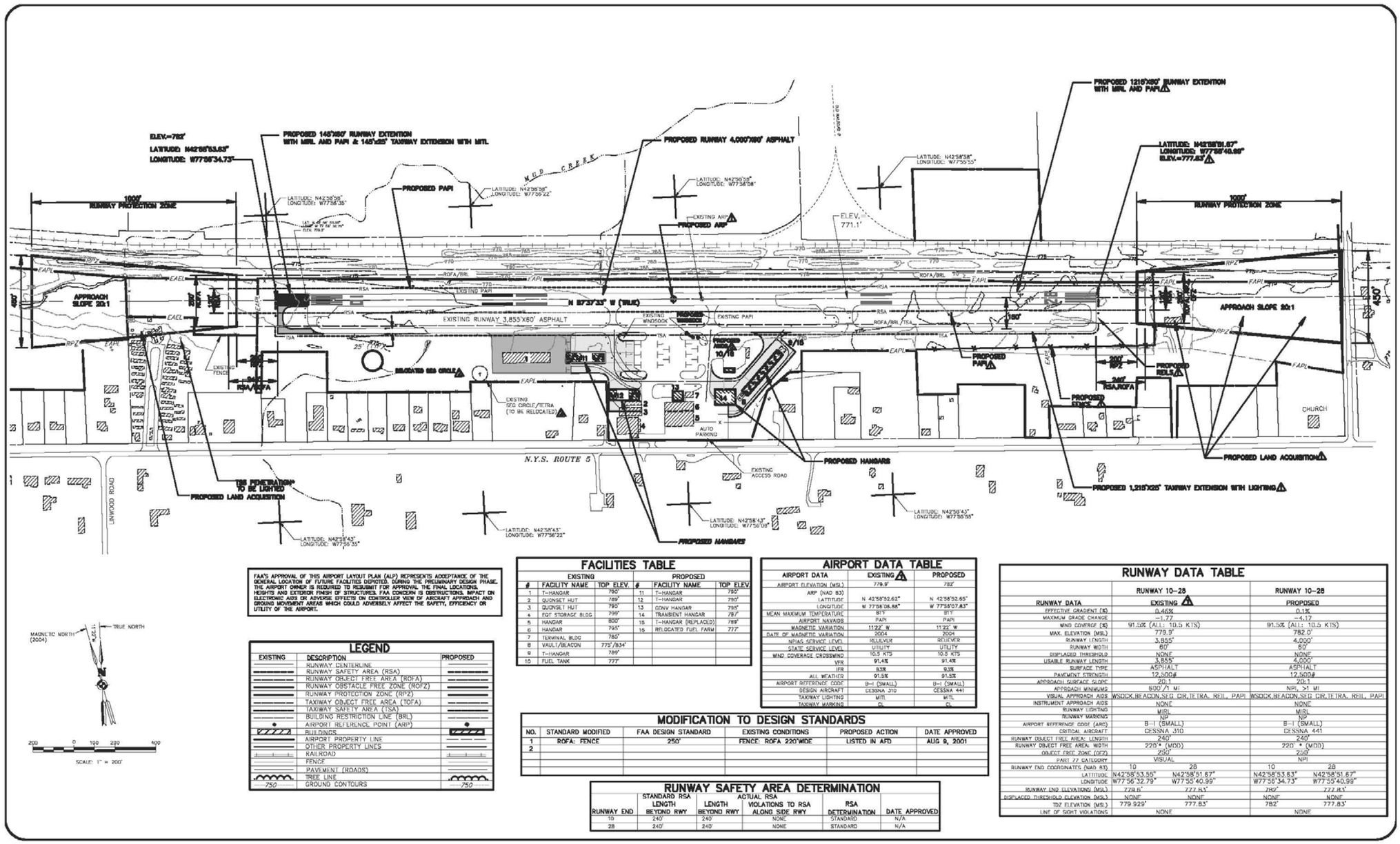
Appendix A:

Approach Plates and Airport Layout Plan


LE ROY, NEW YORK
AL-6839 (FAA)
18256
RNAV (GPS) RWY 10
LE ROY (5G0)
WAAS CH 61030 W10A
APP CRS 104°
Rwy Idg 3854
TDZE 780
Apt Elev 780
RNP APCH.
NA
Use Greater Rochester altimeter setting. Rwy 10 helicopter visibility reduction below 1 SM NA. Straight-in Rwy 10 NA at night, Circling Rwy 10 NA at night. When Circling to Rwy 28 at night, operational VGSI required, remain on or above VGSI glidepath until threshold.
MISSED APPROACH: Climb to 1500 then climbing right turn to 3000 direct ZORPI and hold.
GREATER ROCHESTER INTL ASOS 124.825
ROCHESTER APP CON 123.7 322.3
UNICOM 122.8 (CTAF)
(IAF) AIRCO
3000
141°
(20.6)
Procedure NA for arrivals at AIRCO on V31 westbound and V252 northwest bound.
MSA RW10 25 NM
3600
Procedure NA for arrivals on BUF VOR/DME airway radials 053 CW 158.
(IAF) BUFFALO BUF
3000
092°
(23.2)
(IF) ZORPI
2200
104°
(3.7)
1090
1037
931
104°
284°
4 NM
3000
040° (6)
JUKIR
(FAF) RULAE
RW10
1049±
CESES
2.3 NM
to RW10
1946
3500
040°
(10)
(IAF) DALEE
2364
ELEV 780
TDZE 780
1500
3000
ZORPI
ZORPI
3000
104°
RULAE
CESES
2.3 NM
to RW10
3.00°
TCH 31
2200
1540
RW10
3.7 NM
2.1 NM
2.3 NM
104° to RW10
10
28
3854 X 60
CATEGORY A B C D
LP MDA 1360-1 580 (600-1) NA
LNAV MDA 1380-1 600 (600-1) NA
CIRCLING 1440-1 660 (700-1) NA
MIRL Rwy 10-28
REIL Rwys 10 and 28
LE ROY, NEW YORK
Orig-C 13SEP18
42°59'N-77°56'W
LE ROY (5G0)
RNAV (GPS) RWY 10
NE-2, 12 SEP 2019 to 10 OCT 2019
NE-2, 12 SEP 2019 to 10 OCT 2019


LE ROY, NEW YORK
AL-6839 (FAA)
18256
RNAV (GPS) RWY 28
LE ROY (5GØ)
WAAS CH 69330 W28A
APP CRS 284°
Rwy Idg 3854
TDZE 778
Apt Elev 780
RNP APCH.
NA
Use Greater Rochester altimeter setting. Rwy 28 helicopter visibility reduction below 1 SM NA. Straight-in Rwy 28 NA at night, Circling Rwy 10 NA at night. When Circling to Rwy 28 at night, operational VGSI required, remain on or above VGSI glidepath until threshold.
MISSED APPROACH: Climb to 3000 direct ZORPI and hold.
GREATER ROCHESTER INTL ASOS 124.825
ROCHESTER APP CON 123.7 322.3
UNICOM 122.8 (CTAF)
ZORPI
104°
284°
4 NM
931
1090
853±
RW28
284°
(FAF) CUSUS
2200
313°
(3.8)
(IF) BEYLA
Procedure NA for arrivals on GEE VOR/DME airway radials 287 CW 018.
MSA RW28 25 NM
3600
1946
2500
002°
(6.7)
(IAF) GENESEO GEE
2075
ELEV 780
TDZE 778
3000
ZORPI
Visual Segment - Obstacles.
284° to RW28
3854 X 60
10
28
BEYLA
CUSUS
313°
2500
RW28
284°
2200
4.3 NM
3.8 NM
CATEGORY A B C D
LP MDA 1240-1 462 (500-1) NA
LNAV MDA 1240-1 462 (500-1) NA
CIRCLING 1440-1 660 (700-1) NA
MIRL Rwy 10-28
REIL Rwys 10 and 28
LE ROY, NEW YORK
Orig-D 13SEP18
42°59'N-77°56'W
LE ROY (5GØ)
RNAV (GPS) RWY 28
NE-2, 12 SEP 2019 to 10 OCT 2019
NE-2, 12 SEP 2019 to 10 OCT 2019


LE ROY, NEW YORK
AL-6839 (FAA)
18256
VOR/DME GEE 108.2 Chan 19
APP CRS 323°
Rwy Idg N/A
TDZE N/A
Apt Elev 780
VOR-A
LE ROY (5G0)
NA
Use Greater Rochester altimeter setting. Circling Rwy 10 NA at night. When Circling to Rwy 28 at night, operational VGSI required, remain on or above VGSI glidepath until threshold.
MISSED APPROACH: Climbing left turn to 4000 direct GEE VOR/DME and hold.
GREATER ROCHESTER INTL ASOS 124.825
ROCHESTER APP CON 123.7 322.3
UNICOM 122.8 (CTAF)
110.0 ROC Chan 37
931
MAJLY
GEE 12.3
1090
R-227
UNITS INT
GEE 7.6
1946
2600
323°
(7.6)
NoPT for arrival on GEE VOR/DME airway radials 100 CW 204.
143°
1 min
323°
R-143
IF/IAF
GENESEO
108.2 GEE
Chan 19
MSA GEE 25 NM
180°
2800
270°
3600
2418
NE-2, 12 SEP 2019 to 10 OCT 2019
NE-2, 12 SEP 2019 to 10 OCT 2019
ELEV 780
10
28
3854 X 60
323° 4.7 NM from FAF
MIRL Rwy 10-28
REIL Rwys 10 and 28
4000
GEE
One Minute Holding Pattern
GEE VOR/DME
UNITS INT
GEE 7.6
143°
323°
4000
MAJLY
GEE 12.3
323°
2600
4.7 NM
7.6 NM
FAF to MAP 4.7 NM
Knots 60 90 120 150 180
Min:Sec 4:42 3:08 2:21 1:53 1:34
CATEGORY A B C D
CIRCLING 1440-1 660 (700-1) NA
LE ROY, NEW YORK
Amdt 1C 13SEP18
42°59'N-77°56'W
LE ROY (5G0)
VOR-A



FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED. DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS AND EXTERIOR FINISH OF STRUCTURES. FAA CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACH AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY OR UTILITY OF THE AIRPORT.

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	RUNWAY CENTERLINE	
	RUNWAY SAFETY AREA (RSA)	
	RUNWAY OBJECT FREE AREA (ROFA)	
	RUNWAY OBSTACLE FREE ZONE (ROFZ)	
	RUNWAY PROTECTION ZONE (RPZ)	
	TAXIWAY OBJECT FREE AREA (TOFA)	
	TAXIWAY SAFETY AREA (TSA)	
	BUILDING RESTRICTION LINE (BRL)	
	AIRPORT REFERENCE POINT (ARP)	
	BUILDINGS	
	AIRPORT PROPERTY LINE	
	OTHER PROPERTY LINES	
	RAILROAD	
	FENCE	
	PAVEMENT (ROADS)	
	TREE LINE	
750	GROUND CONTOURS	750

FACILITIES TABLE

EXISTING #	EXISTING FACILITY NAME	EXISTING TOP ELEV.	PROPOSED #	PROPOSED FACILITY NAME	PROPOSED TOP ELEV
1	T-HANGAR	790'	11	T-HANGAR	792'
2	QUONSET HUT	789'	12	T-HANGAR	792'
3	QUONSET HUT	790'	13	CONV HANGAR	795'
4	FOT STORAGE BLDG	799'	14	TRANSIENT HANGAR	787'
5	HANGAR	800'	15	T-HANGAR (REPLACED)	789'
6	HANGAR	795'	16	RELOCATED FUEL FARM	777'
7	TERMINAL BLDG	780'			
8	VAULT/BEACON	775'/834'			
9	T-HANGAR	789'			
10	FUEL TANK	777'			

AIRPORT DATA TABLE

AIRPORT DATA	EXISTING ⚠	PROPOSED
AIRPORT ELEVATION (MSL)	779.9'	782'
ARP (NAD 83) LATITUDE	N 42°58'52.62"	N 42°58'52.65"
ARP (NAD 83) LONGITUDE	W 77°56'08.86"	W 77°55'07.83"
MEAN MAXIMUM TEMPERATURE	81°	81°
AIRPORT NAVAIDS	PAPI	PAPI
MAGNETIC VARIATION	11°22' W	11°22' W
DATE OF MAGNETIC VARIATION	2004	2004
NPIAS SERVICE LEVEL	RELIEVER	RELIEVER
STATE SERVICE LEVEL	UTILITY	UTILITY
WIND COVERAGE CROSSWIND	10.5 KTS	10.5 KTS
VFR	91.4%	91.4%
IFR	9.3%	9.3%
ALL WEATHER	91.5%	91.5%
AIRPORT REFERENCE CODE	B-I (SMALL)	B-I (SMALL)
DESIGN AIRCRAFT	CESSNA 310	CESSNA 441
TAXIWAY LIGHTING	MITL	MITL
TAXIWAY MARKING	GL	GL

MODIFICATION TO DESIGN STANDARDS

NO.	STANDARD MODIFIED	FAA DESIGN STANDARD	EXISTING CONDITIONS	PROPOSED ACTION	DATE APPROVED
1	ROFA: FENCE	250'	FENCE: ROFA 220'WIDE	LISTED IN AFD	AUG 9, 2001
2					

RUNWAY SAFETY AREA DETERMINATION

RUNWAY END	STANDARD RSA LENGTH BEYOND RWY	ACTUAL RSA LENGTH BEYOND RWY	ACTUAL RSA VIOLATIONS TO RSA ALONG SIDE RWY	RSA DETERMINATION	DATE APPROVED
10	240'	240'	NONE	STANDARD	N/A
28	240'	240'	NONE	STANDARD	N/A

RUNWAY DATA TABLE

	RUNWAY 10-28		RUNWAY 10-28	
RUNWAY DATA	EXISTING ⚠		PROPOSED	
EFFECTIVE GRADIENT (%)	0.46%		0.1%	
MAXIMUM GRADE CHANGE	-1.77		-4.17	
WIND COVERGE (%)	91.5% (ALL: 10.5 KTS)		91.5% (ALL: 10.5 KTS)	
MAX. ELEVATION (MSL)	779.9'		782.0'	
RUNWAY LENGTH	3,855'		4,000'	
RUNWAY WIDTH	60'		60'	
DISPLACED THRESHOLD	NONE		NONE	
USABLE RUNWAY LENGTH	3,855'		4,000'	
SURFACE TYPE	ASPHALT		ASPHALT	
PAVEMENT STRENGTH	12,500#		12,500#	
APPROACH SURFACE SLOPE	20:1		20:1	
APPROACH MINIMUMS	600'/1 MI		NPI, >1 MI	
VISUAL APPROACH AIDS	WSOCK,BEACON,SEG CIR,TETRA, REIL, PAPI		WSOCK,BEACON,SEG CIR,TETRA, REIL, PAPI	
INSTRUMENT APPROACH AIDS	NONE		NONE	
RUNWAY LIGHTING	MIRL		MIRL	
RUNWAY MARKING	NPI		NPI	
AIRPORT REFERENCE CODE (ARC)	B-I (SMALL)		B-I (SMALL)	
CRITICAL AIRCRAFT	CESSNA 310		CESSNA 441	
RUNWAY OBJECT FREE AREA: LENGTH	240'		240'	
RUNWAY OBJECT FREE AREA: WIDTH	220' * (MOD)		220' * (MOD)	
OBJECT FREE ZONE (OFZ)	250'		250'	
PART 77 CATEGORY	VISUAL		NPI	
RUNWAY END COORDINATES (NAD 83)	10	28	10	28
LATITUDE	N42°58'53.55"	N42°58'51.87"	N42°58'53.63"	N42°58'51.67"
LONGITUDE	W77°56'32.79"	W77°55'40.99"	W77°56'34.73"	W77°55'40.99"
RUNWAY END ELEVATIONS (MSL)	779.9'	777.83'	782'	777.83'
DISPLACED THRESHOLD ELEVATION (MSL)	NONE	NONE	NONE	NONE
TDZ ELEVATION (MSL)	779.929'	777.83'	782'	777.83'
LINE OF SIGHT VIOLATIONS	NONE		NONE	

NOTES:
FENCE: OFZ PENETRATION/MOS

*TSS PENETRATION: UTILITY POLE TO BE REMOVED

BRL HEIGHT = 780'

APPROVAL SIGNATURES

SPONSOR _____ DATE _____

STATE _____ DATE _____

FAA _____ DATE _____

Revisions

No.	Date	By	Revision
⚠	JAN 2016 LMC		ADDED RELOCATED SEG CIRCLE & ANEMO
⚠	JAN 2020 LMC		ADDED RWY/PWY EXT ETC AND LAND ACQ UPDATED RWY/AIRPORT DATA TABLES

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS IN VIOLATION OF STATE EDUCATION LAW ARTICLE 145 SECTION 7209 AND ARTICLE 147 SECTION 7307.

Scale: 1" = 200'

Principal-in-Charge: Wayne R. Wagner, P.E.

Project Manager: Glenn R. Ring, P.E.

Designer: Lisa Chang

Passero Associates, P.C.
Engineering
Architecture
Surveying
Planning

Drawing: Proposed Airport Layout

Project: LeRoy Airport
Airport Layout Plan Update

Owner: LeRoy Aviation Services, Inc.
6367 E. Main Road, LeRoy, NY 14482

Project No. 92094.20

Drawing No. 3

Date: (October, 2020)

Appendix B:
Environmental Documentation

Biological Resources

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo/es/section7.htm

In Reply Refer To:
Consultation Code: 05E1NY00-2019-SLI-1929
Event Code: 05E1NY00-2020-E-01894
Project Name: Le Roy Airport EA

November 13, 2019

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

To Whom It May Concern:

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

Project Summary

Consultation Code: 05E1NY00-2019-SLI-1929

Event Code: 05E1NY00-2020-E-01894

Project Name: Le Roy Airport EA

Project Type: TRANSPORTATION

Project Description: Le Roy Airport Obstruction Removal

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.98130871174165N77.93920881594383W

Counties: Genesee, NY

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME

Le Roy Airport EA

LOCATION

Genesee County, New York

DESCRIPTION

Le Roy Airport Obstruction Removal

Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus — Breeds Dec 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Bobolink Dolichonyx oryzivorus — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden-winged Warbler Vermivora chrysoptera — Breeds May 1 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8745

Snowy Owl Bubo scandiacus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when

birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);

2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing

when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND
PSS1/FO1E
PSS1E

RIVERINE
R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

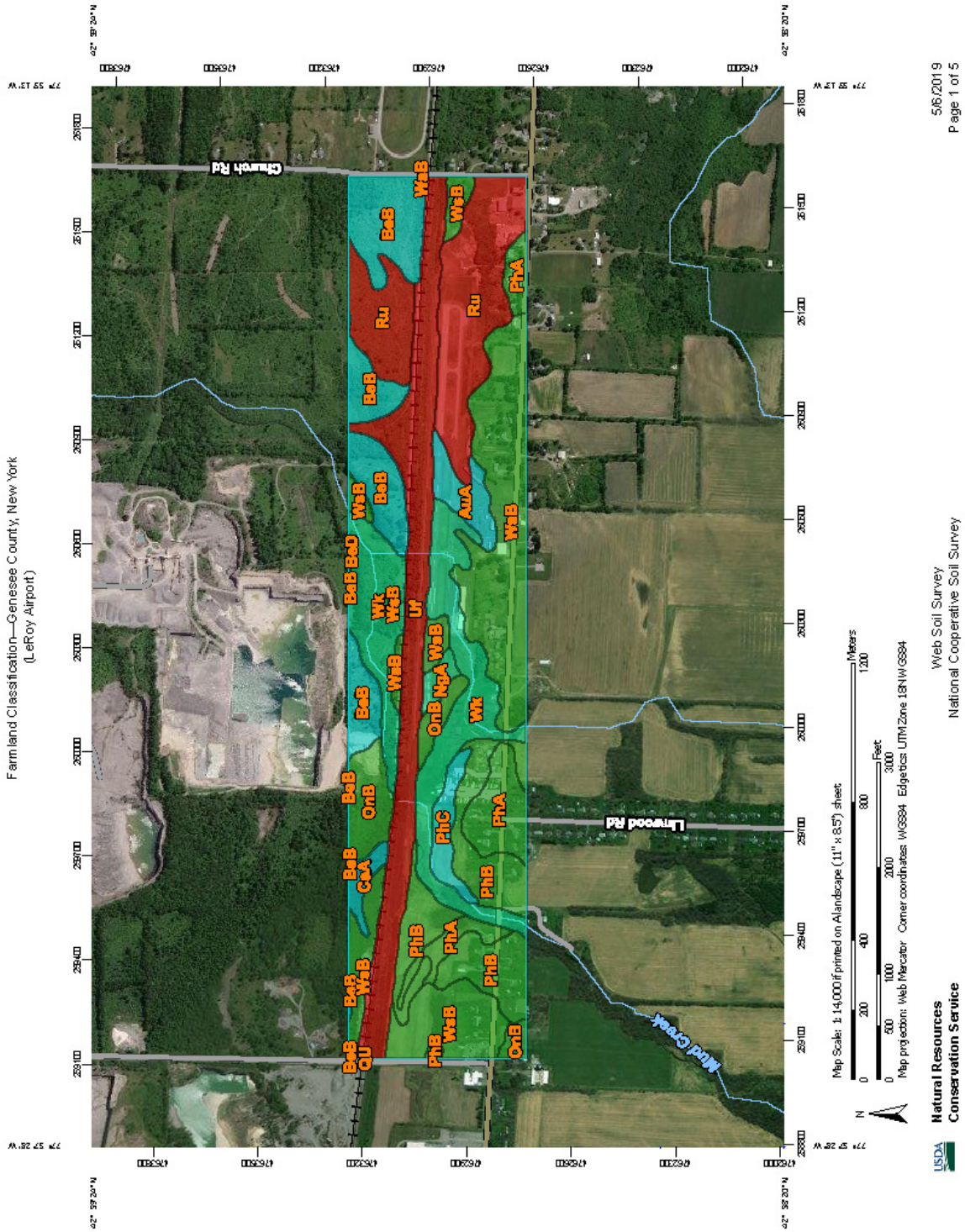
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

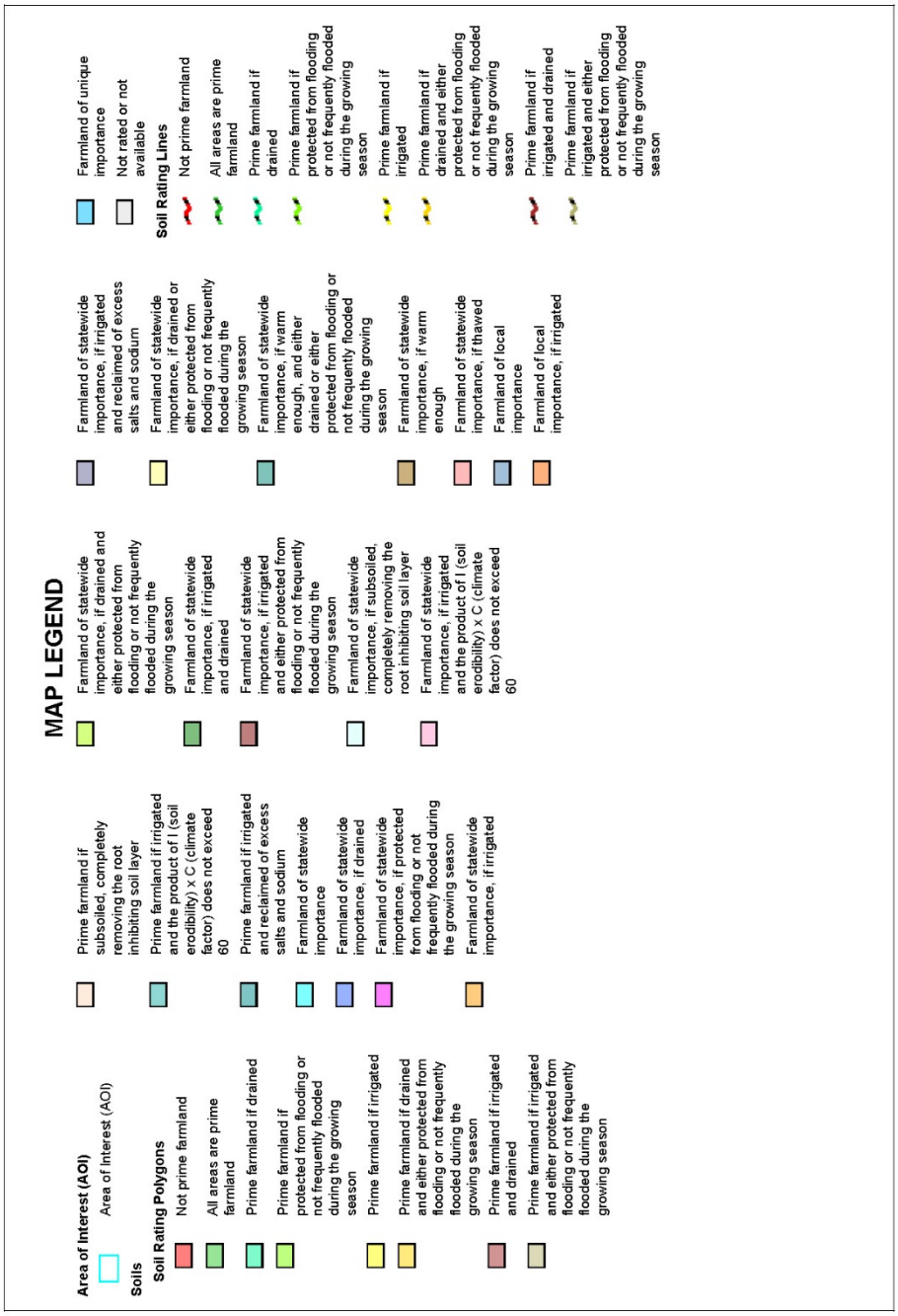
Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending

to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Farmlands


Farmland Classification—Genesee County, New York
(LeRoy Airport)
Chimney Rd
Littlewood Rd
Mud Creek
BaB
BaD
CaA
Ru
WsB
Wk
Uf
AuA
NgA
OnB
PhA
PhB
PhC
Map Scale: 1:14,000 if printed on A landscape (11" x 8.5") sheet.
Meters
Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84
Web Soil Survey
National Cooperative Soil Survey
Natural Resources
Conservation Service
USDA
5/6/2019
Page 1 of 5


Farmland Classification—Genesee County, New York
(LeRoy Airport)
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 reclaimed of excess salts and sodium
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 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
Web Soil Survey
National Cooperative Soil Survey
5/6/2019
Page 2 of 5
USDA
Natural Resources
Conservation Service

Farmland Classification—Genesee County, New York
(LeRoy Airport)

- 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

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

5/6/2019
Page 3 of 5

Farmland Classification—Genesee County, New York
(LeRoy Airport)

- 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 1:24,000.

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: Genesee County, New York
Survey Area Data: Version 19, Sep 3, 2018

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

Date(s) aerial images were photographed: Aug 31, 2012—Sep 16, 2017

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.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AuA	Aurora silt loam, 0 to 3 percent slopes	Farmland of statewide importance	6.9	2.1%
BeB	Benson soils, 0 to 8 percent slopes	Farmland of statewide importance	35.9	11.1%
BeD	Benson soils, 8 to 25 percent slopes	Not prime farmland	0.4	0.1%
CaA	Canandaigua silt loam, 0 to 2 percent slopes	Farmland of statewide importance	3.2	1.0%
NgA	Niagara silt loam, 0 to 2 percent slopes	Prime farmland if drained	2.5	0.8%
OnB	Ontario loam, 3 to 8 percent slopes	All areas are prime farmland	13.8	4.3%
PhA	Palmyra gravelly loam, 0 to 3 percent slopes	All areas are prime farmland	17.9	5.5%
PhB	Palmyra gravelly loam, 3 to 8 percent slopes	All areas are prime farmland	32.4	10.0%
PhC	Palmyra gravelly loam, 8 to 15 percent slopes	Farmland of statewide importance	5.7	1.8%
QU	Quarries	Not prime farmland	0.0	0.0%
Ru	Rubbleland	Not prime farmland	44.9	13.9%
Uf	Udorthents, loamy skeletal	Not prime farmland	47.2	14.6%
Wk	Wakeville silt loam	Prime farmland if drained	43.8	13.6%
WsB	Wassaic silt loam, 2 to 8 percent slopes	All areas are prime farmland	68.6	21.2%
Totals for Area of Interest			**323.2**	**100.0%**

Description

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.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

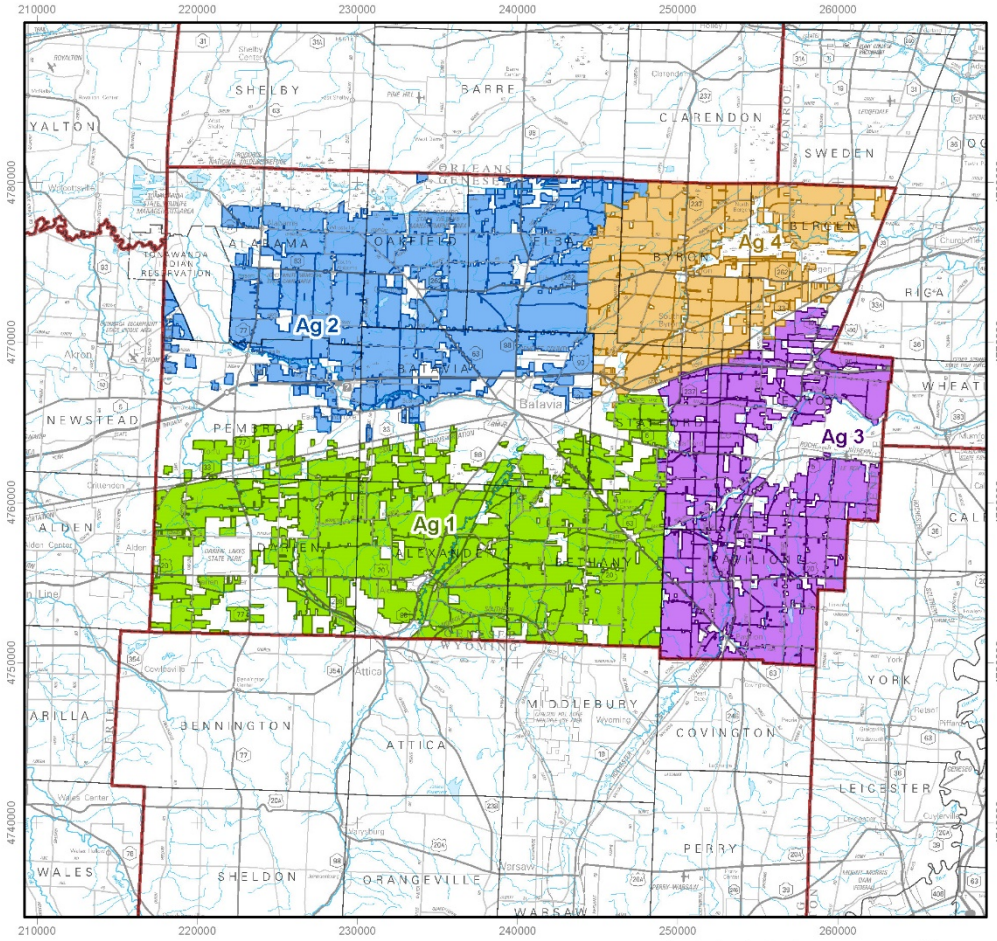
Map unit symbol	Map unit name	Rating	In Project Area?
AuA	Aurora silt loam, 0 to 3 percent slopes	Farmland of statewide importance	Partial
BeB	Benson soils, 0 to 8 percent slopes	Farmland of statewide importance	No
BeD	Benson soils, 8 to 25 percent slopes	Not prime farmland	Yes
CaA	Canandaigua silt loam, 0 to 2 percent slopes	Farmland of statewide importance	Yes
NgA	Niagara silt loam, 0 to 2 percent slopes	Prime farmland if drained	Yes
OnB	Ontario loam, 3 to 8 percent slopes	All areas are prime farmland	Yes
PhA	Palmyra gravelly loam, 0 to 3 percent slopes	All areas are prime farmland	No
PhB	Palmyra gravelly loam, 3 to 8 percent slopes	All areas are prime farmland	Yes
PhC	Palmyra gravelly loam, 8 to 15 percent slopes	Farmland of statewide importance	Yes
QU	Quarries	Not prime farmland	No
Ru	Rubbleland	Not prime farmland	Yes
Uf	Udorthents, loamy skeleta	Not prime farmland	Yes
Wk	Wakeville silt loam	Prime farmland if drained	Yes
WsB	Wassaic silt loam, 2 to 8 percent slopes	All areas are prime farmland	Yes

Source: United States Department of Agriculture, Natural Resource Conservation Service, Web Soil Survey

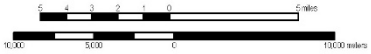
New York State Dept of Agriculture and Markets

GENESEE COUNTY

Agricultural Districts 2018



MAP PROJECTION
UTM Zone 18, NAD83 meters



Key

Ag. District 1 — Ag. District 3

Ag. District 2 — Ag. District 4

DISTRICT CERTIFICATIONS and TOWNS

DISTRICT 1
CERTIFIED 1/11/2016

Alexander	Darien
Batavia	Pembroke
Bethany	Stafford

DISTRICT 2
CERTIFIED 8/15/2017

Alabama	Elba
Batavia	Oakfield
Byron	Pembroke

DISTRICT 3
CERTIFIED 9/19/2011

Bergen	Stafford
Le Roy	
Pavilion	

DISTRICT 4
CERTIFIED 10/11/2013

Bergen	Le Roy
Byron	Stafford
Elba	

MAP SOURCE INFORMATION

Map created at Cornell IRIS (Institute for Resource Information Sciences) <http://iris.cals.cornell.edu> for the NYS Department of Agriculture and Markets <https://www.agriculture.ny.gov>

Agricultural Districts boundary data is available at CUGIR (Cornell University Geospatial Information Repository) website: <http://cugir.library.cornell.edu>

Base Map: state250_bw.tif 1998
Scale: 1:250,000; County boundaries imported from the file nyshore.e00 from the NYSGIS Clearinghouse website: <http://gis.ny.gov>

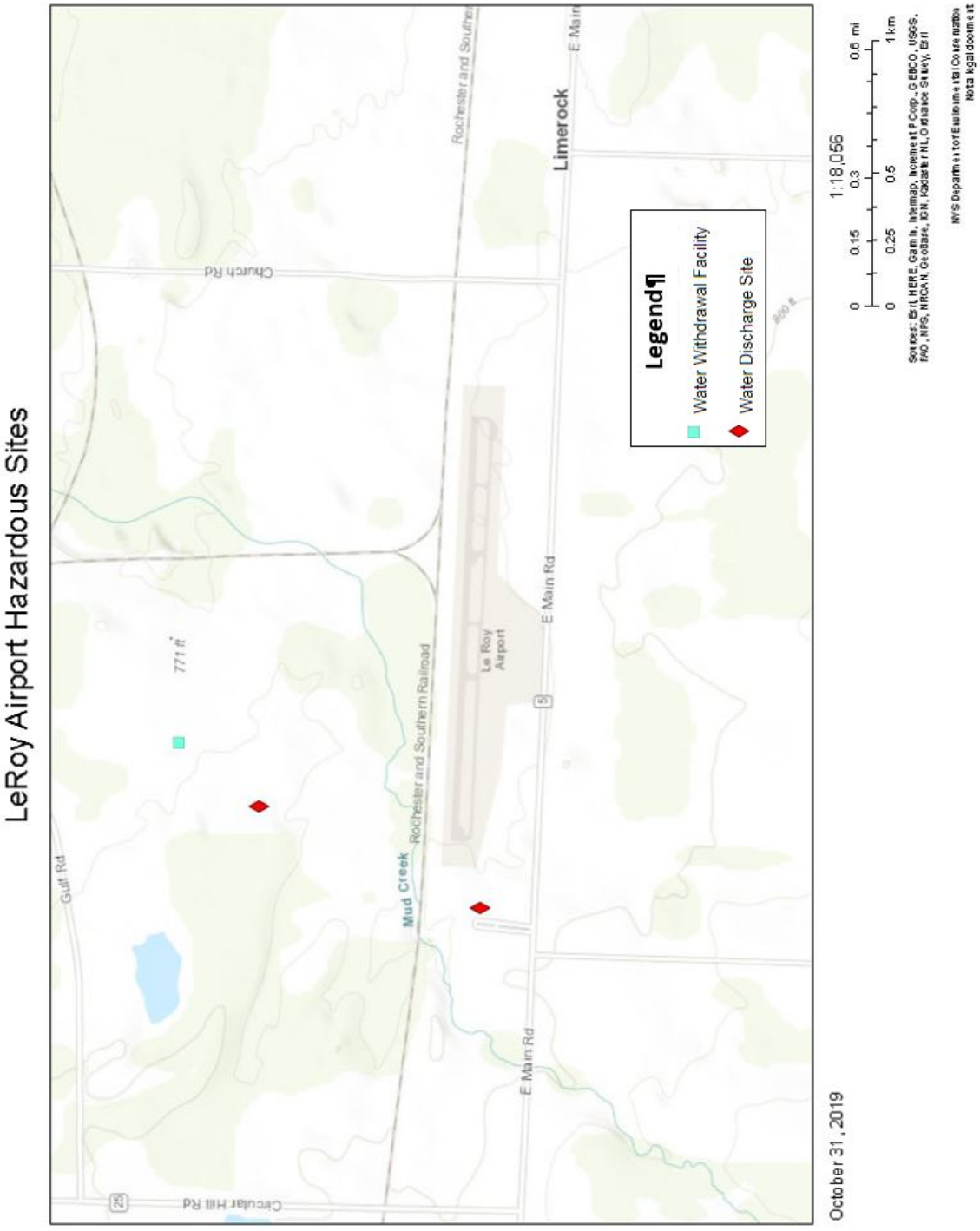
Base map contains data copyrighted by the NYS ITS GIS Program.

DISCLAIMER
This is a general reference to Agricultural District boundaries; not a legal substitute for actual tax parcel information.

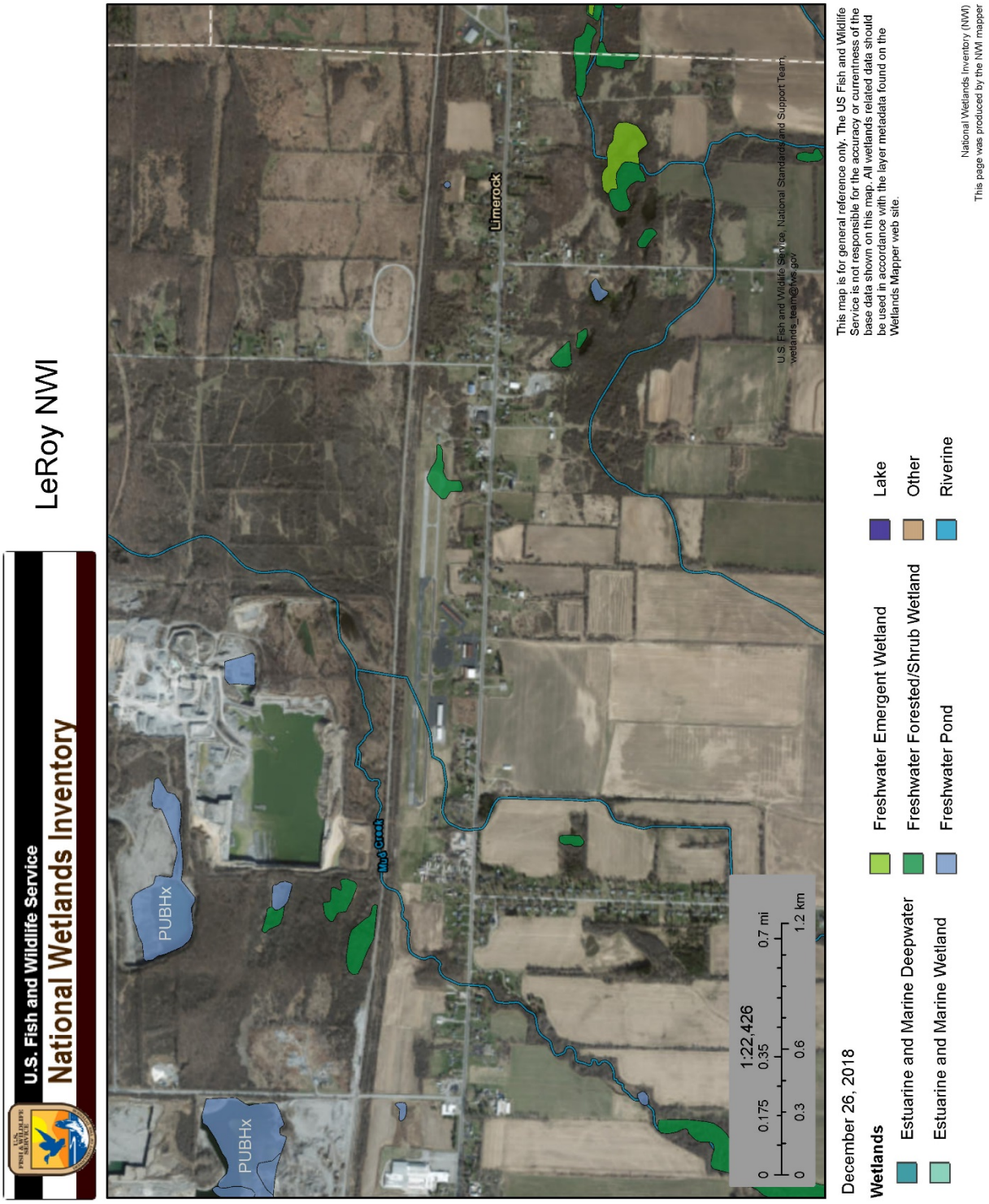
Boundaries as certified prior to January 2018

Open Enrollment Annual Additions are not included in this data. Check with county agencies to confirm the status of individual parcels.

Hazardous Materials, Solid Waste, and Pollution Prevention



Water Resources



Appendix C:
Agency Correspondence

NEW YORK STATE OF OPPORTUNITY. | Agriculture and Markets

ANDREW M. CUOMO
Governor

RICHARD A. BALL
Commissioner

July 31, 2019

Daniel Jablansky
Passero Associates
242 West Main Street
Rochester, NY 14614

RE: LeRoy Airport Environmental Assessment, Genesee County, New York

Thank you for sending a description of the above-mentioned project. Based upon information provided, it appears that a portion of the proposed action may occur within a county adopted, State certified, Agricultural District (see attached image).

Section 305(4) of the Law requires any state agency, public benefit corporation or local government which intends to acquire land or any interest therein within a state certified agricultural district in excess of one acre on an actively operated farm or in excess of ten acres within the district, or which intends to construct or advance public funds for the construction of dwellings, commercial, or industrial facilities, or water or sewer facilities to serve non-farm structures, to file a Final Notice of Intent with the Commissioner of Agriculture and Markets and with the County Agricultural and Farmland Protection Board.

If you have any questions concerning this matter, please contact me at (518) 457-8887.

Sincerely,

Robert Somers, Ph.D.
Manager, Agricultural Protection Unit

Enc.

Division of Land and Water Resources | 10B Airline Dr. Albany, N.Y., 12235 | 518-457-3738 | www.agriculture.ny.gov


Page 1 of
LeRoy Airport Enviromental Assessment
Genesee County, New York
Church Rd
Le Roy Airport
E Main Rd
Trimwood Rd
Circular Hill Rd
Agricultural Districts
1:18,056
0 0.15 0.3 0.6 mi
0 0.25 0.5 1 km
Thomas DellaRocco 30-JUL-2019 @ 09:52:15

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

August 23, 2019

Daniel Jablansky
Passero Associates
242 West Main Street, Suite 100
Rochester, NY 14614

Re: Environmental Assessment for Off-Airport Obstruction Removal and Land/Easement Acquisition -- Le Roy Airport
County: Genesee Town/City: Le Roy

Dear Mr. Jablansky:

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

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 8 Office, Division of Environmental Permits, at dep.r8@dec.ny.gov.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

899

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

OFFICE OF PARKS, RECREATION & HISTORIC PRESERVATION
NEW YORK STATE
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

April 25, 2006

Lisa Cheung
Passero Associates
100 Liberty Pole Way
Rochester, NY 14604
(faxed this day to 585-760-8539)

Dear Ms. Cheung:

Re: FAA
LeRoy Airport Master Plan
Town of LeRoy, Genesee County
05PR05251

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). The SHPO has reviewed the Phase IA Cultural Resource Investigation Report, prepared by the Rochester Museum and dated January 2006, in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended.

Based upon this review, the SHPO has no further concerns with Parcel 1. The SHPO recommends an Addendum Phase I Cultural Resource Investigation for Parcels 2 & 3 when land owner permission is obtained. The addendum report must include a thorough discussion of the lime industry. This discussion will provide a framework for understanding the archaeological resources that may be present and their function. An excellent source on the lime industry is 200 Years of Soot and Sweat by Victor Rolando. It may also be productive to look at the earliest aerial photographs of this area for the location of the lime kiln(s).

Please note that for future reports, the SHPO will not accept project photographs taken under snowy conditions since the natural features discussed in the report are not apparent.

The SHPO appreciates the opportunity to comment on this information. Please telephone me at ext. 3280 with any questions you may have. Please also refer to the PR# above in any future correspondences for this project.

Sincerely,

Nancy Herter

Nancy Herter
Historic Preservation Program Analyst,
Archaeology

cc. Mark Ewing, Rochester Museum

OFFICE OF PARKS, RECREATION & HISTORIC PRESERVATION
NEW YORK STATE
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

December 11, 2006

Lisa Cheung
Passero Associates
100 Liberty Pole Way
Rochester, NY 14604
(*faxed this day to 585-760-8539*)

Dear Ms. Cheung:

Re: FAA
LeRoy Airport Master Plan (10 acres)
Town of LeRoy, Genesee County
05PR05251

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). The SHPO has reviewed the additional historic map information, prepared by the Rochester Museum (RM) and dated November 30, 2006, in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended.

Based upon this review, it is the SHPO's understanding that the Falent Lime Kiln is located to the east outside of the area of potential effect (APE). Therefore, it is our opinion that your project will have **No Effect** upon historic properties in or eligible for inclusion in the State and National Registers of Historic Places.

The SHPO appreciates the opportunity to comment on this information. It should be noted that further consultation with the SHPO will be necessary if there are any changes to the project. Please telephone me at ext. 3280 with any questions you may have. Please also refer to the PR# above in any future correspondence for this project.

Sincerely,

Nancy Herter

Historic Preservation Program Analyst,
Archaeology

cc. Mark Ewing, RM

Appendix D:
Archeological Report

Phase IA Cultural Resource Investigations for the
On and Off-Airport Obstruction Removal Project at the Le Roy Airport
Town of Le Roy, Genesee County, New York

MCD: 03709

NYSOPRHP Project Review Number: 19PR08331

ACE Report 14.19

22 November 2019

Prepared by:
Mark W. Ewing, MA
Archaeological Consulting Experts, LLC
1831 Hoagland Road
Mount Morris, New York 14510
"Your ACE of spades in compliance issues"

Submitted to:
Lisa M. Cheung, LEED Green Associate
Senior Airport Planner
Passero Associates
242 West Main Street, Suite 100
Rochester, NY 14614
Direct: 585.760.8506
lcheung@passero.com

On behalf of:
LeRoy Aviation Services, Inc.

MANAGEMENT SUMMARY

A. **SHPO Project Review Number:** 19PR08331

B. **Involved State and Federal Agencies:** FAA

C. **Phase of Survey:** Phase IA Cultural Resource Reconnaissance Survey

D. **Location Information**
Location: North of East Main Road (Rt 5) between Circular Hill Road and Church Road
Minor Civil Division: Town of Le Roy (03709)
County: Genesee, New York

E. **Survey Area**
Maximum Length: Approximately 2,561 m (8,400 ft) east-west
Maximum Width: Approximately 488 m (1,600 ft) north-south
APE Acres: 96 ha (230 acres)
Number of Square Meter & Feet Excavated (Phase II, Phase III only): N/A
Percentage of the Site Excavated (Phase II, Phase III only): N/A

F. **USGS 7.5 Minute Quadrangle Maps:** Le Roy, NY

G. **Archaeological Survey Overview**
Number & Interval of Shovel Tests: N/A
Number & Size of Units: N/A
Width of Plowed Strips: N/A
Surface Survey Transect Interval: N/A

H. **Results of Archaeological Survey**
Number of & name of prehistoric sites identified: 0
Number of & name of historic sites identified: 0
Number of & name of sites recommended for Phase III/Avoidance: 0

I. **Results of Architectural Survey**
Number of buildings/structures/cemeteries within project area: N/A
Number of buildings/structures/cemeteries adjacent to project area: N/A
Number of known NR listed/eligible buildings/structures/cemeteries/districts: N/A
Number of identified eligible buildings/structures/cemeteries/districts: N/A

J. **Report Author(s):** Mark W. Ewing, MA, RPA, Archaeological Consulting Experts LLC, Mount Morris, New York.

K. **Date of Report:** 22 November 2019

ACE, LLC
1831 Hoagland Road
Mount Morris, New York 14510

"Your ACE of spades in compliance issues"

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ACE, LLC
1831 Hoagland Road
Mount Morris, New York 14510

"Your ACE of spades in compliance issues"

I. Project Description

These Phase IA cultural resource investigations have been requested by Passero Associates on behalf of LeRoy Aviation Services, Inc. for areas within and adjacent to the currently-developed section of the Le Roy airport where tree removal may occur in the Town of Le Roy, Genesee County, New York (Figure 1). For the purposes of this Phase IA report, the Area of Potential Effect (APE) includes the approximately 96 ha (230 acres) where tree removal may occur (Figure 2). The acreage is currently a mix of former railroad grades, an active railway, lands modified by quarrying operations, farm land, airport property, commercial and residential building lots, a cemetery, and scrub fields situated between Circular Hill Road and Church Road, north of East Main Road (Rt 5).

Discussions with Lisa Cheung, Passero Associates, have indicated that the obstruction removal may only involve the cutting of trees and not the grubbing and clearing of stumps, but currently the exact process and potential impacts to the soils in the APE have not been defined and therefore Phase IA investigations are warranted.

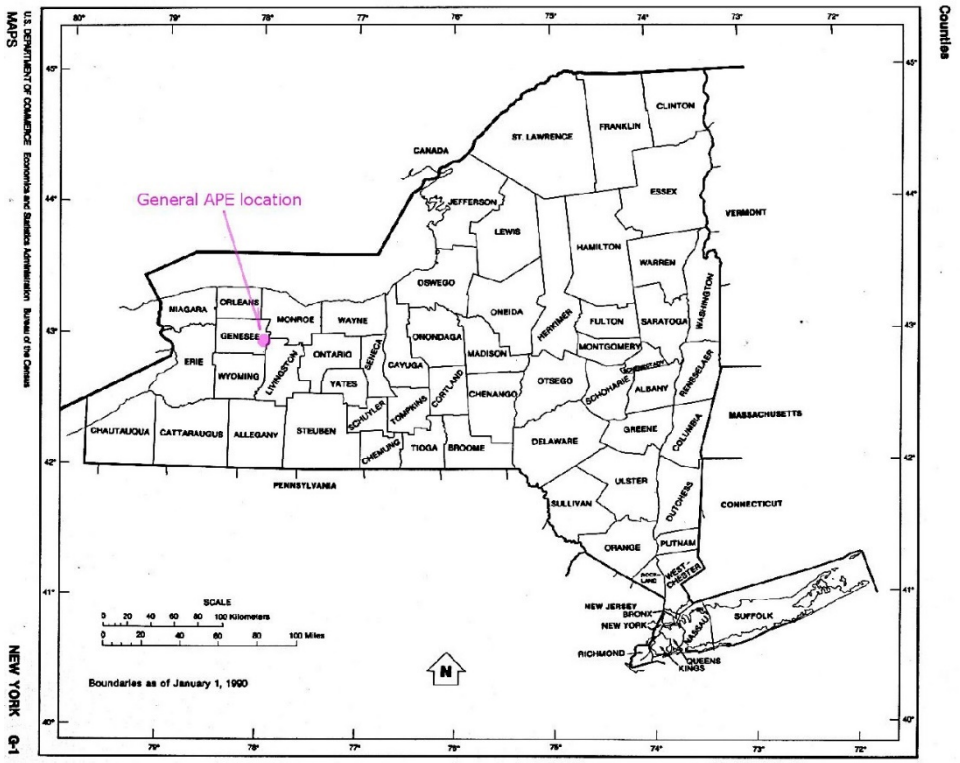

Figure 1: General APE location in Genesee County, New York

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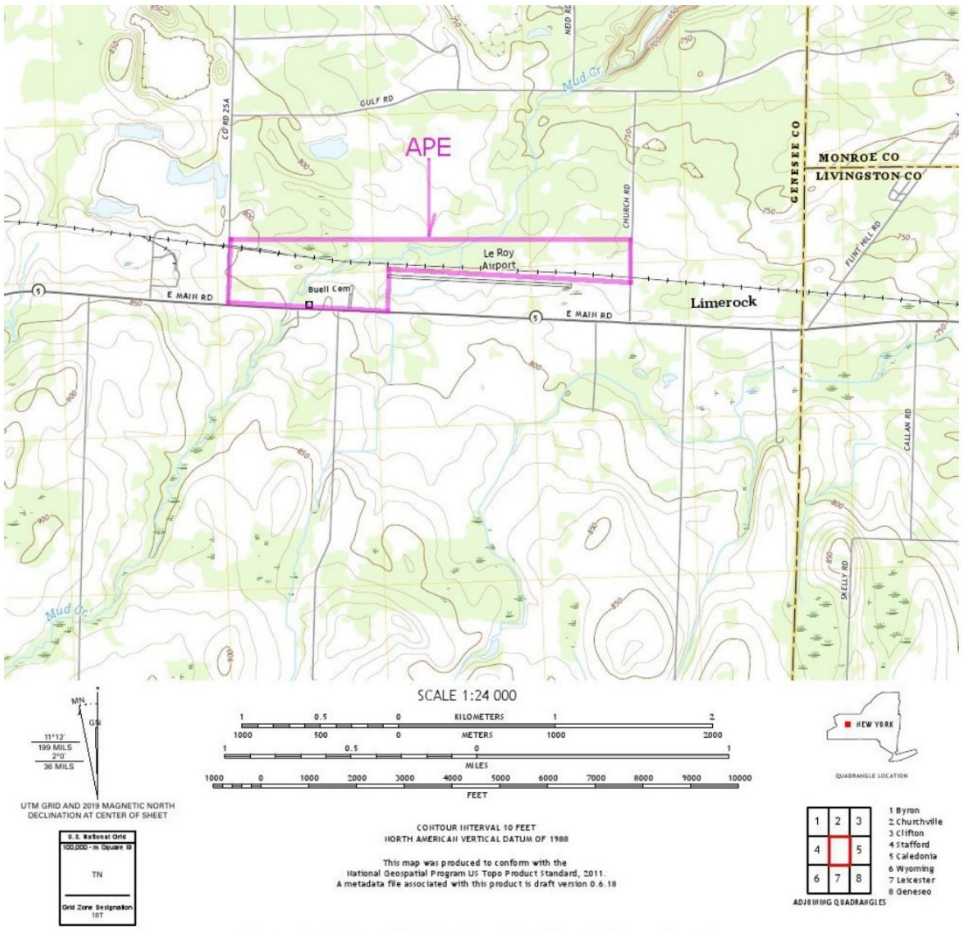

Figure 2: APE on 2019 Le Roy, New York 7.5' quadrangle

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II. General Project Area

2.1 Natural Environment

The last ice sheet remained in some areas of the Northeast until about 12,000 B.P., although best estimates are that the project area was free of ice by 13,000-14,000 B.P. Along the glacial front, a tundra and spruce parkland environment existed which contained cool grasslands, wetlands, and scattered clumps of trees in sheltered valleys. This environment supported large grazing animals such as barren ground caribou and mammoths as well as browsing animals such as mastodons, elk, moose, woodland musk-ox, deer, bear, wolf, and migratory birds (Bodner 1999:29-30; Fagan 1991:107-108; and Ritchie and Funk 1973:6). It appears that this spruce-dominated tundra woodland environment and the floral and faunal species it supported existed from sometime before 14,000 B.P. to at least 10,000 B.P (Bodner 1999:29-30).

Ocean levels continued to rise as the glaciers melted such that by 11,000 B.P., Atlantic coastlines that once extended considerable distances onto the continental shelf had assumed their present-day positions. The general climate continued to warm, and in response, landscapes changed from tundra to grassy plains dotted with spruce, pines, and hemlock trees as well as numerous shrubby species by about 9000 B.P. The mammoths, mastodons, musk ox, and other large herd animals adapted to tundra conditions either moved north or died out, as caribou and other species capable of surviving in the new environment replaced them. Wetlands at this time harbored numerous species of amphibians, mollusks, and insects and continued to attract waterfowl, other birds, and smaller mammals (Bodner 1999:30-31).

By about 6000 B.P., the last of the Laurentide ice sheet had receded and a modern climate became established. When the ocean levels stabilized (ca. 6000-5000 B.P.), tidal flats developed and provided habitats for clams and softshell crabs. Swampy backwaters and lush floodplains also formed as a result of the higher water levels. Concomitant with the changes in the aqueous environment, deciduous tree species spread into the Great Lake region and the Northeast. Numerous nut-producing species such as oak, hickory, beech, and chestnut were part of this newly established biome. Evidence for this shift from coniferous forest to deciduous forest is documented in pollen profiles throughout the Northeast by c. 4800 B.P. when a pronounced decline in hemlock is recognized (Bodner 1999:31; Fagan 1991:333-334).

Sun-loving herbaceous plants typically decreased in number as the forests closed. Cervids, small mammals, and birds thrived in the forests, which eventually came to variously include beech, hemlock, hornbeam, basswood, maples, ash, elm, chestnut, and hickories, while wetlands continued to provide suitable habitats for turtles, amphibians, reptiles, muskrat, beaver, and migratory birds. Inland streams and rivers assumed their present-day routes for the most part, and valleys achieved their current configurations (Bodner 1999:31).

2.2 Physiographic Setting

In general, elevations within the APE are relatively flat but do grade slowly upwards from about 780 ft AMSL at the east end to around 810 ft AMSL at the west end. However, the creation of railroad grades across a large section of the APE has resulted in short, steep slopes of between 3-5 m (10-17 ft) along the edges of the grades in places. Additionally, the norther border of the APE lies along an operational stone quarry. Soil removal activities and the deposition of spoil material at the edges of the mined areas has created steep banks in multiple places along the northern part of the APE. The APE is directly drained by two (2) branches of Mud Creek, which flows northeasterly through the central section.

III. Background Research

3.1 Project Area Soils

Based upon information contained within the 2019 Web Soil Survey of the United States Department of Agriculture (USDA) for Genesee County, New York (http://websoilsurvey.nrcs.usda.gov), the APE traverses 13 soil types representing 10 soil series (Figure 3 and Table 1). One (1) of the soils is considered alluvial in nature (i.e.,Wk) while three (3) soil types (i.e., Qu, Ru, and Uf) represent disturbed soils. The alluvial soils lie along the course of Mud Creek in the central section of the APE while the disturbed soil types lie along the multiple railroad grades the run through the APE immediately north of the airport property and along the edge of the existing quarry in and adjacent to the northern border of the APE.

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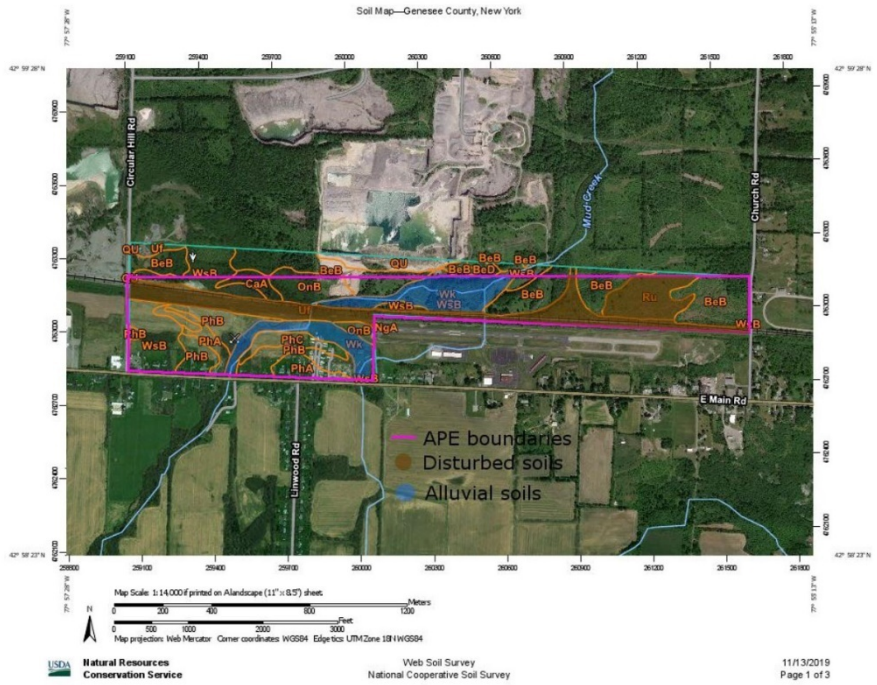

Figure 3: APE on Web Soil Survey

Table 1: Soil types within the APE

Designation (name)	Soil Horizon	Texture, Inclusions	Slope	Drainage	Landform/Parent Material
BeB (Benson soils)	H1: 0-9 in H2: 9-19 in H3: 19-29 in	Channery loam Very channery loam Unweathered bedrock	0-8%	Somewhat excessively drained	Ridges, till plains, benches/Channery loamy till
BeD (Benson soils)	H1: 0-9 in H2: 9-19 in H3: 19-29 in	Channery loam Very channery loam Unweathered bedrock	8-25%	Somewhat excessively drained	Till plains, benches, ridges/Channery loamy till
CaA (Canandaigua silt loam)	H1: 0-9 in H2: 9-39 in H3: 39-72 in	Silt loam Silt loam Silt loam	0-2%	Poorly drained	Depressions/Silty and clayey glaciolacustrrine deposits
NgA (Niagara silt loam)	H1: 0-11 in H2: 11-26 in H3: 26-72 in	Silt loam Silty clay loam Silt loam	0-2%	Somewhat poorly drained	Lake plains/Silty and clayey glaciolacustrrine deposits
OnB (Ontario loam)	Ap: 0-8 in E: 8-14 in Bt/E: 14-21 in Bt: 21-39 in C1: 39-48 in C2: 48-79 in	Loam Loam Loam Gravelly loam Gravelly loam Gravelly loam	3-8%	Well drained	Ridges, till plains, drumlins/Calcareous loamy lodgement till

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Table 1(cont): Soil types within the APE

Designation (name)	Soil Horizon	Texture, Inclusions	Slope	Drainage	Landform/Parent Material
PhA (Palmyra gravelly loam)	H1: 0-12 in H2: 12-29 in H3: 29-72 in	Gravelly loam Gravelly clay loam Stratified very gravelly sand to fine sand	0-3%	Well drained	Deltas, outwash plains, terraces/Loamy over sandy and gravelly glaciofluvial deposits
PhB (Palmyra gravelly loam)	H1: 0-12 in H2: 12-29 in H3: 29-72 in	Gravelly loam Gravelly clay loam Stratified very gravelly sand to fine sand	3-8%	Well drained	Outwash plains, terraces, deltas/Loamy over sandy and gravelly glaciofluvial deposits
PhC (Palmyra gravelly loam)	H1: 0-12 in H2: 12-29 in H3: 29-72 in	Gravelly loam Gravelly clay loam Stratified very gravelly sand to fine sand	8-15%	Well drained	Deltas, outwash plains, terraces/Loamy over sandy and gravelly glaciofluvial deposits
Qu (Quarries)	---	---	---	---	---
Ru (Rubbleland)	---	---	---	---	---
Uf (Udorthents, loamy skeletal)	H1: 0-24 in H2: 24-72 in	Gravelly loamy sand variable	0-35%	Well drained	---
Wk (Wakeville silt loam)	H1: 0-9 in H2: 9-41 in H3: 41-72 in	Silt loam Silt loam Fine sandy loam	0-3%	Somewhat poorly drained	Flood plains/Silty alluvium washed from areas of glacial drift
WsB (Wassaic silt loam)	H1: 0-9 in H2: 9-24 in H3: 24-30	Silt loam Channery silt loam Channery silt loam	2-8%	Well drained	Till plains, benches, ridges/Loamy till

*Soil types noted in blue are alluvial in nature; those noted in brown are considered disturbed

3.2 Regional Culture History

Archaeological investigations within the northeastern United States and southern Ontario, Canada, particularly during the past 30 years, have provided data concerning the human occupation of the region beginning c. 11,000 B.P. This roughly 11,000 year time span begins with small, highly mobile groups of Native Americans who entered the region near the end of the Wisconsin glaciation and ends with many native populations living in large, permanent villages and practicing large-scale maize agriculture at the time of European contact. With this in mind, the following section will provide a brief outline of cultural patterns recognized in the Northeast.

Paleo-Indian Period

Ritchie and Funk (1973:6-7) note that initial aboriginal settlement in the northeast occurred during the late Wisconsin times as vegetation slowly re-established itself following the glacial retreat. Small bands of the Llano and Clovis tradition penetrated northward following major river valleys located on elevated terraces. Paleo Indian groups probably consisted of a family or extended family unit of not more than 25 persons and they most likely came from southern Ohio and Pennsylvania which became inhabitable before New York and New England were free of ice.

At the time of penetration into New York, Paleo-Indians entered a park-tundra environment which existed south of the ice sheet then located north of the present-day St. Lawrence River and which supported grazing animals such as barren ground caribou and mammoths. South of this park-tundra zone was an open forest dominated by spruce, fir, jack pine, white pine, and a few deciduous tree species. Mastodon, caribou, woodland musk-ox, moose, elk, deer, bear, and wolf could be found in this habitat (Ritchie and Funk 1973:6-7).

Archaic Period

As the Pleistocene glaciers waned, a succession of changes took place in the plant and animal communities

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until about 4000 B.C., by which time essentially modern environmental conditions had developed. The human communities also adapted to the changing conditions with innovations in subsistence strategies, technology, and social behavior. A 7,000-year span from approximately 8000 B.C. to 1000 B.C. is known as the Archaic Period. Based upon what is known of the Archaic Period, it can be viewed as a time when groups settled in and became more familiar with local resources. They broadened their resource base and began to exploit a range of food products previously ignored by earlier populations. More intensive and extensive exploitation of local resources favored population increases, a decrease in the size of territories exploited, longer occupations at seasonal sites, and an increase in regional variability (Ellis, Kenyon, and Spence 1990:66-67).

It is suggested that these people relied considerably upon aquatic and marshland resources, as these habitats may have presented the greatest biological carrying capacity in an otherwise immature and resource-poor northern forest. Evidence from throughout the Northeast suggests a considerable reliance upon fish, waterfowl, small mammals, and reptiles as well as moose and white-tailed deer. There are implications that these people followed a seasonal cycle and had adapted to the humid Temperate Continental Climate of the northeast with its associated oak-chestnut-deer-turkey biome (Ritchie and Funk 1973:337).

Woodland Period

The Woodland Period (1000 B.C. to A.D. 1600) in the region is distinguished from the Archaic primarily by three important innovations which appear in many societies within eastern North America: pottery manufacture; deliberate cultivation of native plants; and interment under funerary mounds (Fagan 1991:355). The period is divided into three subunits: Early, Middle, and Late and available evidence suggests that the shift from Late Archaic to Early Woodland cultures is not characterized by abrupt changes in subsistence strategies or social structure (Bodner 1999:49-52; Spence and Fox 1986:39).

The Early Woodland's defining traits are Vinette 1 earthenware, gorgets, tubular smoking pipes, birdstones, boatstones, bar amulets, and copper ornaments. The best recognized Early Woodland manifestation in the northeast is the Meadowood culture which is roughly dated from c. 1000-500 B.C. in central and western New York and c. 900-400 B.C. in southern Ontario, Canada. Artifacts and refuse recovered from habitation sites indicate that the Meadowood economy was strongly riverine and lacustrine resource oriented with subsistence based on hunting, fishing, and the gathering of wild vegetable foods (e.g. acorns, chenopodium/goosefoot, polygonum/smartweed) (Loring 1985:95; Ritchie and Funk 1973:96 and 348).

The Vinette 1 earthenware is a utilitarian ceramic that characterizes Meadowood sites starting about 1000 B.C. It is similar to the low-fired, thick, grit-tempered pottery that appeared throughout the Eastern woodlands between 2500-500 B.C. This pottery is built by the coil method with paddling to weld the coils together. It is posited that these early ceramics played a crucial role in the more intensive exploitation of wild and cultivated seed crops and seem to indicate a more sedentary lifeway (for at least part of the year) where transport and breakage were not major factors (Fagan 1991:356; Griffin 1965:106-107; Hamilton and Yesner 1985:51-52; Spence et al. 1990:125-137; and Stewart 1982:71).

Beginning about 500 B.C. and lasting until the end of the Early Woodland, the Middlesex culture appears within New York, New England, and Ontario. Evidence for this culture is almost exclusively from burial sites and it probably represents a mortuary aspect of a number of otherwise distinctive hunter-gatherer bands that were heavily influenced by the Adena culture centered in Ohio and Indiana c. 500-200 B.C. The earliest Middlesex sites overlap temporally with later Meadowood sites and the populations must have surely interacted (Ritchie and Funk 1973:97; Spence et al 1990:125-141).

Changes within the ceramic and lithic industries provide artifactual markers for the advent of the Middle Woodland beginning somewhere between 400-200 B.C. Also visible in the archaeological record beginning in the Middle Woodland is the presence of larger sites with substantial middens and indications of structures. All of these changes are associated with the Point Peninsula culture which ranged throughout south-central Ontario, southern Quebec, northern and western New York, and northwestern Vermont (Griffin 1965:109; Ritchie and Funk 1973:117; Spence and Fox 1986:33-35; Spence et al 1990:157).

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Settlement system data for the Point Peninsula culture is sparse but it suggests that large macrobands of 100 or more individuals occupied sites on the edges of lakes and rivers from the early spring through the late fall. An emphasis was placed on harvesting shellfish and spawning fish in the spring and early summer, giving way to the exploitation of wild rice, nuts, and deer towards late summer and early fall. Mortuary practices, influenced by the Hopewell culture of Ohio, included the construction of burial mounds and may have aided in the establishment and delineation of a band's territory. Osteological data suggests that the Point Peninsula people followed a patrilocal, post-marital residency pattern (Spence et al 1990:157-168).

The time span from A.D. 600-900 sees the transition from the Middle Woodland to the Late Woodland and by about A.D. 1000, the Owasco culture had emerged from the Point Peninsula culture and represented an evolving sedentary, community-oriented lifeway based primarily upon a horticultural economy involving the cultivation of corn, beans, and squash (Bodner 1999:54; Fox 1990:171; Ritchie and Funk 1973:364; Williamson 1990:291).

The settlement pattern of the Owasco consisted of camps, hamlets, and villages. Villages were semi-permanent occupation sites that typically ranged from about 0.4 ha to 1.6 ha (1-4 acres) in area, contained at least two or more houses of various sizes and shapes, were located on well-drained soils, had palisades, and have evidence of hearth activities and large storage pits. Hamlets were also semi-permanent habitation sites similar to villages but which normally only contained one structure. Camps were episodically used sites of various sizes located near pertinent resources and utilized by fishing, hunting, or collecting parties from the larger settlements. Camp sites included spring and summer fishing stations, fall and winter hunting posts, and lithic workshops and procurement locations (Ritchie and Funk 1973:359; Williamson 1990:291). Mortuary practices show a lessened attention to elaborate ritual as evidenced by lavish grave goods but the emergence of large cemeteries and ossuaries situated near villages (Fox 1990:172; Ritchie and Funk 1973:359). It is also during this time that a shift from a patriarchal to matriarchal society occurs.

The transition from Owasco to identifiably Iroquoian cultures was gradual, and continuity of populations is inferred. By A.D. 1300, most of the archaeological indices of the Iroquois Tradition were in place (Trubowitz 1983:111). Large villages were moved every 15 to 20 years as ready supplies of wood and game and soil productivity diminished. The preferred village locations were no longer in the valley flats along the major rivers and creeks but on defensible hilltop locations. Special purpose camps of short duration may have been located in other environments, however, to gain access to particular resources. Village house types had changed from small circular or oval structures to the multifamily longhouses. An emphasis on canoe travel seems to have declined, and major trails were relied upon for travel. Prior to the arrival of Europeans and the institution of the fur trade, the general area of the APE was utilized by the Neutral Nation, also known as the Attawandaron.

Historic Period

After European contact in the early 1600s, the APE fell under the control of the Seneca as they expanded their boundaries westward to gain a larger share of the bourgeoning fur trade. Following the Revolutionary War, the Seneca Nation was slowly forced to sell land to New York State, with the exception of several reservations.

3.3 Sites within 1.6 km (1 mile) of the APE

An archaeological site files check was conducted via the Cultural Resource Information System (CRIS) on the website of the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP). Additional site file information was also gleaned from a database of information on NYSM sites that had kindly been provided by Josalyn Ferguson, SHPO, as well as from the 1922 Parker publication in the NYSM Bulletin that discussed known archaeological sites across New York State at that time. The site file database identified 14 known archaeological sites within one mile of the APE. A summary of these sites is provided below in Table 2.

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Table 2: Summary of archaeological sites within 1.6 km (1 mile) of the APE

Site or NR Number	*Site Name*	*Site Type*	*Distance from APE*	*Comments*
NYSM 8684* (believed to be NYSM 8664)	---	Trail	Partially encompasses southern section of APE	Site number believed to be a typo and meant to be NYSM 8664, a trail designated by Parker along Rt 5 (south of railroad tracks) in Genesee County
03709.000036 Follett 68 RMSC Cda 075	Sparry Farm	Native camp	0.16 km (0.1 mi) SW from Circular Hill Road and East Main Road	Notched projectile points
03709.000083 NYSM 8662 ACP GNSE 44 RMSC Cda 226	---	Native burial?	0.24 km (0.15 mi) S of Circular Hill Road	Indicated as burial site on Parker's map of Genesee County but no written description provided
03709.000082 NYSM 8663 ACP GNSE 16 RMSC Cda 219 RMSC Cda 224	Lyman Farm	Native camp	1 km (0.65 mi) S of Circular Hill Road	The place is known locally as "Indian mound," but mound appears to be a natural formation, though arrow points, chippings and some worked stones have been found at the base (Parker 1920:564).
NYSM 3337			1.3 km 90.85 mi) WSW of Circular Hill Road	
03709.000035 Follett 1 RMSC Cda 072	McGowan	Native camp	1.3 km 90.85 mi) W of Circular Hill Road	1-2 Ohio slate birdstones, refuse (from site form)
03741.000453 NYSM 3337 ACP GNSE 15 RMSC Cda 218	---	Native camp	1.5 km (0.95 mi) WSW of Circular Hill Road	Arrow points, celts and hammerstones have been found (Parker 1922: 563).

CRIS also contained information on archaeological surveys that were conducted in the vicinity of the APE. A 2000 Phase I survey performed by Pratt and Pratt for the Lehigh Valley Water Project (00SR50868) that involved the installation of 3.8 miles of watermain within existing ROWs tested two sections of ROW that abut the current APE. These sections lie along East Main Road (Rt 5) and Circular Hill Road. No archaeological sites or artifacts indicative of Native presence on the landscape were recovered during the fieldwork. Approximately 0.8 mi west, on the south side of East Main Road, a Phase I survey was conducted for a proposed senior living community (08SR58849) by Powers & Teremy, LLC. Unfortunately, no survey report for this project was available via CRIS, but two (2) of the Native sites listed in Table 2 were noted as within or adjacent to that project's APE. About 0.6 miles east of the APE along the north side of East Main Road a Phase I survey was undertaken in 2017 for a bulk storage facility (17SR00292) by SUNY PAF. No archaeological sites were found within the 14-acre APE (Sheridan 2017). A Phase I survey done in 2011 by Pratt and Pratt for 10-acre APE that contained land contaminated by a chemical spill in 1970. This project area was located about 0.5 miles north of the APE at Gulf Road, near the

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northern terminus of a former railroad connector line that extended into the current APE. No archaeological sites were found during this survey.

The closest archaeological survey where a Native site was reported happened in 1993 for a proposed expansion of an existing gravel mine about 1.4 mi north of the east end of the APE. The survey was conducted by this report's author under the auspices of the Rochester Museum & Science Center (Ewing et al. 1993). A surface examination of lands within the APE located a chert biface and a celt fragment in close proximity to each other that were designated the Stein Site (03709.000057). Supplemental Phase IB investigations, consisting of 13 shovel test pits dug at and near the find spots, did not recover any additional artifacts. This site was determined to not be eligible for the National Register. Although not noted on CRIS, the author of this report also conducted a survey in the early to mid-1990s for a runway expansion within the Le Roy Airport property immediately south of the APE. No archaeological sites were found during that Phase I survey.

3.4 Historic Maps

A series of historic maps and aerial resources were accessed online (http://www.historicmapworks.com, http://store.usgs.gov, https://www.google.com/earth/versions/#earth-pro) and are found within this report as Figures 2 and 4 through 10. The information gleaned from all accessed resources form the basis of a discussion related to the historic usage of the APE and how it influenced the conditions seen in the field today.

As early as 1866 (Figure 4), the presence of what appears to be two (2) railroad tracks traverse the northern part of the APE between Circular Hill Road and Church Road and a cemetery is noted in the APE on the north side of East Main Road as are two residences, east of Circular Hill Road. The APE appears to be mostly lands associated with lots for buildings fronting on East Main Road, although a lime kiln owned by P. Colman is depicted on the south side of the railroad tracks, near Church Road. Ten years later (Figure 5), it looks like a third railroad track has been added to the two existing lines. Several of the lots along East Main Road have indication of orchards, including the two (2) in the APE. The cemetery is still depicted at this time and pertinent to the eastern end of the APE is the still-present lime kiln just west of Church Road, now on the property of W. Karney that straddles the three (3) railroad alignments traversing the APE. Conditions within the APE remain relatively the same as late as 1904 (Figure 6). Three (3) railroad tracks still cross the APE east-west, while two (2) structures and the cemetery are still within the APE along East Main Road. The lack of a lime kiln seems to be the only immediate change within the APE. However, slightly north of the APE, changes that will come to impact the APE are starting as the General Crushed Stone Co. is seen to be operating just north of Gulf Road.

The 1950 Le Roy quadrangle (Figure 7) continues to indicate three (3) sets of railroad tracks but additional railroad impacts have occurred. Near the tracks crossing of Circular Hill Road, several side tracks have been added to the north, while a connecting railway now runs northward to the stone quarry from the existing tracks in the eastern part of the APE. Several more buildings are now shown along the north side of East Main Road, while the cemetery that predates 1866 is noted as the East Main Street Cemetery (E Main St Cem). Figure 7 also shows additional data not seen on earlier maps due to the presence of contour intervals. The contour intervals in what would have been the Karney property associated with the lime kiln show clear evidence of borrow pits/excavations and the alteration of the ground surface in this area. Expansive areas of excavations noted by contours are seen north of the APE on both sides of the north-trending railroad connector that appears to service the expanding stone quarry.

The 1995 aerial (Figure 8) shows that quarrying operations have moved south of Gulf Road and may have already impacted the APE in several places. This appears true along the northern border, especially in the central section immediately below the easily-seen quarrying operations. Bare earth, numerous trails/access roads, and irregular vegetation patterns suggest soil disturbance may have occurred years prior to this photograph, possibly involving the removal of topsoil deposits prior to expected quarrying operations in those areas. The northward railroad connecter is no longer seen and it appears that the two (2) southernmost railroad tracks have been abandoned and allowed to revegetate. There has also been a tremendous growth in the number of structures now within the APE along the north side of East Main Road. The establishment of a mobile home park and about a dozen frame structures has dramatically increased the human footprint and impacts along this section of the APE as lands were leveled to provide building lots. The presence of a now-operational Le Roy Airport can be seen just east and south of the APE as this time. Lands behind the structures on East Main Road and the railroad tracks at the western

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end of the APE are seen as active farm fields in 1995 and are considered to be the only lands in the APE that have not been significantly impacted by soil-disturbing activities by this time. Figure 9 is an aerial from 2009 that shows the expanded quarry now directly abuts the APE along the northern border, with at least part of the impacted lands extending into the APE. The single operational railroad line is well-defined, as are the two (2) overgrown abandoned railroad beds. The lands fronting East Main Road within the APE are almost totally developed by this time, but the farm lands behind these structures still exist. Conditions within and adjacent to the APE continue to remain relatively stable from 2009 into the present day as shown by Figures 2 and 10 except the East Main Street Cemetery is now noted a Buell Cemetery on Figure 2. Records note this cemetery as containing burials from the early 1800s up to the early 20th century and while the grounds are well-maintained, precise boundaries were not seen other than treed hedgerows between adjacent properties at 8079-83 East Main Road and 8103 East Main Road (Figure 11).

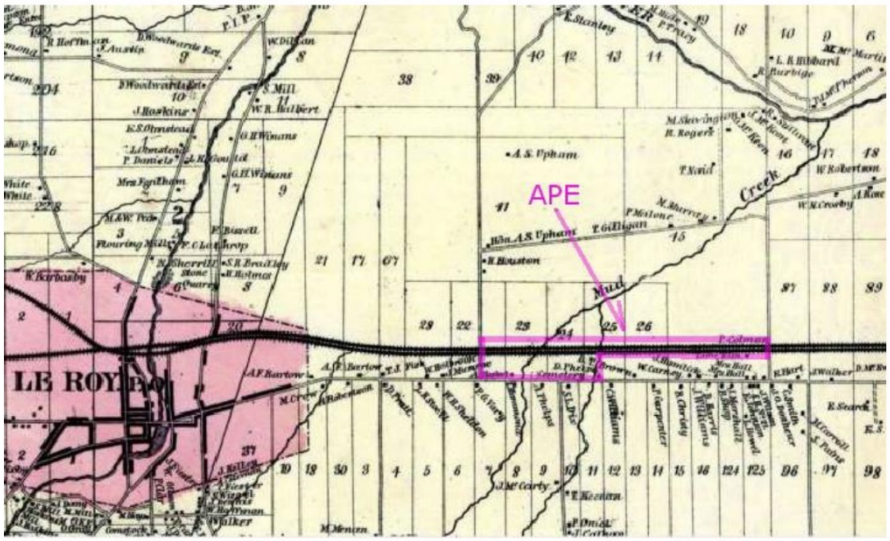

Figure 4: APE on 1866 *New Topographical Atlas of Genesee and Wyoming Counties, New York*

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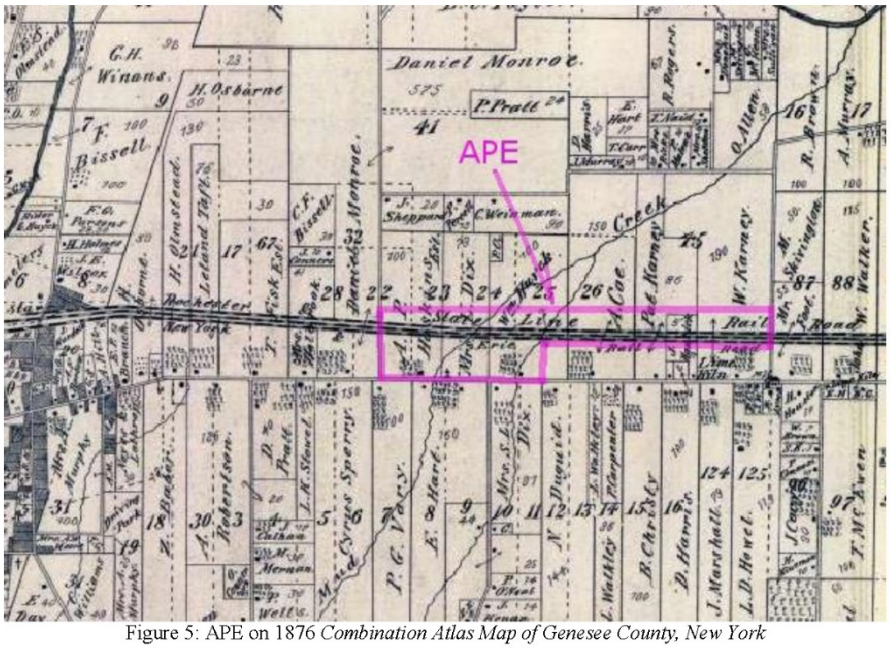

Figure 5: APE on 1876 *Combination Atlas Map of Genesee County, New York*

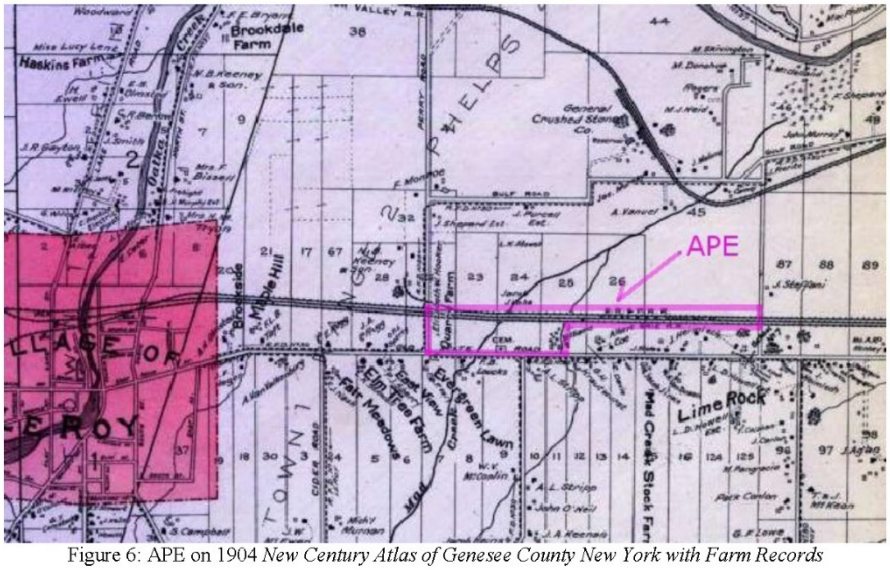

Figure 6: APE on 1904 *New Century Atlas of Genesee County New York with Farm Records*

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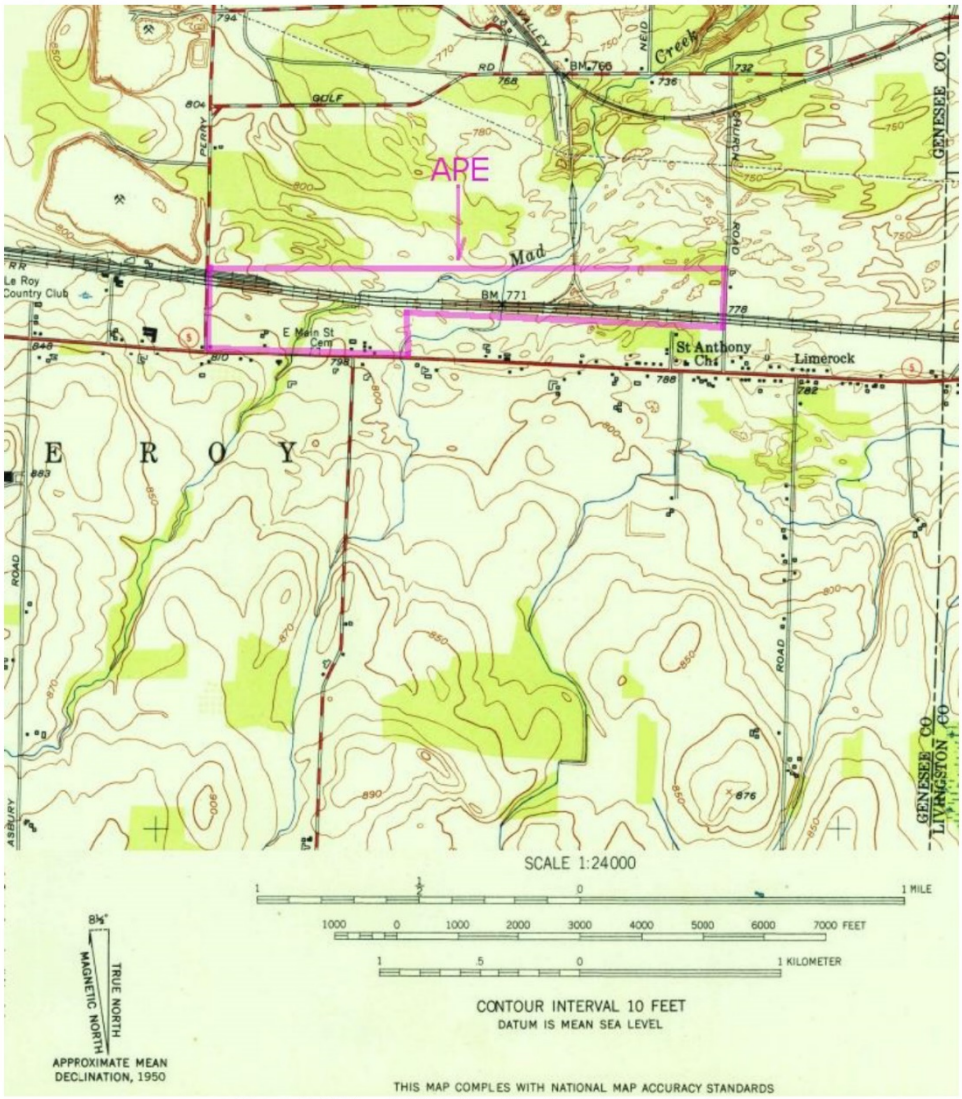

Figure 7: APE on 1950 Le Roy, New York 7.5' quadrangle

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Figure 8: APE on Google Earth: Imagery date April 1995

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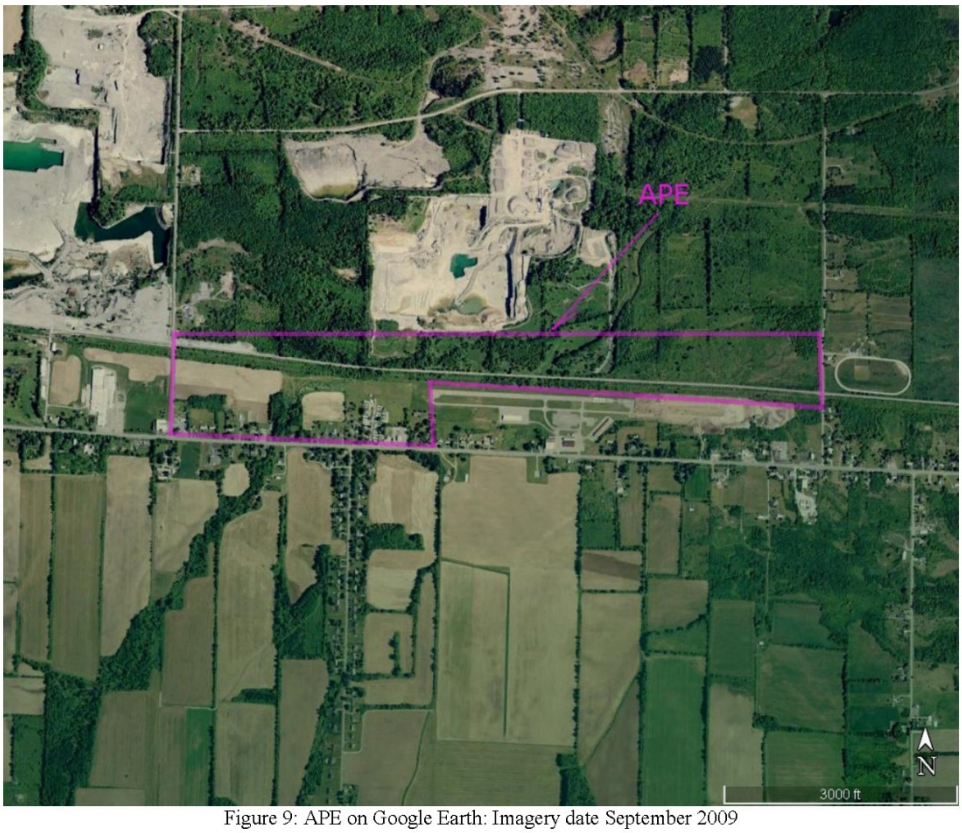

Figure 9: APE on Google Earth: Imagery date September 2009

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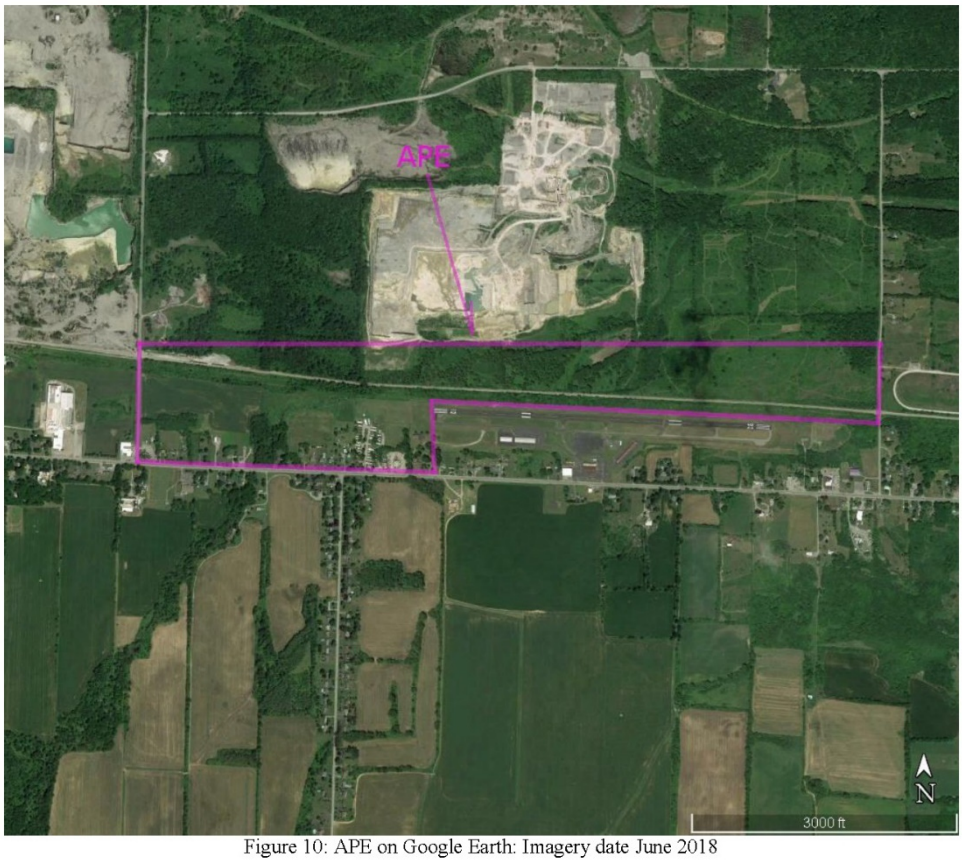

Figure 10: APE on Google Earth: Imagery date June 2018

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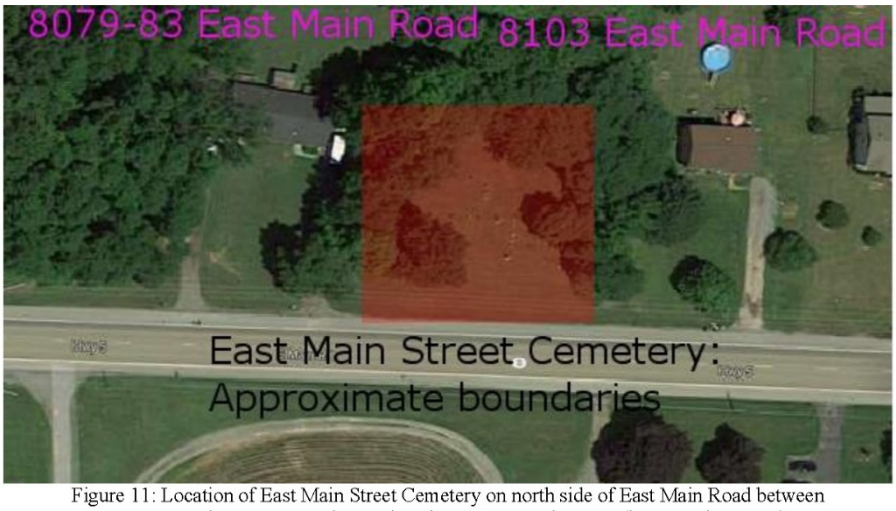

Figure 11: Location of East Main Street Cemetery on north side of East Main Road between 8079-83 and 8103 East Main Road as shown on Google Maps (imagery date 2019)

IV. Sensitivity Assessment

The overall sensitivity assessment for this project is deemed to be *average with regards to Native American cultural resources and elevated for historic resources.* Native people have utilized and inhabited the area since the retreat of the glaciers. The forests, wetlands, and Mud Creek proved valuable to inhabitants in the area. Many sections transected by the APE would provide a good location for a camp site whose occupants could exploit nearby faunal and piscean resources on a limited basis. The same factors were relevant for historic settlers of the area and coupled with the fact that the APE contains complete yard areas surrounding numerous structures more than 50 years old and therefore within the period of consideration for the National Register means that the likelihood of encountering archaeological evidence related to the occupation of these structures is increased. Given the early date of burials within the East Main Street Cemetery, located between the properties at 8079-83 East Main Road and 8103 East Main Road, and the potential for unmarked graves, the sensitivity for this specific section of the APE should be considered very high.

V. Type and Extent of Disturbance

Several avenues of investigations suggest that a large percentage of the APE is disturbed to such an extent that Phase IB investigations would not be warranted. Soil data from the WSS indicate three (3) soils noted within the APE and found along the existing railroad grades and quarry boundary are disturbed. Map evidence shows additional impacts such as the construction of the connecting railroad that ran north from the existing tracks and the expansion of the railroad tracks near the crossing of Circular Hill Road have impacted soils. Contour intervals from the 1950 quadrangle and subsequent aerial photographs, coupled with the knowledge that a lime kiln operated in the eastern part of the APE during at least the central part of the 19th century, point to wholesale soil redistribution as limestone was quarried to supply the kiln(s).

Finally, an assessment of the APE via a pedestrian survey revealed disturbed soils as suggested by spoil piles, berms, and channelized ditches within the sections of the APE including the railroad alignments and the lands north of them. The quarry north of the APE appears to have done previous soil redistribution within sections of the APE as noted by the very large spoil piles observed immediately north of the railroad tracks in numerous places. The section of the APE west of Church Road where documentary evidence suggested soil disturbance occurred during mining of limestone for the kiln associated with this section of land was visually confirmed during the walkover of the APE. Soil berms lined the edges of the railroad property along this section of the APE and similar berms (and associated depressions interior of the berms), were also seen along the former connector railroad as well.

These soil-disturbing activities would have impacted the alluvial soils noted by the WSS (see Figure 3) in these areas. Additionally, the areas immediately around most structures found on the north side of East Main Road have been disturbed by grading to provide level building areas. The least disturbed section of the APE is the current and former farm lands immediately east of Circular Hill Road and west of the Le Roy Airport runways, between the railroad tracks and the structures fronting East Main Road (Figure 12). Photographs found in Appendix A are a representative sample of the conditions found throughout the APE.

VI. Phase IA Conclusions and Recommendations

If the tree removal process only involves the cutting of trees and no soil-disturbing activities, then no Phase IB investigations would be recommended for this project. However, plans for the removal of trees that might form a potential obstruction for pilots at Le Roy Airport are not formalized yet, so a recommendation for Phase IB investigations would be warranted for parts of the APE if clearing and stump removal and/or the construction of access roads are performed as part of the proposed project. However, Phase IB investigations would only be recommended in the undisturbed western section of the APE in the former or existing farm lands west of the airport and east of Circular Hill Road. Furthermore, if work in or around the building lots for the structures along East Main Road occurs in areas not graded or filled to provide a level building site, then these areas should be subjected to Phase IB investigations as well if soil impacts are to occur. As alluvial soils are noted in this section of the APE adjacent to Mud Creek, Phase IB investigations should attempt to penetrate any soil layers that might contain buried cultural material, which according to the soil profile might extend to about 102 cmbs (41 in), although the potential for modification of soils in this area may have occurred during construction of the airport but indications are not readily visible and background research cannot verify it.

Finally, although no soil disturbing activities are planned within the East Main Street (Buell) Cemetery, located on the north side of East Main Road between the properties at 8079-83 East Main Road and 8103 East Main Road, field verification of the cemetery boundaries should be done prior to any potential ground-disturbing activities on adjacent properties to prevent any encroachment on the cemetery that could result in the inadvertent impact to unmarked graves.

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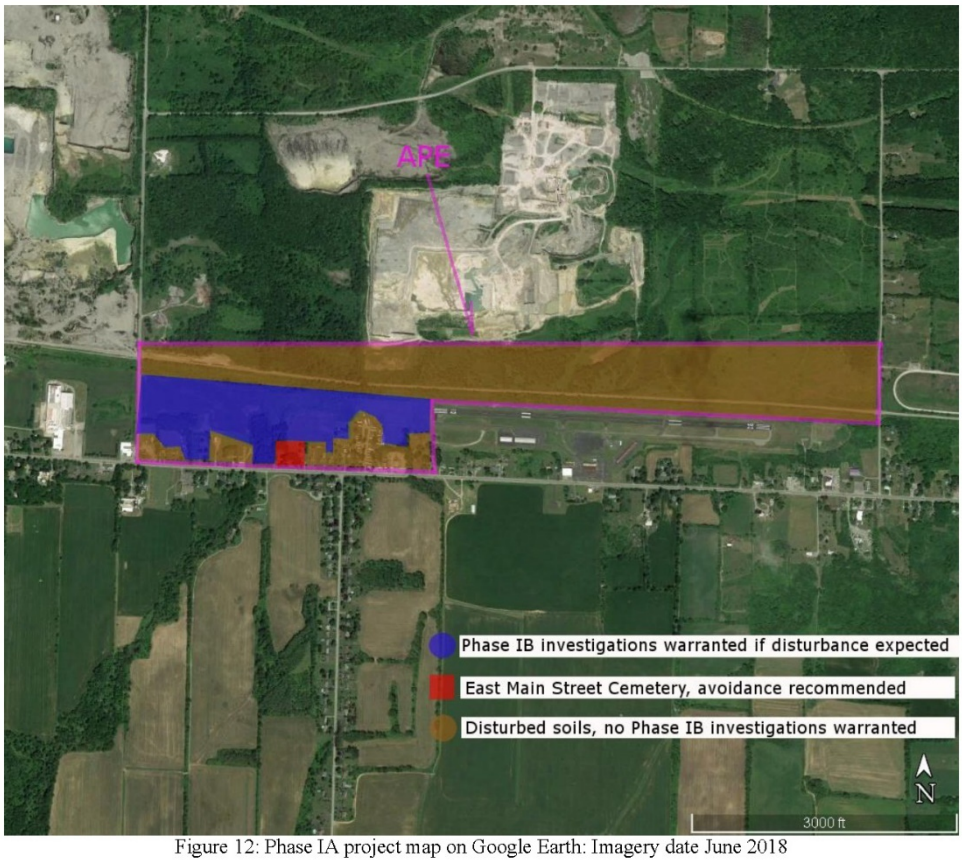

Figure 12: Phase IA project map on Google Earth: Imagery date June 2018

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United States Department of Agriculture
2019 Web Soil Survey (online http://websoilsurvey.nrcs.usda.gov)

United States Geological Survey (online http://store.usgs.gov)
1950 Le Roy, New York 7.5' quadrangle
2019 Le Roy, New York 7.5' quadrangle

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Appendix A

Photographs

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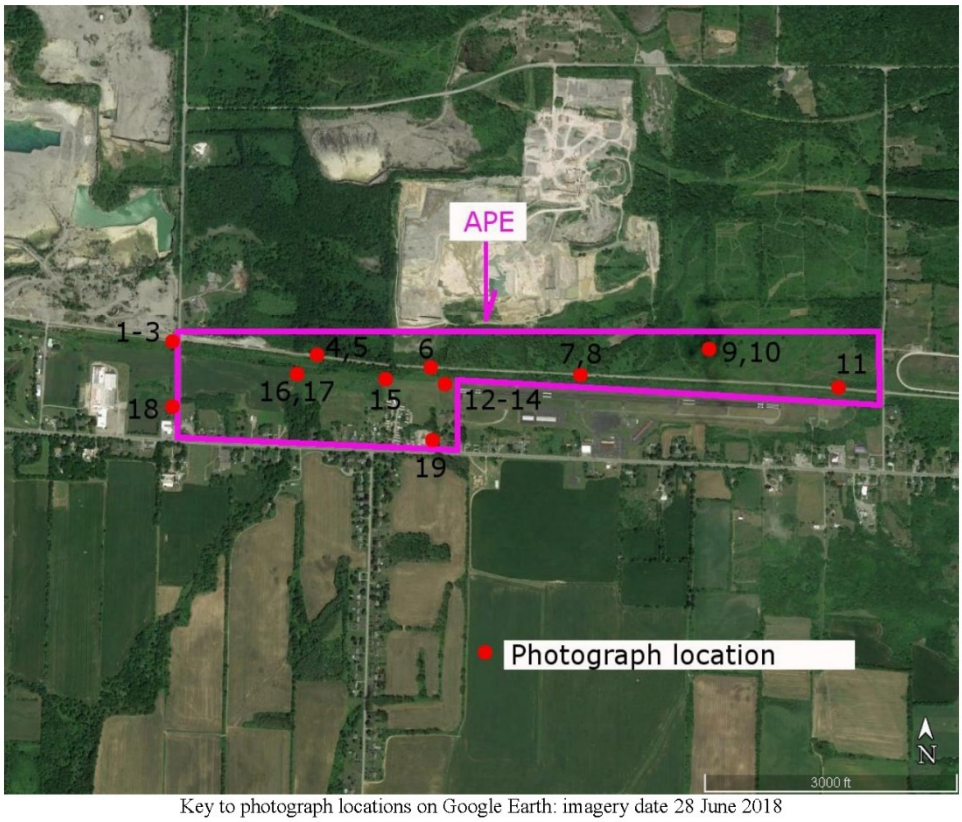

Key to photograph locations on Google Earth: imagery date 28 June 2018

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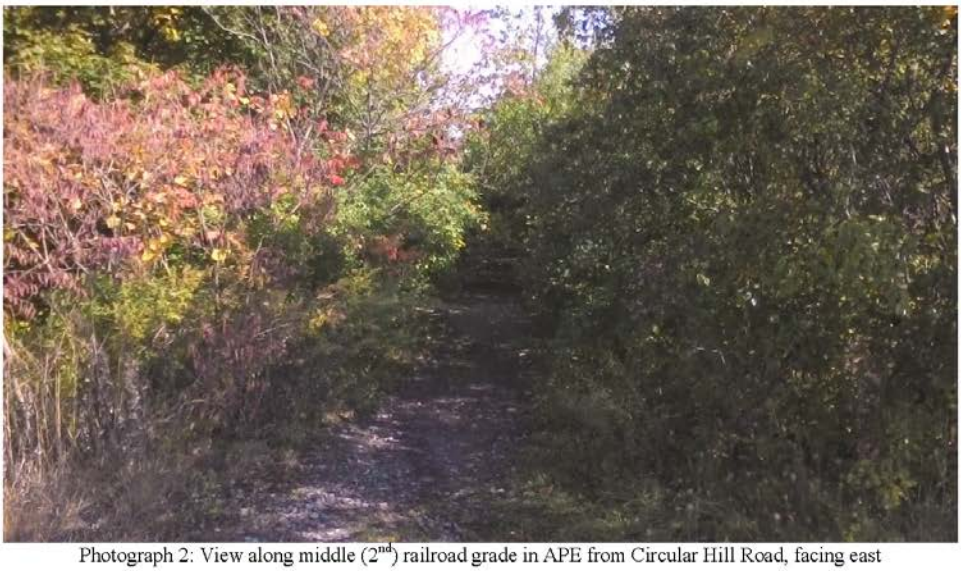
Photograph 1: View along southernmost railroad grade in APE from Circular Hill Road, facing east



Photograph 2: View along middle (2nd) railroad grade in APE from Circular Hill Road, facing east

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Photograph 3: View along northernmost railroad grade in APE from Circular Hill Road, note total disturbance of soils in expand footprint and large spoil pile adjacent to quarry to north (left), facing east

Photograph 4: View along operational railroad track from east of expanded track area near Circular Hill Road, note total disturbance of soils and large spoil pile on north (right), facing west

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Photograph 5: View towards abandoned railroads grades showing disturbance associated with ditching and the creation of the railroad bed, facing southeast

Photograph 6: View of channelized ditch (Mud Creek?) between the existing railroad and quarry, noted steep bank on quarry side comprised of spoil piles of displaced soil and stones, facing north

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Photograph 7: View of displaced soils in quarry lands north of existing railroad tracks, facing north

Photograph 8: General conditions along operational railroads tracks in central part of APE, note substantial ditching and heavily-vegetated berms on both sides (abandoned railroads grades to south/right and quarry to north/left), facing east

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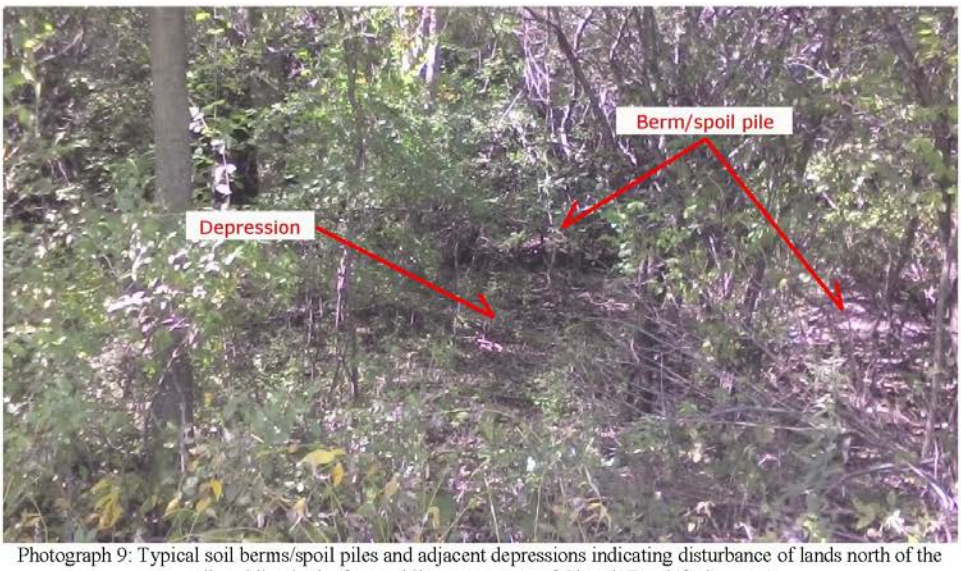
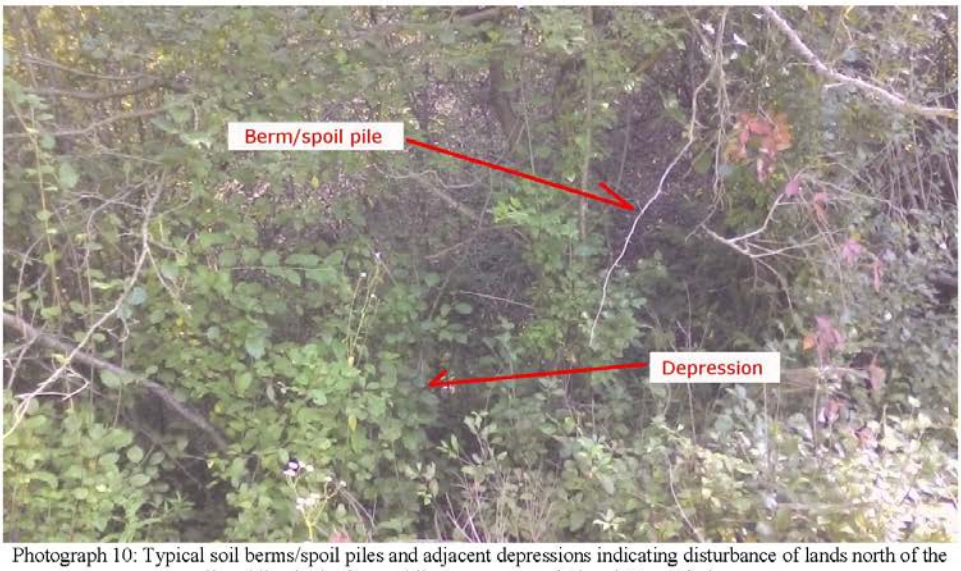


Photograph 9: Typical soil berms/spoil piles and adjacent depressions indicating disturbance of lands north of the railroad line in the former kiln quarry west of Church Road, facing west



Photograph 10: Typical soil berms/spoil piles and adjacent depressions indicating disturbance of lands north of the railroad line in the former kiln quarry west of Church Road, facing east

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Photograph 11: Typical disturbed conditions in former kiln area west of Church Road showing evidence of grading (note spoil piles on south/left adjacent to operational railroad tracks), facing northwest

Photograph 12: Typical conditions of APE west of Le Roy airport, between the abandoned railroad tracks and structures fronting East Main Road, facing south

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Photograph 13: Typical conditions of APE west of Le Roy airport, between the abandoned railroad tracks and structures fronting East Main Road, facing southwest

Photograph 14: View along disturbed section south of abandoned railroad grades, facing west

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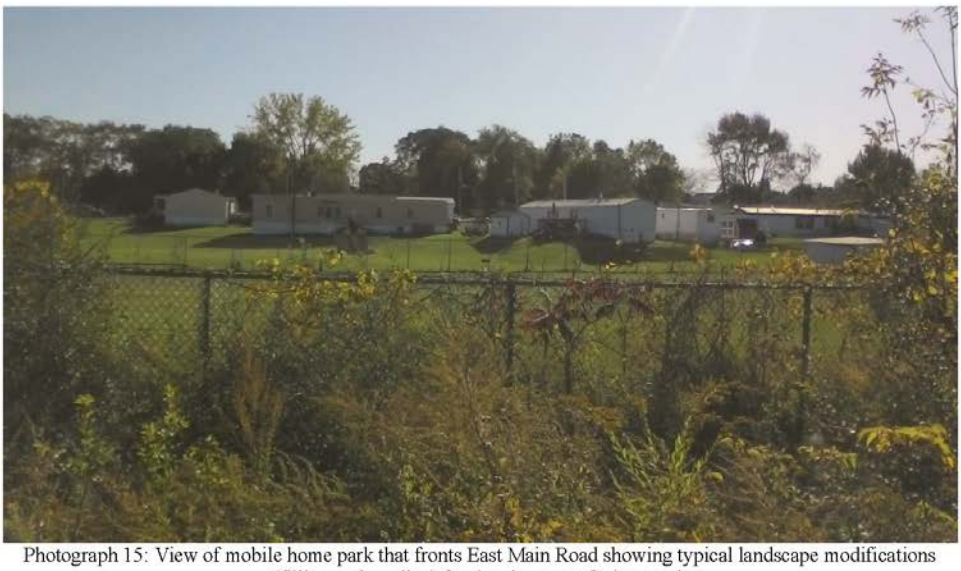

Photograph 15: View of mobile home park that fronts East Main Road showing typical landscape modifications (filling and grading) for development, facing south

Photograph 16: Potentially undisturbed section of APE in former agricultural fields east of Circular Hill Road and between the abandoned railroad grades and structures fronting East Main Road, facing east-southeast

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Photograph 17: Potentially undisturbed section of APE in active agricultural fields east of Circular Hill Road and between the abandoned railroad grades and structures fronting East Main Road, facing southwest

Photograph 18: Typical modification of lots adjacent to East Main Road for development, facing east

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Photograph 19: Typical modification of lots adjacent to East Main Road for development, facing west-northwest

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Appendix E:

Wetland Delineation Report and Determination

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

339 East Avenue, Suite 200
Rochester, NY 14604
Ph 585.385.7417 Fax 585.385.3741

Letter of Transmittal

Date:	05/10/20	Project No.
Attention:		
Re:	**LeRoy Airport**	
	Wetland Delineation Report	
	Request for Jurisdictional	
	Determination	

To: U.S. Army Corps of Engineers
Buffalo District-Regulatory Branch
1776 Niagara Street
Buffalo, NY 14207

We are sending you:

[x] Attached [ ] Under Separate Cover Via _____ the following items
[ ] Shop Drawings [ ] Prints
[ ] Samples [ ] Specifications [ ] Plans
[ ] Change Order [ ] _____ [ ] Copy of Letter

Copies	Date	No.	Description
1	December 2019		LeRoy Airport Wetland Delineation Report

These materials are transmitted as checked below:

[ ] For Approval [ ] Approved as Submitted [ ] Resubmit _____ Copies for Approval
[x] For Your Use [ ] Approved as Noted [ ] Submit _____ Copies for Distribution
[ ] As Requested [ ] Return for Correction [ ] Return _____ Corrected Prints
[ ] For Review and Comment [ ] Prints Returned After Loan to Us
[ ] For Bids Due [ ] _____

Remarks:
Please see attached Wetland Delienation Report for LeRoy Airport in LeRoy, NY. Providing for review for Jurisdictional Determination. Questions can be directed to:
Bryan Bancroft, CPESC
Lu Engineers
Natural Resources Group Leader
339 East Ave, Suite 200
Rochester, NY 14604
585.385.7417 x247

Copy to: _____

Signed: Bryan Bancroft

Wetland Delineation Report

for

LeRoy Airport – Environmental Assessment for On- and Off- Airport Obstruction Removal

Address:
8267 E Main Rd, Le Roy, NY 14482
Town of LeRoy, Genesee County, New York

Delineated Forested Wetland 'A'

Prepared for:

Passero Associates
242 W Main St Suite 100
Rochester, NY 14614

by:

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL
339 East Avenue, Suite 200
Rochester, NY 14604

December 2019

Table of Contents

I. Introduction

Lu Engineers was retained by Passero Associates to delineate federal and New York State jurisdictional wetlands in areas adjacent to the LeRoy Airport (address- 8267 E Main Rd, Le Roy, NY 14482). Two areas located west of the LeRoy Airport were delineated for the presence of wetlands (see attached mapping for wetland screening area).

The purpose of the delineation was to identify Federal and State wetlands that are present within the screening area in anticipation of potential airspace obstruction removal at the site. All areas within the wetland screening areas were screened for wetlands.

Identification of wetlands allows regulatory agencies and the project sponsor and design consultants to review and modify mapping to avoid and minimize wetland impacts to proposed development or other activities within the delineated area.

II. Site Description

The project site is located along E. Main Road, within the Town of LeRoy, Genesee County, New York. The wetland screening area consists of approximately 10.2 acres of land, divided into two areas. The areas are located west of the airport and consist of wooded areas - the north site is bordered by Dolomite gravel quarry to the east, and CSX Railroad to the south, the north site is bordered by CSX Railroad to the north, and E. Main Road to the south. Undeveloped forest, agricultural land and residential property make up the remainder of the surrounding area.

There is no existing development at the site. The properties consist of undeveloped land, including forested, shrub scrub, and meadow areas. Mud Creek is present within the southern screening area, and flows north through the center of the area.

The site location is shown in Figure 1.

Table 1. Hydrologic Summary of System

Hydrologic Feature	Hydrologic Unit Reach Code	Watershed Area (Sq. Mi.)	Water Regime	Watershed Description	NYSDEC Classification
Mud Creek	041300030404	9.24	Perennial non-navigable tributary	Includes agricultural, forested, and residential land cover types/uses.	Class C

State and Federal Wetlands Identified from Public Record Review

No New York State freshwater wetlands are located within or adjacent to the property. The closest state mapped wetland, State Wetland CH-28 is identified as a Class 2 wetland and is listed as being 45 acres in size. This wetland is located approximately 1.85 miles northeast of the screening area.

One tributary as identified in the table above exists within the southern screening area. Mud Creek flows north beneath E. Main Rd. and into the southern screening area before flowing through the area and northeast beneath CSX Railroad. The creek then continues northeast, outside of the northern screening area before entering Oatka Creek in the vicinity of State Wetland CH-28. Oatka Creek flows into the Genesee River in the vicinity of nearby Scottsville, which ultimately flows into Lake Ontario. The tributary is identified as a NYSDEC Class C Stream within the screening area.

New York State regulates activities within its freshwater wetlands under Article 24 of the Environmental Conservation Act. The state also regulates certain activities within 100 feet of a regulated freshwater wetland, including placement of fill, utilities and buildings, and alteration of stream channels and outfalls.

New York State wetland mapping of the project area is provided in Appendix E.

The National Wetland Inventory Map for the property shows mapped federal wetlands in the northern and southern screening areas at the site. Mud Creek is mapped as federal wetland, (Riverene, perennial, permanently flooded) within the southern screening area. An approximate 3.38-acre Forested/Shrub wetland is mapped in the center of the northern screening area. Wetlands assumed to be federal regulated wetlands were delineated for this study, and are discussed in this report and the supporting data sheets.

National Wetland Inventory wetlands are provided in Appendix E.

Mapped soil types within the project area include Benson soils, Canandaigua silt loam, Ontario loam, Palmyra gravelly loam, Wakeville silt loam, and Wassaic Silt loam. The Benson series consists of shallow excessively drained soils on glaciated uplands. The Canandaigua series consists of very deep, poorly and very poorly drained soils formed in silty glacio-lacustrine sediments. The Ontario series consist of very deep, well drained soils formed in loamy till. The Palmyra series consists of very deep, well drained to somewhat excessively drained soils formed in glacial outwash. The Wakeville series consists of very deep, somewhat poorly drained soils on flood plains. The Wassaic series consists of moderately deep, well drained soils formed in loamy till.

Soil mapping found within the project area is provided in Appendix D. A brief description of the soils mapped within the project area is provided in Table 2. Detailed soil map unit descriptions are also found in Appendix D.

Table 2. Mapped Soil Type Legend

Map Unit Symbol	Map Unit Name	Hydric Rating
BeB	Benson soils, 0 to 8 percent slopes	Not Hydric (0%)
CaA	Canandaigua silt loam, 0 to 2 percent slope	Predominantly Hydric (95%)
OnB	Ontario loam, 3 to 8 percent slopes	Not Hydric (0%)
PhB	Palmyra gravelly loam, 3 to 8 percent slopes	Not Hydric (0%)
PhC	Palmyra gravelly loam, 8 to 15 percent slopes	Not Hydric (0%)
Wk	Wakeville silt loam	Predominantly Non-Hydric (5%)
WsB	Wassaic silt loam, 2 to 8 percent slopes	Not Hydric (0%)

III. Field Investigation Methods

Lu Engineers delineated the wetland boundaries using the Routine On-Site Method outlined in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual and the Northeast/Northcentral Regional Supplement to the 1987 Corps of Engineers Wetland Delineation Manual. Dominant vegetation in the tree, sapling/shrub, vine and herb layers was identified using the areal dominance method. Trees, shrubs and saplings were identified within a radius of typically 30 feet around the soil test pit for each

sample point. Herbs and vines were identified within a radius of 5 feet around the soil test pit for each sample point.

Soils were described using USDA methods for color identification (the Munsell color system), texture, structure and redoximorphic features. Hydric soil indicators provided in the Northeast/Northcentral Regional Supplement were also utilized in the classification of the soils. Wetland hydrology was identified using field indicators as described in the 1987 Delineation Manual.

A wetland determination data form provided in the Northeast/Northcentral Supplement to the Wetland Delineation Manual was used to characterize the vegetation, soils and hydrology at each sample point. The data form provides indicators for Hydric Soil and Wetland Hydrology, as well as Hydrophytic Vegetation indicators.

Wetland boundary points were logged using a Trimble Geo 7X hand held global positioning system (GPS). Data from this device was downloaded and post-processed for greater positional accuracy.

IV. Results

Wetland A *(Forested Wetland)*
Wetland A is a 2.01-acre wetland located in the north portion of the study area associated with the wetland delineation. The wetland is characterized by the presence of mature trees in a low-lying area. Emergent vegetation and some shrubs are also present in the wetland area. No hydrologic connection between this area and Mud Creek was observed during the delineation.

Dominant trees within the wetland area consist of green ash (*Fraxinus pennsylvanica-FACW*), and eastern cottonwood (*Populus deltoides-FAC*). Herbaceous vegetation observed within the wetland includes hop sedge (*Carex lupulina -OBL*), swamp milkweed (*Asclepias incarnata*- OBL) and sensitive fern (*Onoclea sensibilis -FACW)*.

Hydrology indicators observed in this wetland include saturation, water marks, drift deposits and water stained leaves. Soil saturation was present below the ground surface during sampling of Wetland A.

Soils were observed in Wetland A with a Munsell color ranging from 10 YR 3/1 to 10 YR 6/3, with a soil texture ranging from muck to loamy/clayey. Hydric soil indicators observed included A11-Depleted below Dark Surface, and F3- Depleted Matrix.

Adjacent upland areas are dominated by shagbark hickory (Carya ovata-FACU) and common buckthorn (*Rhamnus cathartica*- FAC).

Mud Creek *(Perennial Non-navigable tributary)*
Mud Creek is a perennial non-navigable tributary located toward the central portion of the southern study area associated with the wetland delineation. The waterway is characterized by the presence of a meandering waterway with pool and riffle areas. During multiple visits, the waterway appeared to have intermittent flow, however the fractured rock material may have unseen flow below the ground surface. Water was observed in some areas of the tributary during each visit.

Overstory surrounding the tributary consists of mature trees with some shrubs and herbaceous vegetation present within the adjacent floodplain area. The adjacent floodplain was assessed for the presence of wetlands and none were found. This tributary enters the study area from the south and conveys flow north-eastward.

Dominant vegetation in the tree layer adjacent to the waterway includes eastern cottonwood (*Populus deltoides -FAC*), and sugar maple (*Acer saccharum*-FACU).

Adjacent upland areas are dominated by tatarian honeysuckle (*Lonicera tatarica*- FACU) and white snakeroot (*Ageratina altissima*-FACU).

Table 3. Summary of Delineated Wetlands

Wetland ID	Abbreviation	Area (acres)	Cover Type
Wetland A	PFO	2.01	Forested; green ash (*Fraxinus pennsylvanica-FACW*), Eastern cottonwood (*Populus deltoides-FAC*)
Mud Creek	RIV	0.82	Tributary; riverine with surrounding upland forested areas; Eastern cottonwood (*Populus deltoides-FAC*), sugar maple (*Acer saccharum*-FACU)

Selected References

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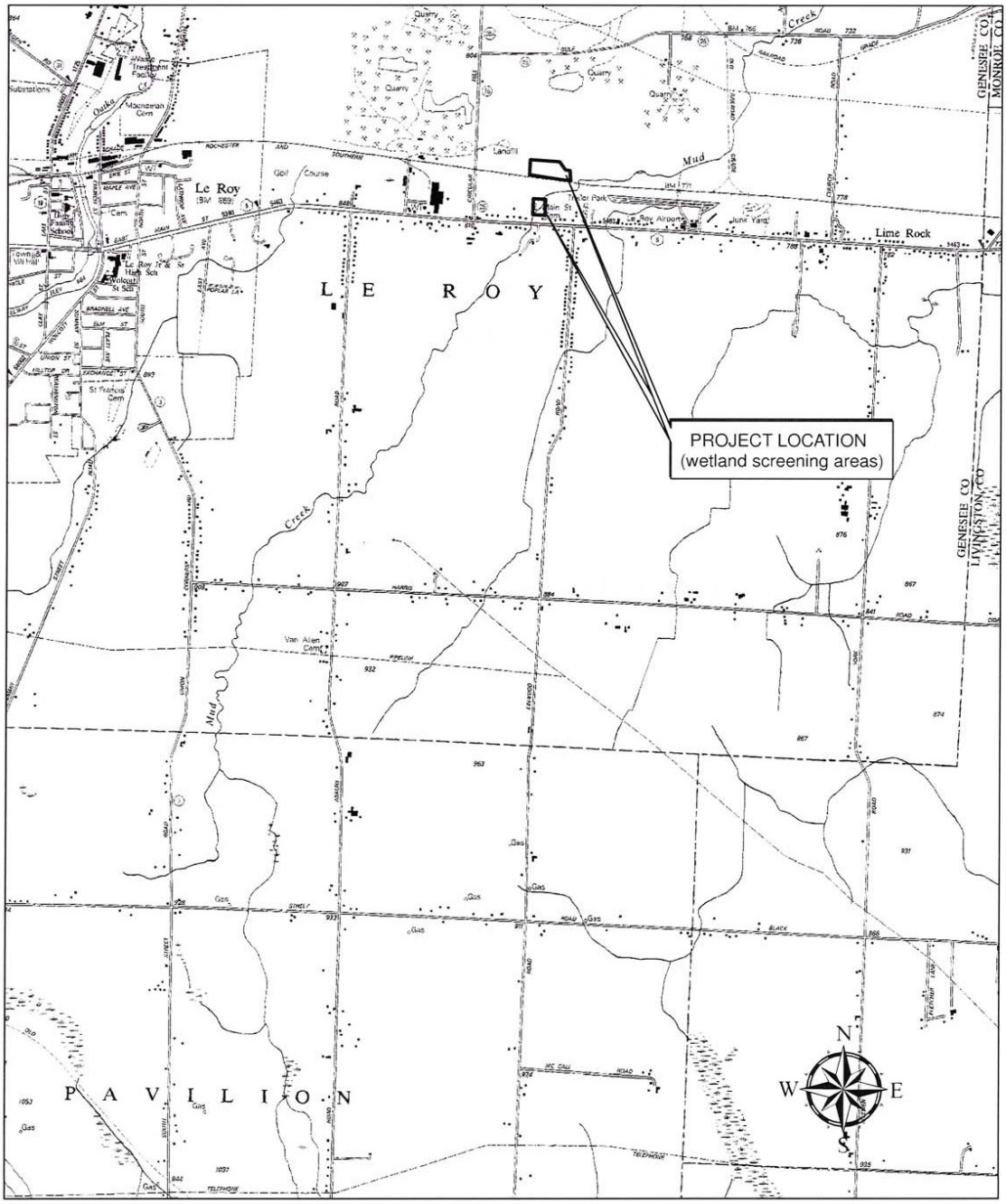

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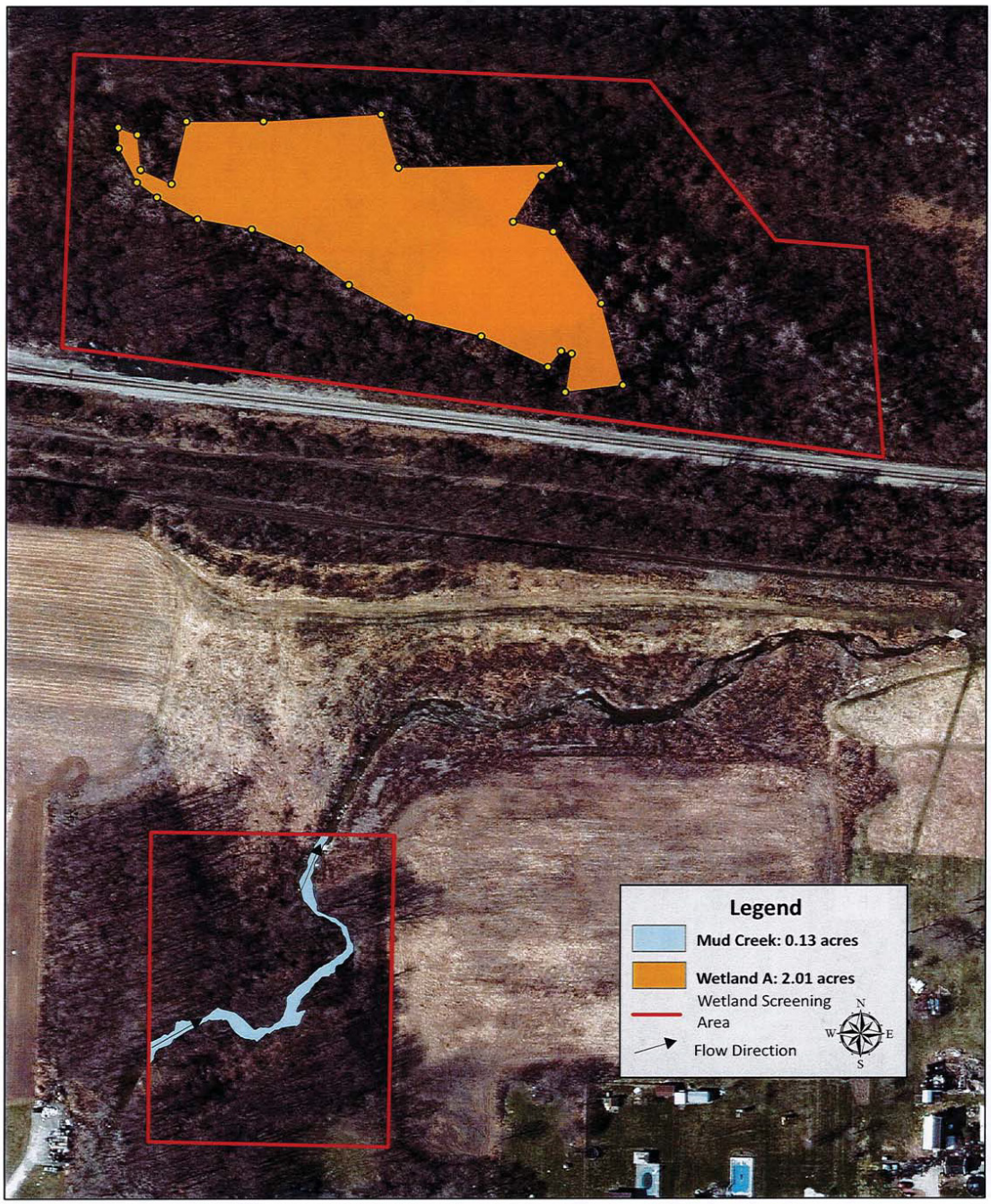
ENVIRONMENTAL • TRANSPORTATION • CIVIL

SITE LOCATION MAP
Wetland Delineation Report
LeRoy Airport – Environmental Assessment for Obstruction Removal
8267 E Main Road, Town of LeRoy, Genesee County

DATE: December 2019
SCALE: 1 inch = 3,000 feet
DRAWN/CHECKED: BCB
DATA SOURCE: NYS GIS Clearinghouse

Appendix A

Wetland Delineation Mapping



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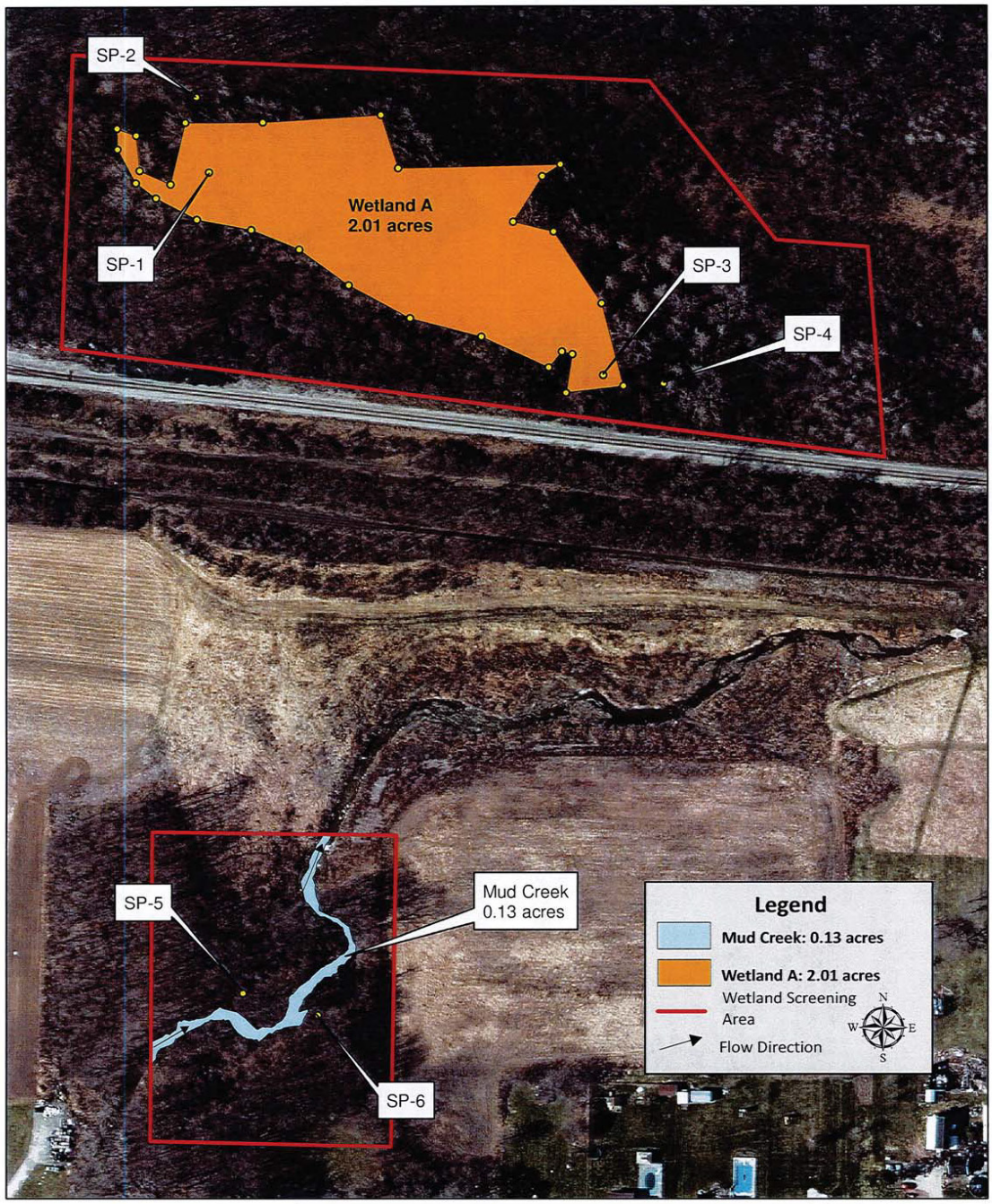
WETLAND DELINEATION MAP
Wetland Delineation Report
LeRoy Airport – Environmental Assessment for Obstruction Removal
8267 E Main Road, Town of LeRoy, Genesee County

DATE: December 2019
SCALE: 1 inch = 150 feet
DRAWN/CHECKED: BCB
DATA SOURCE: NYS GIS Clearinghouse



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WETLAND DELINEATION MAP
Wetland Delineation Report
LeRoy Airport – Environmental Assessment for Obstruction Removal
8267 E Main Road, Town of LeRoy, Genesee County

DATE: December 2019
SCALE: 1 inch = 150 feet
DRAWN/CHECKED: BCB
DATA SOURCE: NYS GIS Clearinghouse

Appendix B

Data Sheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: LeRoy Airport – Environmental Assessment City/County: LeRoy/Genesee Sampling Date: 10/18/19
Applicant/Owner: LeRoy Airport State: NY Sampling Point: SP1
Investigator(s): Bryan Bancroft Section, Township, Range: LeRoy
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope %: 1
Subregion (LRR or MLRA): LRR R Lat: 42.983454 Long: -77.726311 Datum: NAD 83
Soil Map Unit Name: Canandaigua silt loam NWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____	
Water Table Present?	Yes ____	No X	Depth (inches): ____	
Saturation Present? (includes capillary fringe)	Yes x	No ____	Depth (inches): 20	**Wetland Hydrology Present?** **Yes** X **No** ____

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

Remarks:

US Army Corps of Engineers Northcentral and Northeast Region – Version 2.0

VEGETATION – Use scientific names of plants. Sampling Point: SP1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	70	Yes	FAC
2. *Salix nigra*	10	No	OBL
3.			
4.			
5.			
6.			
7.			
	80	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Apocynum cannabinum*	40	Yes	FAC
2. *Carex lupulina*	25	Yes	OBL
3. *Asclepias incarnata*	15	No	OBL
4. *Boehmeria cylindrica*	10	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	0	x 2 =	0
FAC species	110	x 3 =	330
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	170 (A)		390 (B)

Prevalence Index = B/A = 2.29

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _X_ No ___

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

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SOIL Sampling Point SP1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100					Loamy/Clayey	
4-14	10YR 6/1	100					Loamy/Clayey	
14-20	10YR 7/4	100					Sandy	

[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)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

US Army Corps of Engineers Northcentral and Northeast Region – Version 2.0

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: LeRoy Airport – Environmental Assessment City/County: LeRoy/Genesee Sampling Date: 10/18/19

Applicant/Owner: LeRoy Airport State: NY Sampling Point: SP2

Investigator(s): Bryan Bancroft Section, Township, Range: LeRoy

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope %: 1

Subregion (LRR or MLRA): LRR R Lat: 42.983696 Long: -77.949436 Datum: NAD 83

Soil Map Unit Name: Benson soils NWI classification:

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

US Army Corps of Engineers Northcentral and Northeast Region – Version 2.0

VEGETATION – Use scientific names of plants.

Sampling Point: SP2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carya ovata*	20	Yes	FACU
2. *Tilia americana*	30	Yes	FACU
3. *Quercus montana*	40	Yes	UPL
4.			
5.			
6.			
7.			
	90	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Rhamnus cathartica*	60	Yes	FAC
2. *Crataegus monogyna*	10	No	FACU
3.			
4.			
5.			
6.			
7.			
	70	=Total Cover	
Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
		=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	60	x 3 =	180
FACU species	60	x 4 =	240
UPL species	40	x 5 =	200
Column Totals:	160 (A)		620 (B)

Prevalence Index = B/A = 3.88

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

SOIL Sampling Point SP2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	100					Loamy/Clayey	
14-20	10YR 7/2	100					Sandy	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

US Army Corps of Engineers Northcentral and Northeast Region – Version 2.0

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: LeRoy Airport – Environmental Assessment City/County: LeRoy/Genesee Sampling Date: 10/18/19
Applicant/Owner: LeRoy Airport State: NY Sampling Point: SP3
Investigator(s): Bryan Bancroft Section, Township, Range: LeRoy
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope %: 1
Subregion (LRR or MLRA): LRR R Lat: 42.982780 Long: -77.947647 Datum: NAD 83
Soil Map Unit Name: Canandaigua silt loam NWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes x	No ____	Depth (inches): 20

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

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

Remarks:

US Army Corps of Engineers Northcentral and Northeast Region – Version 2.0

VEGETATION – Use scientific names of plants.

Sampling Point: SP3

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	30	Yes	FACW
2. *Populus deltoides*	30	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Fraxinus pennsylvanica*	20	Yes	FACW
2. *Onoclea sensibilis*	40	Yes	FACW
3. *Carex lupulina*	15	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Vitis riparia*	15	Yes	FAC
2.			
3.			
4.			
	15	=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: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	90	x 2 =	180
FAC species	45	x 3 =	135
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	150 (A)		330 (B)

Prevalence Index = B/A = 2.20

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

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SOIL Sampling Point SP3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100					Loamy/Clayey	
4-18	10YR 5/1	100					Sandy	
18-20	10YR 6/3	100					Sandy	

[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)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

US Army Corps of Engineers Northcentral and Northeast Region – Version 2.0

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: LeRoy Airport – Environmental Assessment City/County: LeRoy/Genesee Sampling Date: 10/18/19
Applicant/Owner: LeRoy Airport State: NY Sampling Point: SP4
Investigator(s): Bryan Bancroft Section, Township, Range: LeRoy
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope %: 1
Subregion (LRR or MLRA): LRR R Lat: 42.982749 Long: -77.947377 Datum: NAD 83
Soil Map Unit Name: Ontario silt loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

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VEGETATION – Use scientific names of plants. Sampling Point: SP4

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	10	Yes	FACW
2. *Populus deltoides*	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Rhamnus cathartica*	60	Yes	FAC
2. *Crataegus monogyna*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	90	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Solidago canadensis*	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	15	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	80	x 3 =	240
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals:	135 (A)		440 (B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 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** X **No** ___

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

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SOIL Sampling Point SP4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	100					Loamy/Clayey	
12-20	10YR 7/1	100					Sandy	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

US Army Corps of Engineers Northcentral and Northeast Region – Version 2.0

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: LeRoy Airport – Environmental Assessment City/County: LeRoy/Genesee Sampling Date: 10/18/19

Applicant/Owner: LeRoy Airport State: NY Sampling Point: SP5

Investigator(s): Bryan Bancroft Section, Township, Range: LeRoy

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope %: 1

Subregion (LRR or MLRA): LRR R Lat: 42.980770 Long: -77.949265 Datum: NAD 83

Soil Map Unit Name: Wakeville silt loam NWI classification:

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

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

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

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

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

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

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VEGETATION – Use scientific names of plants.

Sampling Point: SP5

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	20	Yes	FACW
2. *Acer saccharum*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Rhamnus cathartica*	45	Yes	FAC
2. *Lonicera tatarica*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	60	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Ageratina altissima*	50	Yes	FACU
2. *Rhamnus cathartica*	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	60	x 3 =	180
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	175	(A)	600 (B)

Prevalence Index = B/A = 3.43

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

US Army Corps of Engineers

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SOIL Sampling Point SP5

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 5/2							Gravel and stone in floodplain
								Refusal near surface

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

US Army Corps of Engineers Northcentral and Northeast Region – Version 2.0

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: LeRoy Airport – Environmental Assessment City/County: LeRoy/Genesee Sampling Date: 10/18/19
Applicant/Owner: LeRoy Airport State: NY Sampling Point: SP6
Investigator(s): Bryan Bancroft Section, Township, Range: LeRoy
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope %: 1
Subregion (LRR or MLRA): LRR R Lat: 42.980694 Long: -77.948940 Datum: NAD 83
Soil Map Unit Name: Palmyra gravelly loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

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VEGETATION – Use scientific names of plants. Sampling Point: SP6

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	20	Yes	FACW
2. *Carya ovata*	50	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	70	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Rhamnus cathartica*	10	Yes	FAC
2. *Lonicera tatarica*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Alliaria petiolata*	60	Yes	FACU
2. *Rhamnus cathartica*	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	30	x 3 =	90
FACU species	120	x 4 =	480
UPL species	0	x 5 =	0
Column Totals:	170 (A)		610 (B)

Prevalence Index = B/A = 3.59

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

US Army Corps of Engineers — Northcentral and Northeast Region – Version 2.0

SOIL Sampling Point SP6

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3	100					Loamy/Clayey	
4-14	10YR 5/3	100					Sandy	Refusal at 14" rocky substrate

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

US Army Corps of Engineers Northcentral and Northeast Region – Version 2.0

Appendix C

Representative Site Photographs

Photo 1. Photo of Sample Point 1 within Wetland A

Photo 2. Photo of Sample Point 2 north of Wetland A

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

339 East Ave, Suite 200
Rochester, NY 14604
Tel. 585.385.7417
Fax 585. 546.1634

Wetland Photos
LeRoy Airport –
Environmental Assessment for Obstruction Removal
8267 E Main Road, Town of LeRoy, Genesee County
New York

Date: December 2019
Scale: None
Drawn by: BB
Source: Photographs by Lu Engineers, October 18, 2019

Photo 3. Photo of Sample Point 3 within Wetland A

Photo 4. Photo of Sample Point 4 east of Wetland A

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL
339 East Ave, Suite 200
Rochester, NY 14604
Tel. 585.385.7417
Fax 585. 546.1634

Wetland Photos
LeRoy Airport –
Environmental Assessment for Obstruction Removal
8267 E Main Road, Town of LeRoy, Genesee County
New York

Date: December 2019
Scale: None
Drawn by: BB
Source: Photographs by Lu Engineers, October 18, 2019

Photo 5. Photo of Sample Point 5 adjacent to west side of Mud Creek

Photo 6. Photo of Sample Point 6 adjacent to east side of Mud Creek

Lu Engineers
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Rochester, NY 14604
Tel. 585.385.7417
Fax 585. 546.1634

Wetland Photos
LeRoy Airport –
Environmental Assessment for Obstruction Removal
8267 E Main Road, Town of LeRoy, Genesee County
New York

Date: December 2019
Scale: None
Drawn by: BB
Source: Photographs by Lu Engineers, October 18, 2019

Photo 7. Photo of eastern portion of forested Wetland A within north wetland screening area

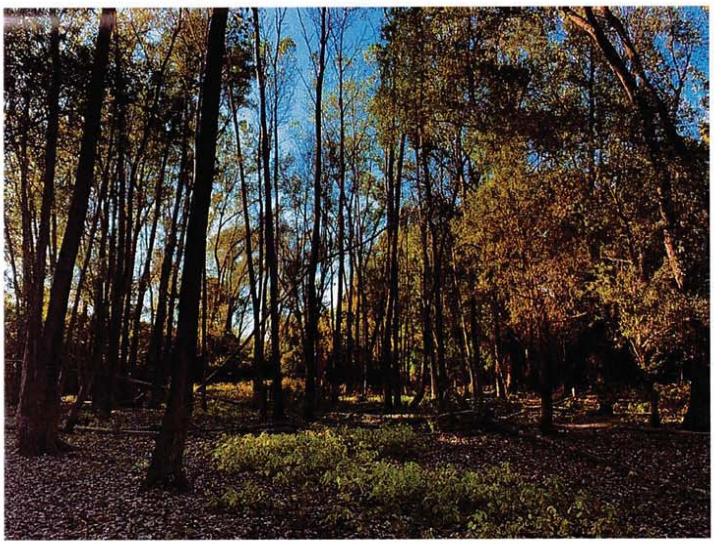

Photo 8. Photo of western portion of forested Wetland A within north wetland screening area

Lu Engineers
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339 East Ave, Suite 200
Rochester, NY 14604
Tel. 585.385.7417
Fax 585. 546.1634

Wetland Photos
LeRoy Airport –
Environmental Assessment for Obstruction Removal
8267 E Main Road, Town of LeRoy, Genesee County
New York

Date: December 2019
Scale: None
Drawn by: BB
Source: Photographs by Lu Engineers, October 18, 2019

Photo 9. Photo of Mud Creek within south portion of wetland screening area

Photo 10. Photo of Mud Creek within south portion of wetland screening area

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

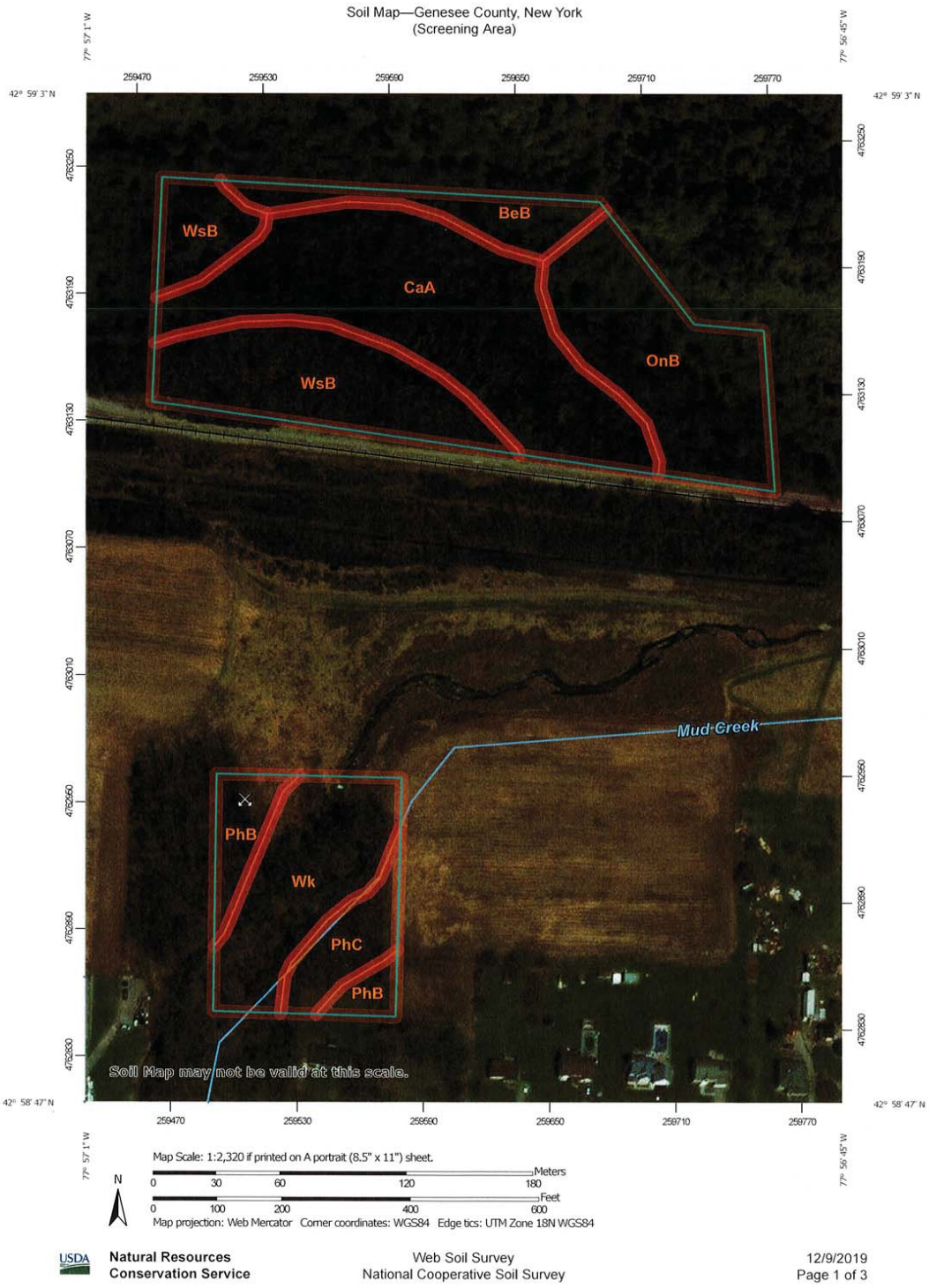
339 East Ave, Suite 200
Rochester, NY 14604
Tel. 585.385.7417
Fax 585. 546.1634

Wetland Photos
LeRoy Airport –
Environmental Assessment for Obstruction Removal
8267 E Main Road, Town of LeRoy, Genesee County
New York

Date: December 2019
Scale: None
Drawn by: BB
Source: Photographs by Lu Engineers, October 18, 2019

Appendix D

NRCS Soil Mapping/
Detailed Soil Descriptions


Soil Map—Genesee County, New York
(Screening Area)
77° 57' 1" W
77° 56' 45" W
42° 59' 3" N
42° 58' 47" N
259470
259530
259590
259650
259710
259770
4763250
4763190
4763130
4763070
4763010
4762950
4762890
4762830
WsB
BeB
CaA
OnB
WsB
Mud Creek
PhB
Wk
PhC
PhB
Soil Map may not be valid at this scale.
Map Scale: 1:2,320 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 30 60 120 180
Feet
0 100 200 400 600
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84
USDA
Natural Resources
Conservation Service
Web Soil Survey
National Cooperative Soil Survey
12/9/2019
Page 1 of 3

Soil Map—Genesee County, New York
(Screening Area)

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 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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: Genesee County, New York
Survey Area Data: Version 20, Sep 16, 2019

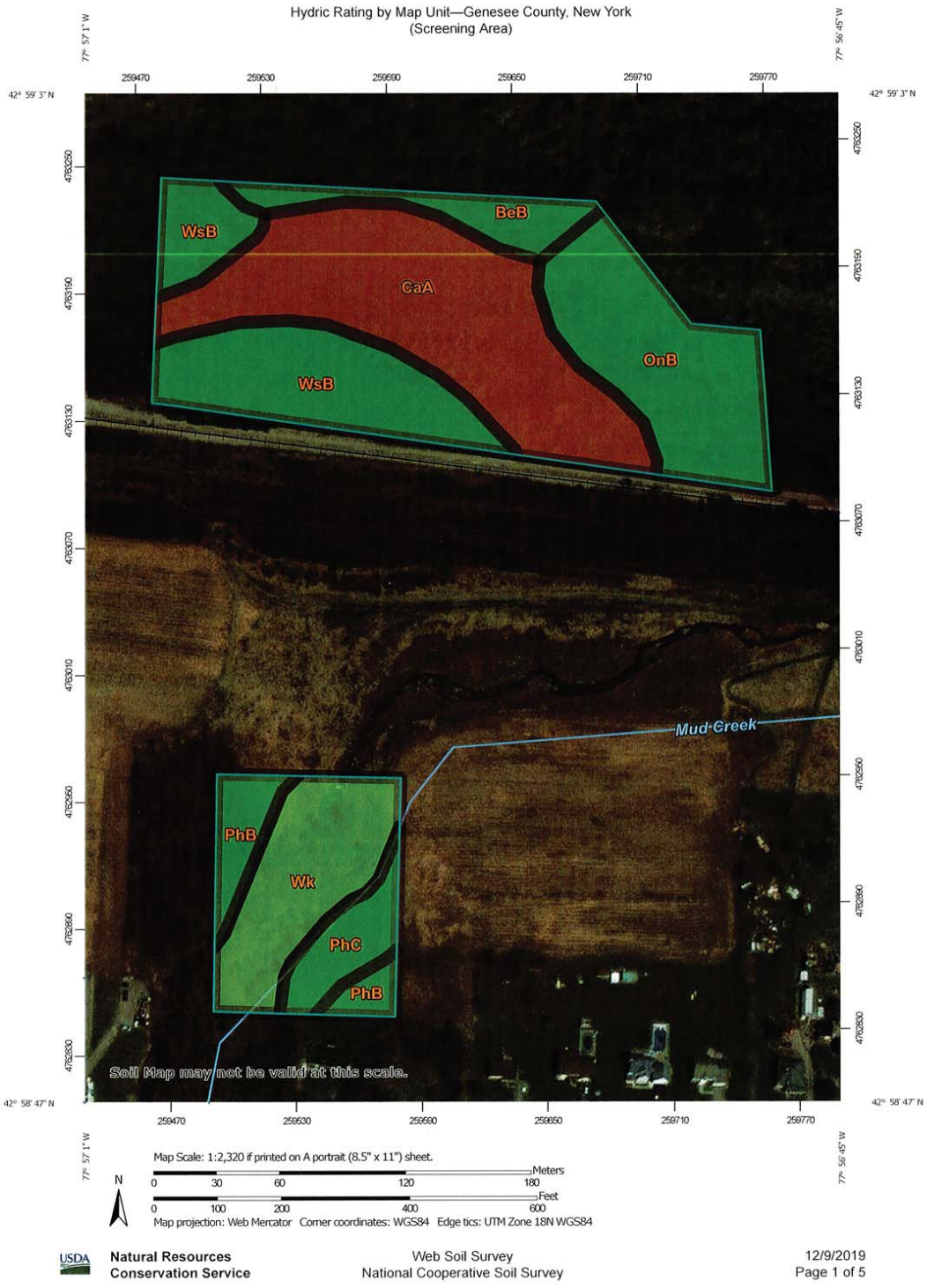
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 31, 2012—Sep 16, 2017

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
BeB	Benson soils, 0 to 8 percent slopes	0.6	6.1%
CaA	Canandaigua silt loam, 0 to 2 percent slopes	3.2	31.5%
OnB	Ontario loam, 3 to 8 percent slopes	1.9	18.7%
PhB	Palmyra gravelly loam, 3 to 8 percent slopes	0.5	5.3%
PhC	Palmyra gravelly loam, 8 to 15 percent slopes	0.5	4.9%
Wk	Wakeville silt loam	1.4	13.6%
WsB	Wassaic silt loam, 2 to 8 percent slopes	2.0	20.0%
Totals for Area of Interest		**10.2**	**100.0%**


Hydric Rating by Map Unit—Genesee County, New York
(Screening Area)
77° 57' 1" W
77° 56' 45" W
42° 59' 3" N
42° 58' 47" N
259470
259530
259590
259650
259710
259770
4763250
4763190
4763130
4763070
4763010
4762950
4762890
4762830
WsB
BeB
CaA
OnB
WsB
Mud Creek
PhB
Wk
PhC
PhB
Soil Map may not be valid at this scale.
Map Scale: 1:2,320 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 30 60 120 180
Feet
0 100 200 400 600
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84
USDA
Natural Resources Conservation Service
Web Soil Survey
National Cooperative Soil Survey
12/9/2019
Page 1 of 5

Hydric Rating by Map Unit—Genesee County, New York
(Screening Area)

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 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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: Genesee County, New York
Survey Area Data: Version 20, Sep 16, 2019

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

Date(s) aerial images were photographed: Aug 31, 2012—Sep 16, 2017

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
BeB	Benson soils, 0 to 8 percent slopes	0	0.6	6.1%
CaA	Canandaigua silt loam, 0 to 2 percent slopes	95	3.2	31.5%
OnB	Ontario loam, 3 to 8 percent slopes	0	1.9	18.7%
PhB	Palmyra gravelly loam, 3 to 8 percent slopes	0	0.5	5.3%
PhC	Palmyra gravelly loam, 8 to 15 percent slopes	0	0.5	4.9%
Wk	Wakeville silt loam	10	1.4	13.6%
WsB	Wassaic silt loam, 2 to 8 percent slopes	0	2.0	20.0%
Totals for Area of Interest			**10.2**	**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:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

LOCATION BENSON VT ME NY PA

Established Series
Rev. HRS-BGW-RLM-SHG
02/2003

BENSON SERIES

The Benson series consists of shallow to limestone or calcareous shale, somewhat excessively and excessively drained soils on glaciated uplands. They formed in loamy till. Bedrock is at a depth of 10 to 20 inches. Permeability is moderate throughout the soil. Slope ranges from 0 to 70 percent.

TAXONOMIC CLASS: Loamy-skeletal, mixed, active, mesic Lithic Eutrudepts

TYPICAL PEDON: Benson silt loam - described in a wooded area of Benson rocky silt loam, over shaley limestone, 8 to 15 percent slopes (Colors are for moist soil unless otherwise noted.)

Oi-- 0 to 1 inches; slightly decomposed litter of leaves and twigs.

A-- 1 to 6 inches; dark grayish brown (10YR 4/2) silt loam; moderate fine granular structure; friable; many roots; 5 percent rock fragments; slightly acid; clear smooth boundary. (3 to 7 inches thick.)

Bw1-- 6 to 11 inches; brown (10YR 4/3) channery silt loam; weak fine and very fine subangular blocky structure; friable; many roots; 15 percent rock fragments; neutral; abrupt wavy boundary.

Bw2-- 11 to 19 inches; dark grayish brown (10YR 4/2) very channery silt loam; weak fine subangular blocky structure; friable; many roots; 40 percent rock fragments; strongly effervescence; slightly alkaline; abrupt wavy boundary. (Combined thickness of the Bw horizon is 6 to 16 inches.)

R--19 inches; dark gray (N 4/0) limestone; violent effervescence.

TYPE LOCATION: Grand Isle County, Vermont; Town of South Hero; 1.2 miles west of the west end of Sand Bar Bridge connecting South Hero Island and

Chittenden County, Vermont. USGS South Hero, VT topographic quadrangle; Latitude 44 degrees, 38 minutes, 2 seconds N. and Longitude 73 degrees, 17 minutes, 16 seconds W. NAD 1927.

RANGE IN CHARACTERISTICS: The thickness of the solum ranges from 9 to 20 inches. The depth to bedrock ranges from 10 to 20 inches. Rock fragments make up 35 to 70 percent by volume of the particle size control section and range from 5 to 50 percent in the A horizon and from 15 to 70 percent in the Bw horizon. Channers are the dominant kind of rock fragment. Reaction ranges from moderately acid to slightly alkaline in the A horizon, from slightly acid to slightly alkaline in the upper part of the Bw horizon, and is neutral or slightly alkaline in the lower part of the Bw horizon. Carbonates are usually present in the lower part but can be found throughout the Bw horizon.

The A horizon has hue of 7.5YR or 10YR, value of 2 through 4, and chroma of 2 through 4. It is silt loam, loam, or silty clay loam in the fine earth.

The Bw horizon has hue of 5YR, 7.5YR, or 10YR, value of 4 through 6, and chroma of 2 through 6. It is silt loam, loam or silty clay loam in the fine earth.

Some pedons have a Cr or C horizon. It has hue of 5YR, 7.5YR, 10YR, 2.5Y, or 5Y, value of 3 through 5, and chroma of 3 through 6. It is silt loam, loam or silty clay loam in the fine earth. Rock fragments range from 20 to 90 percent. Reaction is neutral or slightly alkaline.

Bedrock is limestone or calcareous shale.

COMPETING SERIES: There no series in the same family.

The Brimfield, Farmington, Galway, Hollis, Holyoke, Kearsarge, Lordstown, Palatine, and Umpcoos series are similar soils in related families. The Umpcoos soil is more acid in the subsoil and is underlain by sandstone or siltstone. Brimfield, Hollis, Holyoke, and Kearsarge soils have less than 60 percent base saturation and less than 35 percent rock fragments in the control section. The Farmington soil has less than 35 percent rock fragments in the control section. The Galway soil has less than 35 percent rock fragments in the control section and the depth to bedrock ranges from 20 to 40 inches. The Lordstown soil has less than 60 percent base saturation, less than 35 percent rock fragments in the control section and the depth to bedrock ranges from 20 to 40 inches. The Palatine soil has a mollic epipedon and the depth to bedrock ranges from 20 to 40 inches.

GEOGRAPHIC SETTING: Benson soils are nearly level to very steep soils on glaciated uplands. They are on broad plains and on the tops and side slopes of hills, ridges, knolls, and mounds. Slope ranges from 0 to 70 percent. The soils formed in loamy till underlain by limestone or calcareous shale bedrock. The mean annual precipitation ranges from 28 to 45 inches and the mean annual temperature ranges from 45 to 56 degrees Farenheit. The frost free season ranges from 120 to 180 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the Amenia, Covington, Massena, Nellis, Panton, and Vergennes soils. The Nellis, Amenia, and Massena soils have less than 35 percent rock fragments in the control section and the depth to bedrock is greater than 60 inches. The Amenia and Massena soils have mottles in the subsoil. The Vergennes, Panton, and Covington soils formed in clayey lacustrine deposits and the depth to bedrock is greater than 60 inches.

DRAINAGE AND PERMEABILITY: Somewhat excessively drained and excessively drained. Permeability is moderate throughout the soil.

USE AND VEGETATION: Most areas are wooded. Common trees are sugar maple, beech, yellow birch, basswood, red oak, hickory, white ash, white pine, northern white cedar, red cedar, and hemlock. A few areas of Benson soils that are mapped in a complex with moderately deep to very deep soils have been cleared and are used for cultivated cropland, hayland, and pasture.

DISTRIBUTION AND EXTENT: New York, Vermont, and Pennsylvania. Benson was used in Maine prior to frigid/mesic separation. MLRA's 101, 140, 142, 144A, and 146. The series is of moderate extent.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Amherst, Massachusetts

SERIES ESTABLISHED: Grand Isle County, Vermont, 1956.

REMARKS: This revision reflects new horizon designations and general updating.

This series was mapped in MLRA 146 (Maine) prior to the mesic/frigid separation and is still on the books. It would not be used there again.

The horizons and features diagnostic for the typical pedon are:
1. Ochric epipedon from 0 to 5 inches.

2. Cambic horizon from 5 to 18 inches.
3. Lithic contact at 18 inches.
4. Carbonates in the cambic horizon or Cr horizon or the base saturation by Ammonium Acetate that is 60 percent or more in some subhorizon between 10 to 30 inches.
5. Particle-size control section from 10 inches to the lithic contact is loamy-skeletal.
6. Mesic soil temperature regime.
7. Udic soil moisture regime.

ADDITIONAL DATA: NSSL laboratory data is available for the following pedons - S56VT-7-1 S56VT-7-2 (SSIR 20)

National Cooperative Soil Survey
U.S.A.

LOCATION CANANDAIGUA NY+VT

Established Series
Rev. CER-WEH-PSP
02/2013

CANANDAIGUA SERIES

The Canandaigua series consists of very deep, poorly and very poorly drained soils formed in silty glacio-lacustrine sediments. These soils are on lowland lake plains and in depressional areas on glaciated uplands. Slope ranges from 0 to 3 percent. Mean annual temperature is 49 degrees F. and mean annual precipitation is 39 inches.

TAXONOMIC CLASS: Fine-silty, mixed, active, nonacid, mesic Mollic Endoaquepts

TYPICAL PEDON: Canandaigua silt loam, in a cultivated field on a 1 percent slope. (Colors are for moist soil unless otherwise stated.)

Ap -- 0 to 8 inches; very dark gray (10YR 3/1) silt loam; moderate fine and very fine subangular blocky structure; friable; many fine roots; neutral; abrupt smooth boundary. (6 to 9 inches thick.)

Bg1 -- 8 to 12 inches; light brownish gray (10YR 6/2) silt loam; weak very coarse prismatic structure parting to weak fine subangular blocky; friable; many fine roots; common medium and fine pores; many medium distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; neutral; clear irregular boundary.

Bg2 -- 12 to 19 inches; gray (10YR 6/1) silt loam; strong very coarse prismatic structure parting to moderate fine and medium subangular blocky; friable; few fine and medium roots; common medium pores with faint patchy clay films on surfaces along pores; gray (10YR 5/1) on all faces of peds; many medium faint light gray (10YR 7/2) areas of iron depletion in the matrix and distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; neutral; clear wavy

boundary. (Combined thickness of the Bg horizon is 5 to 30 inches.)

BC -- 19 to 30 inches; light brownish gray (10YR 6/2) silt loam; moderate medium and thick platy structure parting to weak fine subangular blocky; friable; gray (10YR 6/1) on all faces of peds; many medium distinct light brown (7.5YR 6/4) and strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; slightly effervescent, slightly alkaline; gradual irregular boundary. (0 to 16 inches thick.)

C -- 30 to 72 inches; gray (10YR 6/1) and light brown (7.5YR 6/4) thin strata of silt loam and very fine sandy loam; massive; friable; common medium distinct strong brown (7.5YR 5/8) masses of iron accumulation in the matrix and pinkish gray (7.5YR 6/2) areas of iron depletion in the matrix; strongly effervescent, moderately alkaline.

TYPE LOCATION: Orleans County, New York; 300 feet east of the Gaines Basin Road, 450 feet south of Allen Road intersection. USGS Albion, NY topographic quadrangle; Latitude 43 degrees, 13 minutes, 46 seconds N. and Longitude 78 degrees, 13 minutes, 25 seconds W., NAD 1927.

RANGE IN CHARACTERISTICS: Solum thickness ranges from 20 to 40 inches. Depth to free carbonates commonly ranges from 18 to 60 inches, but some pedons lack carbonates within a depth of 80 inches. Rock fragments are commonly absent, but range up to 10 percent by volume in random subhorizons of some pedons. Below depths of 40 inches rock fragments can range up 30 percent in some pedons.

Ap and A horizons have hue of 5YR through 2.5Y, or are neutral, with value of 2 or 3 and chroma of 0 through 2. They are silt loam, very fine sandy loam, loam, or fine sandy loam. They have weak to strong, granular or subangular blocky structure. In some pedons, O horizons range from a trace to 6 inches thick overlying an A horizon. Reaction ranges from moderately acid to slightly alkaline.

The Bg horizon has hue of 5YR through 5GY, or is neutral, value of 4 through 7, and chroma of 0 through 2. Texture is silt loam, very fine sandy loam, or silty clay loam, with thin, random subhorizons in some pedons having lighter or heavier textures. Structure is very fine to coarse, subangular or angular blocky, either primary or within coarse or very coarse prisms. Consistence is friable to very firm. Redoximorphic accumulations are common to many. Reaction ranges from

moderately acid to slightly alkaline.

BC horizons are similar to Bg horizon except for presence of free carbonates in many pedons. Structure is usually weaker and can include platy structure.

The C horizon has hue of 5YR to 5G or is neutral, value of 3 through 6, and chroma of 0 through 4. It consists of thin strata ranging from fine sand to silty clay to a depth of at least 40 inches. Below a depth of 40 inches some pedons have a loamy, nonstratified 2C and 3C horizons. Reaction ranges from slightly acid to moderately alkaline.

COMPETING SERIES: There are no series in the same family.

The Alden, Birdsall, Lamson, Minoa, Raynham, and Wegatchie series are members of closely related families. Alden soils have fine-loamy particle-size control sections. Birdsall and Raynham soils have coarse-silty particle-size control sections. Lamson and Minoa soils have coarse-loamy particle size control sections. Wegatchie soils have frigid temperature regimes.

GEOGRAPHIC SETTING: Canandaigua soils are nearly level soils mainly on glacial lake plains, but are also in depressional areas of glaciated uplands where water-sorted sediments have accumulated to a depth of more than 40 inches. Slope is mainly less than 1 percent, but ranges up to 3 percent. Mean annual temperature ranges from 46 degrees to 53 degrees F.; mean frost-free season ranges from 140 to 200 days; and mean annual precipitation ranges from 28 to 50 inches The elevation commonly ranges from 100 to 1300 feet but the range includes up to 1750 feet above sea level.

GEOGRAPHICALLY ASSOCIATED SOILS: Canandaigua soils are the wettest of a drainage sequence that includes the Dunkirk, Collamer, and Niagara series. Lighter textured Amboy, Arkport, Galen, Lamson, Minoa, Wallington and Williamson soils, and heavier textured Hudson, Lakemont, Madalin, Odessa, Rhinebeck, an Schoharie soils are also on associated lake plains. Honeoye, Lansing, and Ontario soils and their wetter associates are on nearby glacial till plains. Alton, Howard, and Palmyra soils and their wetter associates are on associated glacial outwash terraces.

DRAINAGE AND PERMEABILITY: Poorly and very poorly drained. The potential for surface runoff is very low or ponded. Permeability is moderate in the surface layer, moderate or moderately slow in the subsoil, and moderately slow

and substratum.

USE AND VEGETATION: Much of the area is drained and used for truck crops and for growing beans, corn, hay and pasture. Undrained woodlots contain soft maple, swamp elm, white and black ash, white cedar, and hemlock.

DISTRIBUTION AND EXTENT: Lake plains of New York and Vermont, and locally in upland depressions. MLRA 101, 127, 139, 140, 141, 142, and 144A. The series is of moderate extent.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Amherst, Massachusetts.

SERIES ESTABLISHED: Ontario County, New York, 1949.

REMARKS: This soil now classifies in the subgroup of Mollic Endoaquepts. Competing series are expected to change as similar soils are reclassified.

Diagnostic horizons and other features recognized in the typical pedon are:
(1) Ochric Epipedon - from 0 to 8 inches (Ap horizon), does not meet thickness requirements for a mollic epipedon.
(2) Cambic horizon - from 8 to 30 inches (Bg and BCg horizons).
(3) Aquepts suborder - Aquic moisture regime, and matrix with 2 chroma or less and redoximorphic features within 20 inches of the soil surface (Bg horizon).
(4) CEC activity class calculated as active from pedon S88NY-009-11

National Cooperative Soil Survey
U.S.A.

LOCATION ONTARIO NY

Established Series
Rev. MGC-PSP-GWS
05/2017

ONTARIO SERIES

The Ontario series consists of deep or very deep, well drained soils formed in loamy till which is strongly influenced by limestone and sandstone. They are nearly level to very steep soils on convex upland till plains and drumlins. Slope ranges from 0 to 60 percent. Mean annual temperature is 8 degrees C. (46 degrees F.), and mean annual precipitation is 995 mm (39 in).

TAXONOMIC CLASS: Fine-loamy, mixed, active, mesic Glossic Hapludalfs

TYPICAL PEDON: Ontario loam - cultivated. (Colors are for moist soil unless otherwise stated.)

Ap-- 0 to 20 cm, dark brown (7.5YR 3/2) loam, gray (7.5YR 6/1) dry; weak fine and medium granular structure; very friable; many fine roots; 10 percent rock fragments; moderately acid; abrupt smooth boundary. (15 to 30 cm thick.)

E--20 to 36 cm, brown (7.5YR 5/3) loam; weak medium platy structure; friable; common fine roots; common fine pores; 10 percent rock fragments; moderately acid; abrupt irregular boundary. (0 to 20 cm thick.)

Bt/E--36 to 53 cm, brown (7.5YR 4/4) loam; weak medium subangular blocky structure; friable; brown (7.5YR 5/2) fine sandy loam coatings on faces of peds 1 mm thick that constitutes less than 15 percent of the layer; thin clay linings on surfaces along pores and on all faces of peds; 10 percent rock fragments; slightly acid; clear, wavy boundary. (8 to 23 cm inches thick.)

Bt--53 to 99 cm, reddish brown (5YR 4/4) gravelly loam; moderate medium subangular blocky structure; firm; dark reddish brown (5YR 3/3) clay films on all faces of peds and on surfaces along pores; 20 percent rock fragments; neutral;

clear wavy boundary. (30 to 74 cm thick.)

C1--99 to 122 cm, brown (7.5YR 5/2) gravelly loam; moderate thin and medium plate like divisions; firm; few pores; 20 percent rock fragments; slightly alkaline, slightly effervescent; clear wavy boundary.

C2--122 to 183 cm, brown (7.5YR 4/3) gravelly loam; massive; firm; few pores; 20 percent rock fragments; slightly alkaline, slightly effervescent.

TYPE LOCATION: Genesee County, New York, Town of Elba, 2 1/2 miles southeast of the village of Elba, one mile west of Norton Road and Edgerton Road, 100 feet north of Edgertown Road. USGS Batavia North, NY topographic quadrangle; Latitude 43 degrees, 03 minutes, 42 seconds N. and Longitude 78 degrees, 09 minutes, 31 seconds W., NAD 1927.

RANGE IN CHARACTERISTICS: Thickness of solum ranges from 91 to 122 cm (36 to 48 in). Depth to bedrock is more than 102 cm (40 in). Depth to carbonates ranges from 86 to 122 cm (34 to 48 in). Stones, cobbles, and gravel range from 0 to 30 percent in the solum and from 10 to 50 percent in the C horizon.

In undisturbed areas, an A horizon 3 to 6 in thick is present. The Ap horizon has hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 2 or 3. Dry color values are more than 5.5. Texture is fine sandy loam, loam or silt loam. Structure is very weak and moderate medium or fine granular and consistence is friable to very friable. Reaction is strongly acid to neutral.

The E horizon has hue of 10YR to 5YR, value of 5 or 6, and chroma of 2 to 4. Texture is fine sandy loam, loam or silt loam. The material is massive or has weak platy or fine to coarse blocky structure.
The Bt/E horizon has colors similar to the E and Bt horizons. Texture is loam, silt loam, or sandy clay loam, averaging 18 to 28 percent clay. Structure is weak or moderate, fine to coarse blocky. Consistence is friable or firm. Reaction ranges from strongly acid to neutral. Clay films cover 5 to 30 percent of ped faces and line pores

The Bt horizon has hue of 10YR to 5YR, value of 4 to 6, and chroma of 2 to 4. Ontario is 7.5YR or redder in at least one subhorizon in the Bt. Texture is loam, silt loam, or sandy clay loam, averaging 18 to 28 percent clay. Structure is moderate or strong, medium or coarse blocky. Consistence is friable or firm.

Reaction ranges from strongly acid to neutral. Clay films cover 5 to 30 percent of ped faces and line pores.

The C or Cd horizon has hue of 10YR to 5YR, value of 4 to 6, and chroma of 2 to 4. Consistence is friable to very firm. Texture is fine sandy loam or loam or gravelly analogs. It is slightly to strongly alkaline and slightly to violently effervescent till having thin or thick weak or moderate plate like divisions or the material is massive.

COMPETING SERIES: These are the Fairport, Lansing, Wampsville, Wassaic, and Yunenyeti series. Fairport, Wassaic, and Yunenyeti soils have bedrock within a depth of 102 cm (40 in). Lansing soils are 10YR or yellower in all subhorizons of the Bt. Wampsville soils are stratified in the lower part of the series control section.

The Aurora, Cazenovia, Conesus, Danley, Hilton, Honeoye, Lima, Madrid, and Mohawk series are similar soils in related families. Honeoye soils have solum less than 81 cm (32 in). Aurora, Conesus, Danley, and Nunda soils have mottles with chroma of 2 or less in the upper 25 cm (10 in) of the argillic horizon. Cazenovia soils have more than 28 percent clay in the Bt horizon. Hilton and Lima soils have redox features within a depth of 102 cm (40 in). Madrid soils have coarse-loamy particle-size control sections. Mohawk soils have Ap horizons with moist color value of 3 or less.

GEOGRAPHIC SETTING: Dominantly undulating to rolling till plains and drumlins. Slope ranges from 0 to 60 percent. The regolith is a red calcareous basal till of Wisconsin age high in limestone and sandstone. These soils are mainly on the central and northern part of the Ontario Lowland and Mohawk Valley of New York. Mean annual temperature ranges from 5 to 10 degrees C. (41 to 50 degrees F)., mean annual precipitation ranges from 790 to 1440 mm (31 to 57 in), and mean annual frost-free days ranges from 100 to 190 days. Elevation ranges from 70 to 540 m (220 to 1760 ft) above sea level.

GEOGRAPHICALLY ASSOCIATED SOILS: Hilton, Appleton and Lyons soils are catena associates, with Lima replacing Hilton and Kendaia replacing Appleton locally. Dunkirk, Collamer, Amboy, and Williamson soils are on associated silty lake deposits. Hudson and Rhinebeck are on associated clayey deposits. Alton and Palmyra soils are on associated glacial outwash deposits. Arkport and Colonie are on associated sandy deltas.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Well drained. The potential for surface runoff is low to very high. Saturated hydraulic conductivity is moderately high or high in the solum and low to moderately high in the substratum.

USE AND VEGETATION: A high proportion of the series has been cleared and farmed. A significant acreage, especially on drumlins, is idle or is in unimproved pasture. Crops include hay, corn, oats, wheat, and some vegetables and considerable deciduous fruit. Woodlots have red and white oak, sugar maple, hickory, black cherry and associated species.

DISTRIBUTION AND EXTENT: Ontario plain of western New York and locally in the Mohawk Valley. MLRAs 101 and 140. Ontario is a very extensive soil.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Amherst, Massachusetts

SERIES ESTABLISHED: Monroe County, New York, 1910.

REMARKS: A new pedon from Genesee County was selected in 2003 because the typical pedon does not match the typical pedon for Ontario in the Ontario County, NY Soil Survey. After a review of the use of the Ontario and Lansing series for the range of the color hue in the Bt, the requirement that at least one subhorizon be 7.5YR or redder was added in 2006 to Ontario and the competing series section of Ontario and Lansing were adjusted to reflect the change.

Diagnostic horizons and other features recognized in the typical pedon include:
1. Ochric epipedon - the zone from the surface to 20 cm (8 in) (Ap horizon).
2. Argillic horizon - the zone from 36 to 99 cm (14 to 39 in) (Bt/E and Bt horizons).
3. Glossic subgroup - as evidenced by interfingering of albic material around peds in the upper part of the argillic horizon (Bt/E horizon) and mean annual soil temperature less than 10 degrees C.

National Cooperative Soil Survey
U.S.A.

LOCATION PALMYRA NY

Established Series
Rev. MGG-JWW-PSP
08/2007

PALMYRA SERIES

The Palmyra series consists of very deep, well drained to somewhat excessively drained soils formed in glacial outwash. They are nearly level to very steep soils formed in loamy material overlying calcareous, stratified gravel and sand. Saturated hydraulic conductivity is moderately high or high in the solum and high or very high in the substratum. Slope ranges from 0 to 40 percent. Mean annual temperature is 48 degrees F. and mean annual precipitation is 37 inches.

TAXONOMIC CLASS: Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Glossic Hapludalfs

TYPICAL PEDON: Palmyra gravelly loam - idle (Colors are for moist soil unless otherwise stated.)

Ap-- 0 to 9 inches; dark grayish brown (10YR 4/2) gravelly loam; weak medium and fine granular structure; friable; many fine roots; 20 percent rock fragments; slightly acid; abrupt smooth boundary. (6 to 12 inches thick.)

E-- 9 to 11 inches; grayish brown (10YR 5/2) gravelly loam; massive; friable; many fine roots; common fine pores; 20 percent brown (10YR 4/3) medium subangular blocky peds that are slightly more firm than the matrix; 25 percent rock fragments; moderately acid; clear irregular boundary. (0 to 8 inches thick.)

Bt/E-- 11 to 15 inches; brown (10YR4/3) gravelly loam; weak medium and fine subangular blocky structure; friable; common roots; common fine pores with clay linings on surfaces along pores; peds have coats of grayish brown (10YR5/2) light loam 1 to 2 mm thick that constitutes less than 15 percent of the layer; 30 percent rock fragments; thin films of clay on some gravel; slightly acid; clear irregular boundary. (2 to 5 inches thick.)

Bt-- 15 to 24 inches; brown (7.5YR 4/4) gravelly sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; common fine pores; medium and thick clay coats on 30 percent of vertical and horizontal faces of peds, and on surfaces along all pores, and on 10 percent of the surfaces of gravel; 30 percent rock fragments; few soft dark brown (7.5YR 3/2) to dark reddish brown (5YR 2/2) weathered limestone gravel; cone-shaped tongues of B extending 12 to 20 inches into C at 2 to 5 foot intervals; neutral; abrupt irregular boundary. (4 to 6 inches thick between tongues; 12 to 23 inches thick in tongues.)

2C-- 24 to 60 inches; grayish brown (10YR 5/2), dark grayish brown (10YR 4/2) and very dark grayish brown (10YR 3/2) gravel and sand; single grain; loose; moderately alkaline; slightly effervescent.

TYPE LOCATION: Wayne County, New York; Town of Macedon, 1 mile west of Village of Palmyra on Highway 31, 1/2 mile north across New York State Barge Canal, 1/2 mile west to gravel pit, 100 feet north of gravel pit in field. USGS Macedon, NY topographic quadrangle; Latitude 43 degrees, 03 minutes, 53 seconds N. and Longitude 77 degrees, 15 minutes, 52 seconds W. NAD 1927.

RANGE IN CHARACTERISTICS: The thickness of the solum ranges from 15 to 45 inches within individual pedons due to tonguing of the B into the C. Average solum thickness ranges from 18 to 30 inches among pedons. Depths to carbonates typically corresponds to the solum thickness or is 2 to 4 inches less. Depth to bedrock is greater than 60 inches. Coarse fragments, dominantly gravel and cobblestones, range from 5 to 30 percent in the Ap and E horizons, 15 to 35 percent in the argillic horizon, and 40 to 70 percent in the C horizon. This includes 0 to 15 percent cobblestones in the solum and 0 to 20 percent in the C horizon. The reaction ranges from moderately acid to neutral in the Ap horizon, slightly acid to slightly alkaline in the remainder of the solum, and is slightly alkaline or moderately alkaline in the C horizon.

The Ap horizon has hue of 5YR through l0YR, value of 3 through 5, and chroma of 2 or 3. It is sandy loam through silt loam in the fine earth fraction. It has weak or moderate, fine or medium granular structure and friable or very friable consistence.

The E horizon where present has hue of 5YR through 10YR, value of 5 or 6 and chroma of 2 or 3. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. It has platy or subangular blocky structure or it is massive. Consistence is friable or very friable.

The Bt/E horizon has hue of 5YR through l0YR, value of 3 through 5, and chroma of 2 through 4. It is fine sandy loam, loam, or sandy clay loam in the fine earth fraction. E properties are similar to those of the E horizon. Structure is weak or moderate subangular blocky. Consistence is friable or firm.

The Bt horizon has hue of 2.5YR through l0YR, value of 3 through 5 and chroma of 2 through 4. It is heavy fine sandy loam to clay loam in the fine earth fraction. It has moderate, fine to coarse subangular blocky structure and friable or firm consistence. Some pedons have thin BC horizons with colors and textures similar to the B and C horizon that are calcareous. The Bt horizon usually tongues into the C horizon.

The 2C horizon has hue of 5YR through l0YR, value of 3 through 5, and chroma of 2 through 4. It is sand or loamy sand in the fine earth fraction or is stratified sand and gravel. The 2C horizon is channery in some pedons.

COMPETING SERIES: Palmyra is the only series in this family.

Howard, Kars, Phelps and Wampsville are closely related soils in similar families. Howard and Kars soils have loamy skeletal argillic horizons. Phelps soils have low chroma mottles in the Bt horizon. Wampsville soils have fine-loamy particle size control sections.

GEOGRAPHIC SETTING: Palmyra soils occupy nearly level to gently sloping or pitted glacial outwash plains and associated steeper kames and kame terraces. Slope ranges from 0 to 40 percent. The regolith is water sorted gravel and sand, dominated by limestone with varying proportions of sandstone, siltstone and shale and with lesser amounts of igneous erratic. The solum in most pedons has been influenced by deposits containing more silt than the 2C. Mean annual precipitation ranges from 28 to 45 inches, mean annual air temperature from 46 to 50 degrees F. and mean growing season from 140 to 180 days. In some areas, the lowest parts of the landscapes are subject to rare flooding.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the moderately well drained Phelps; the somewhat poorly drained and poorly drained Fredon and very poorly drained Halsey soils that are in a drainage sequence with Palmyra. Also associated are the Arkport, Cazenovia, Collamer, Cosad, Dunkirk, Honeoye, Hudson, Ontario, Rhinebeck and Varysburg soils. Arkport soils formed in deep sandy deltaic deposits. Cazenovia, Honeoye, and Ontario soils occupy associated till plains. Collamer and Dunkirk soils are on associated silty lacustrine deposits.

Cosad soils formed in sandy over clayey lacustrine deposits. Hudson and Rhinebeck soils formed in clayey lacustrine deposits. Varysburg soils formed in similar outwash materials that overlie clayey lacustrine deposits.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Well drained and somewhat excessively drained. The potential for surface runoff is very low to high. Saturated hydraulic conductivity is moderately high or high in the solum and high or very high in the substratum.

USE AND VEGETATION: Most level to sloping areas have been cleared and are used intensively for growing corn, small grains, hay, small fruits, vegetable crops, and nursery stock. Hilly and steep areas are pastured or wooded. Woodlots contain sugar maple, red oak, tulip poplar, hickory, black cherry and associated species.

DISTRIBUTION AND EXTENT: Ontario Plain, Mohawk Valley, Hudson Valley and northern portions of valleys of the glaciated Allegheny Plateau in New York and possibly in western Massachusetts. MLRA's 101, 140, and 144A. The series is extensive.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Amherst, Massachusetts

SERIES ESTABLISHED: Wayne County, New York, 1919.

REMARKS: The A&B horizon was changed to E horizon and the B&A horizon was changed to Bt/E horizon.

Diagnostic horizons and other features recognized in the typical pedon are as follows:
(1) Ochric epipedon - the zone from the surface to 9 inches (Ap horizon).
(2) Albic horizon - the zone from 9 to 11 inches (E horizon).
(3) Argillic horizon - the zone from 11 to 24 inches (Bt/E and Bt horizons).
(4) Glossic subgroup - as evidenced by interfingering of Albic material around peds in the upper part of the Argillic horizon (Bt/E horizon).

National Cooperative Soil Survey
U.S.A.

LOCATION WAKEVILLE NY

Established Series
WEH-PSP
02/2006

WAKEVILLE SERIES

The Wakeville series consists of very deep, somewhat poorly drained soils on flood plains. They formed in silty alluvium. They are nearly level soils that are subject to flooding. Permeability is moderate throughout the soil. Slope ranges from 0 to 3 percent. Mean annual temperature is 48 degrees F. and mean annual precipitation is 37 inches.

TAXONOMIC CLASS: Coarse-silty, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts

TYPICAL PEDON: Wakeville silt loam, on a 1 percent slope in a cultivated field. (colors are for moist soil unless otherwise noted.)

Ap-- 0 to 7 inches, dark grayish brown (10YR 4/2) silt loam; light brownish gray (10YR 6/2) dry; moderate fine and medium granular structure; friable; many fine roots; neutral; abrupt smooth boundary. (6 to 10 inches thick.)

Bw-- 7 to 12 inches, brown (10YR 4/3) silt loam; weak fine subangular blocky structure; friable; common fine roots; neutral; common fine pores; clear wavy boundary. (2 to 8 inches thick.)

Bg1-- 12 to 26 inches, dark grayish brown (10YR 4/2) silt loam; weak fine and medium subangular blocky structure; friable; common fine roots; common fine pores; grayish brown (10YR 5/2) on all faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation and faint grayish brown (10YR 5/2) areas of iron depletion in the matrix; neutral; clear wavy boundary.

Bg2-- 26 to 42 inches, grayish brown (10YR 5/2) silt loam; weak fine subangular blocky structure; friable; few fine pores; light brownish gray (10YR 6/2) on all faces of peds; common medium distinct dark yellowish brown (10YR 4/4) masses

of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion within the matrix; neutral; clear wavy boundary. (Combined thickness of the Bg horizon is 16 to 37 inches.)

Cg-- 42 to 72 inches, grayish brown (10YR 5/2) and dark yellowish brown (10YR 4/4) silt loam; massive; friable; slightly alkaline.

TYPE LOCATION: Chautauqua County, New York, Town of Kiantone, 500 feet west of US Rt. 62 and NY Rt. 60; 50 feet south of NY Rt. 60. USGS Jamestown, NY topographic quadrangle; Latitude 42 degrees, 03 minutes, 16 seconds N. and Longitude 79 degrees, 11 minutes, 45 seconds W. NAD 1927.

RANGE IN CHARACTERISTICS: Solum thickness ranges from 24 to 45 inches. Rock fragments generally are less than 5 percent in the surface layer and subsoil but range to 20 percent in the substratum and up to 45 percent below 40 inches. Depth to bedrock is more than 60 inches. Reaction ranges from moderately acid to neutral to a depth of 40 inches and from moderately acid to moderately alkaline below 40 inches.

The Ap or A horizon has hue of 10YR, value of 3 or 5, and chroma of 2 or 3. Texture is silt loam or very fine sandy loam. Thickness of the A horizon ranges from 2 to 5 inches thick.

The Bw horizon has hue of 7.5YR through 2.5Y, value of 4 through 6, and chroma of 3 through 6. The texture is very fine sandy loam or silt loam. Structure is fine or medium subangular blocky or granular.

The Bg horizon has hue of 7.5YR through 5Y, value of 3 through 6, and chroma of 1 or 2. The texture is silt loam or very fine sandy loam. Structure is subangular blocky or granular.

The Cg or C horizon has hue of 7.5YR through 5Y, value of 5 or 6, and chroma of 1 through 4. The texture is silt loam, loam, or very fine sandy loam above 40 inches, and ranges to fine sandy loam or loamy sand below 40 inches in the fine earth fraction. The horizon is massive, or has plate like divisions. Consistence is very friable to firm.

Some pedons have a 2C horizon below 40 inches with hue of 10YR through 5Y, value of 3 through 6, and chroma of 1 through 4. Texture ranges from loam to loamy sand in the fine earth fraction. Some pedons have strata of fine sand or

sand below 40 inches. The horizon is massive. Consistence is very friable or friable.

COMPETING SERIES: The Limerick series is the only soil in the same family. Limerick soils are poorly drained, and do not have a Bw horizon in the upper subsoil.

The Holderton, Maplehill, Raypol, Raynham, Wakeland, Wayland, and Wyalusing series are similar soils in related families. Holderton soils have a coarse-loamy particle-size control section. Maplehill soils have a buried dark colored A horizon within a depth of 36 inches. Raynham soils occur outside the flood plain in older lacustrine deposits. Raypol and Wyalusing soils are coarse-silty over sandy or sandy-skeletal. The Wakeland soils have an AC profile lacking a developed subsoil, are more acid in the substratum, and occur in areas of higher air temperatures. Wayland soils are fine-silty in the particle-size control section.

GEOGRAPHIC SETTING: Wakeville soils are level and nearly level soils on flood plains along low gradient streams. Slope ranges from 0 to 3 percent. The soils formed in recent alluvium derived from upland glacial drift predominantly of shale, siltstone and sandstone origin with some limestone. Mean annual precipitation ranges from 30 to 45 inches; mean annual air temperature ranges from 46 to 50 degrees F.; and the growing season ranges from 110 to 150 days.

GEOGRAPHICALLY ASSOCIATED SOILS: Wakeville soils are the somewhat poorly drained member of a drainage sequence which includes the well drained Hamlin, moderately well drained Teel and poorly and very poorly drained Wayland soils. Allard, Howard and Valois soils are on gravelly, higher adjacent terraces. Langford, Erie, Chautauqua and Busti soils are till soils on higher surrounding landscapes. Swormsville soils occupy similar lowland positions but have a higher clay content in the subsoil.

DRAINAGE AND PERMEABILITY: Somewhat poorly drained. The potential for surface runoff is very low to very high. Permeability is moderate throughout the soil. The seasonal high water table is at a depth of 0.5 to 1.5 feet below the surface from November to May.

USE AND VEGETATION: Most areas of this soil are in, corn, small grains, hay and pasture. Native vegetation is mixed hardwoods including red maple, sugar maple, white ash, walnut and Eastern hemlock.

DISTRIBUTION AND EXTENT: Southwestern and South Central New York. MLRA's 101, 139, and 140. The series is moderately extensive.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Amherst, Massachusetts

SERIES ESTABLISHED: Chautauqua County, New York 1988.

REMARKS: Wakeville series is proposed for the somewhat poorly drained soils previously included with Teel series. The Teel series is now restricted to moderately well drained.

Diagnostic horizons and features recognized in the typical pedon are:
1. Ochric epipedon - the zone from the surface to a depth of 7 inches (Ap horizon).
2. Irregular decrease in organic carbon with depth and is greater than 0.2 percent within 1.25 meters.
3. An aquic moisture regime - evidenced by low chroma matrix colors and redoximorphic features in the Bg horizons
4. Particle-size control section from 10 to 40 inches that is coarse-silty weighted average.

National Cooperative Soil Survey
U.S.A.

LOCATION WASSAIC NY NJ

Established Series
Rev. JPW-JEW-SWF
07/2007

WASSAIC SERIES

The Wassaic series consists of moderately deep, well drained soils formed in loamy till. They are on bedrock controlled till plains. Bedrock is at depths of 20 to 40 inches. Permeability is moderate or moderately slow in the subsoil and substratum. Slope ranges from 0 to 50 percent. Mean annual temperature is 48 degrees F. and mean annual precipitation is 37 inches.

TAXONOMIC CLASS: Fine-loamy, mixed, active, mesic Glossic Hapludalfs

TYPICAL PEDON: Wassaic silt loam, on a 3 percent slope in a cultivated field. (Colors are for moist soil.)

Ap-- 0 to 9 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) coatings on peds; moderate medium granular structure; friable, slightly plastic; many fine roots; 10 percent gravel and 2 percent cobbles; neutral; abrupt smooth boundary. (6 to 10 inches thick.)

E-- 9 to 10 inches; grayish brown (10YR 5/2) loam; weak fine platy structure; friable, nonplastic; common fine roots; common fine cylindrical vertical pores; 10 percent gravel and 2 percent cobbles; neutral; abrupt wavy boundary. (0 to 6 inches thick.)

B/E-- 10 to 14 inches; brown (7.5YR 4/4) silt loam; moderate medium subangular blocky structure; firm, slightly plastic; common fine roots; many fine cylindrical and spherical pores; 2 mm thick fingers of pale brown (10YR 6/3) loam extend from the E horizon along ped faces; few clay coats in pores; 10 percent gravel and 3 percent cobbles; slightly acid; clear wavy boundary. (2 to 8 inches thick.)

Bt-- 14 to 23 inches; brown (7.5YR 4/4) gravelly silt loam; moderate medium subangular blocky structure; firm, plastic; few fine roots; common fine pores; brown to brown (10YR 4/3) clay coats on 50 percent of faces of peds and in most

pores; 15 percent gravel and 5 percent cobbles; neutral; clear wavy boundary. (6 to 20 inches thick.)

C-- 23 to 28 inches; brown (7.5YR 5/2) gravelly loam; weak medium platy structure; firm, slightly plastic; few fine roots; few pores; 20 percent gravel and 5 percent cobbles; slightly alkaline, slightly effervescent; abrupt smooth boundary. (0 to 12 inches thick.)

R-- 28 inches; gray hard limestone.

TYPE LOCATION: Erie County, New York; town of Clarence, two miles west-southwest of village of Clarence, one-third mile south of New York Highway 5. USGS Lancaster, NY topographic quadrangle; Latitude 42 degrees, 58 minutes, 15 seconds N. and Longitude 78 degrees, 37 minutes, 46 seconds W. NAD 1927.

RANGE IN CHARACTERISTICS: Thickness of the solum ranges from 20 to 36 inches. Depth to bedrock ranges from 20 to 40 inches. Rock fragments, mainly gravel and cobbles and some stones, range from 0 to 35 percent by volume in the A and E horizons and 3 to 35 percent in the B/E, B and C horizons.

The Ap or A horizon has hue of 7.5YR or 10YR, value of 3 through 5, and chroma of 2 or 3. It is sandy loam, loam, or silt loam in the fine-earth fraction. Structure is weak or moderate granular, some pedons may have subangular blocky. Reaction ranges from moderately acid through neutral. The thickness of the A horizon ranges from 3 to 5 inches. Some pedons have a BA horizon.

The E horizon has hue of 5YR through 2.5Y, value of 5 or 6, and chroma of 2 through 4. Texture is similar to the A horizon. E material interfingers into the B horizon to depths ranging from 2 to 10 inches forming a B/E horizon. In some pedons a thin E/B horizon is present above the B/E horizon. The B/E and E/B horizons have properties similar to the E and Bt horizons, respectively.

The Bt horizon has hue of 5YR through 2.5Y, value of 4 or 5, and chroma of 3 or 6, with or without mottles of higher chroma. It is loam to silty clay loam in the fine-earth fraction. It has prismatic or subangular blocky structure, and ranges from moderately acid through slightly alkaline. The Bt horizon has common or abundant clay films. Some pedons have a BC or CB horizon.

The C horizon has hue of 5YR through 2.5Y, value of 4 or 5, and chroma of 2 through 4. It ranges from fine sandy loam to silty clay loam in the fine-earth

fraction and ranges from moderately acid through slightly alkaline.

The R or 2R horizon is unfractured or partially fractured sedimentary rock. Usually it is limestone, but some pedons are shale or sandstone.

COMPETING SERIES: Members of the same family include the Fairpoint, Honeoye, Lansing, Ontario, Wampsville, and Yunenyeti (T) series. Fairport soils only allow hue of 7.5YR or redder in the control section and occur in areas with less precipitation and lower temperatures. Yunenyeti (T) soils have redoximorphic features in the B horizon. The rest of the series are more than 40 inches deep to bedrock.

The Aurora, Lairdsville, Northfield, Riga, Ritchey, and Sebastian series are similar soils in related families that have argillic horizons and bedrock within a depth of 40 inches. Aurora soils have mottles with chroma of 2 or less in the upper 10 inches of the argillic horizon. Lairdsville and Riga soils have fine particle- size control sections. Northfield, Ritchey, and Sebastian soils have bedrock within 20 inches.

GEOGRAPHIC SETTING: Wassaic soils are nearly level to steep soils on bedrock controlled undulating to rolling till plains with locally dissected areas. These soils are also on the face of escarpments. Slope ranges from 0 to 50 percent. The soils formed in till of Wisconsin age dominated by limestone, but containing some sandstone, shale, and granitic erratics. Mean annual precipitation ranges from 30 to 42 inches; mean annual air temperature ranges from 45 to 50 degrees F. and the growing season ranges from 140 to 200 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the Cazenovia, Farmington, Galway, Hilton, Honeoye, Lima, and Ontario soils on associated deeper till landscapes. Farmington and Galway soils are typically associated in the extreme southern portions of MLRA 144A. Benson and Farmington soils are in associated deposits less than 20 inches thick over bedrock. Aurora and Angola soils are more poorly drained, moderately deep associates over shale bedrock. Galway soils lack argillic horizons and have less than 18 percent clay. Newstead soils are somewhat poor and poorly drained soils in associated depressions and on footslopes.

DRAINAGE AND PERMEABILITY: Well drained. The potential for surface runoff is low to very high. Permeability is moderate or moderately slow in the subsoil and substratum.

USE AND VEGETATION: Mostly cleared and used for growing general farm crops. Crops include hay, corn, oats, wheat, and some vegetables. Woodlots have red and white oak, sugar maple, white ash, hickory, black cherry, and companion species.

DISTRIBUTION AND EXTENT: Ontario lowlands of western New York, the northern edge of the Allegany Plateau in Central New York, locally in the Mohawk and Hudson Valleys of New York, and in northwestern New Jersey. MLRA's 101, 140, and 144A. Wassaic soils are moderately extensive.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE:
Amherst, Massachusetts

SERIES ESTABLISHED: Dutchess County, New York, 1939.

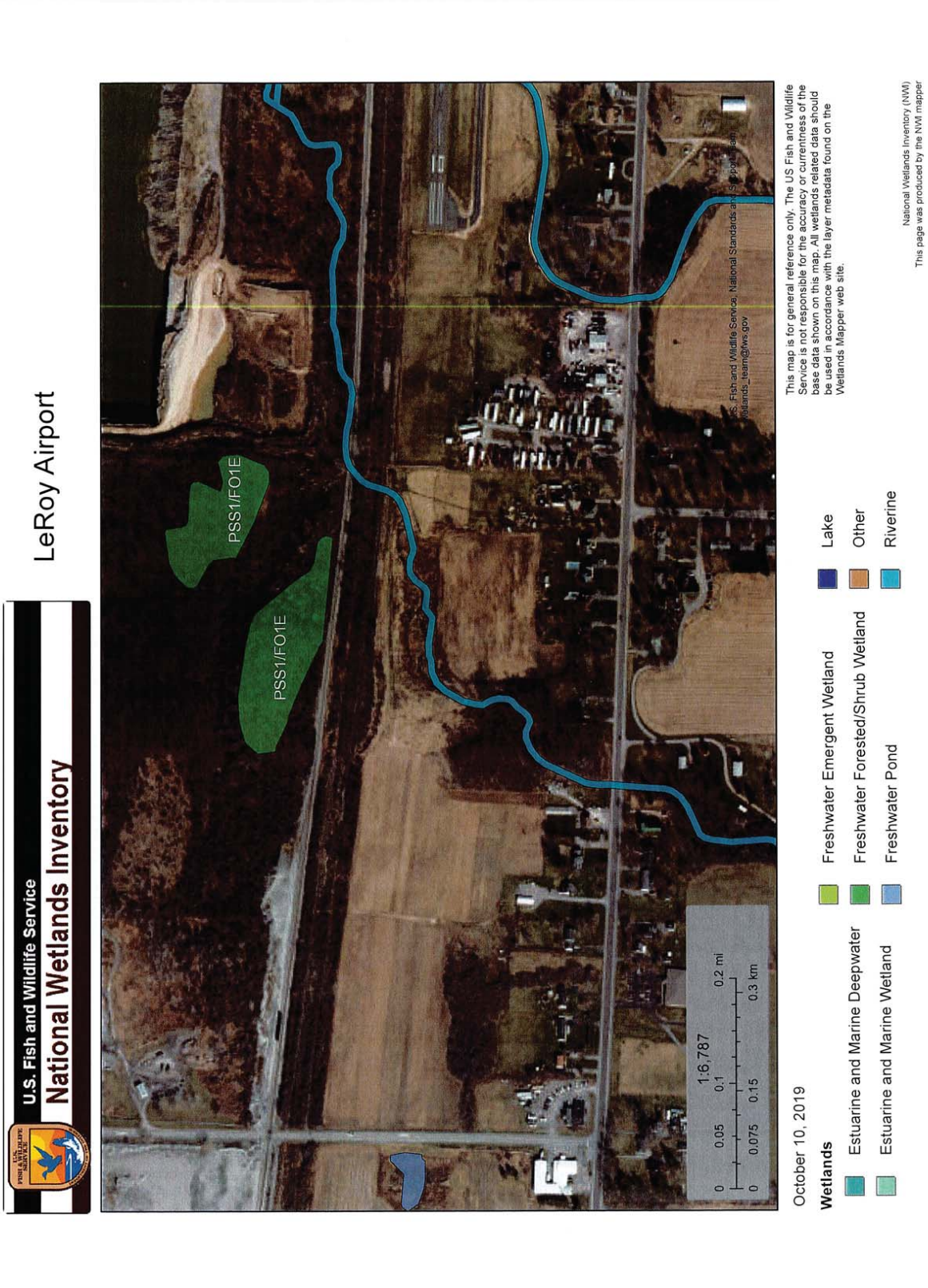
REMARKS: Moderately well drained was removed from the series, and areas that are moderately well drained will be considered as inclusions, unless there is a significant acreage to establish a new series.
Since this soil is till over sedimentary bedrock, the designation of the bedrock horizon should be 2R. R is retained at this time because of past use.

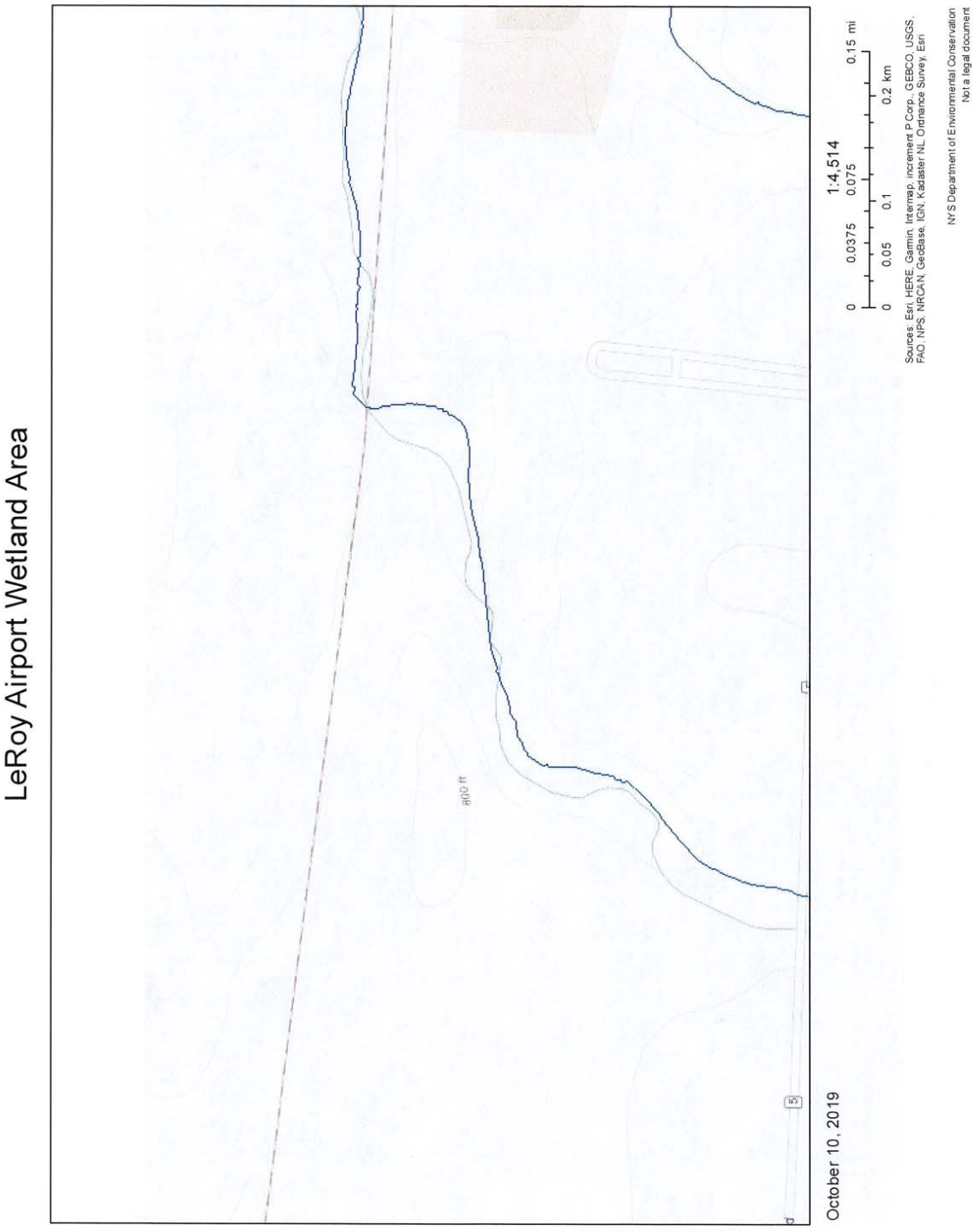
Diagnostic horizons and features recognized in this pedon are:
a. Ochric epipedon - the zone from 0 to 14 inches (Ap, E, and B/E horizons).
b. Argillic horizon - the zone from 14 to 23 inches (Bt horizon).
c. Glossoboric subgroup - interfingering of E horizon material 2 mm or more thick around peds of Bt horizon material in the
zone from 10 to 14 inches (B/E horizon).
d. Lithic contact at 28 inches (R horizon).

National Cooperative Soil Survey
U.S.A.

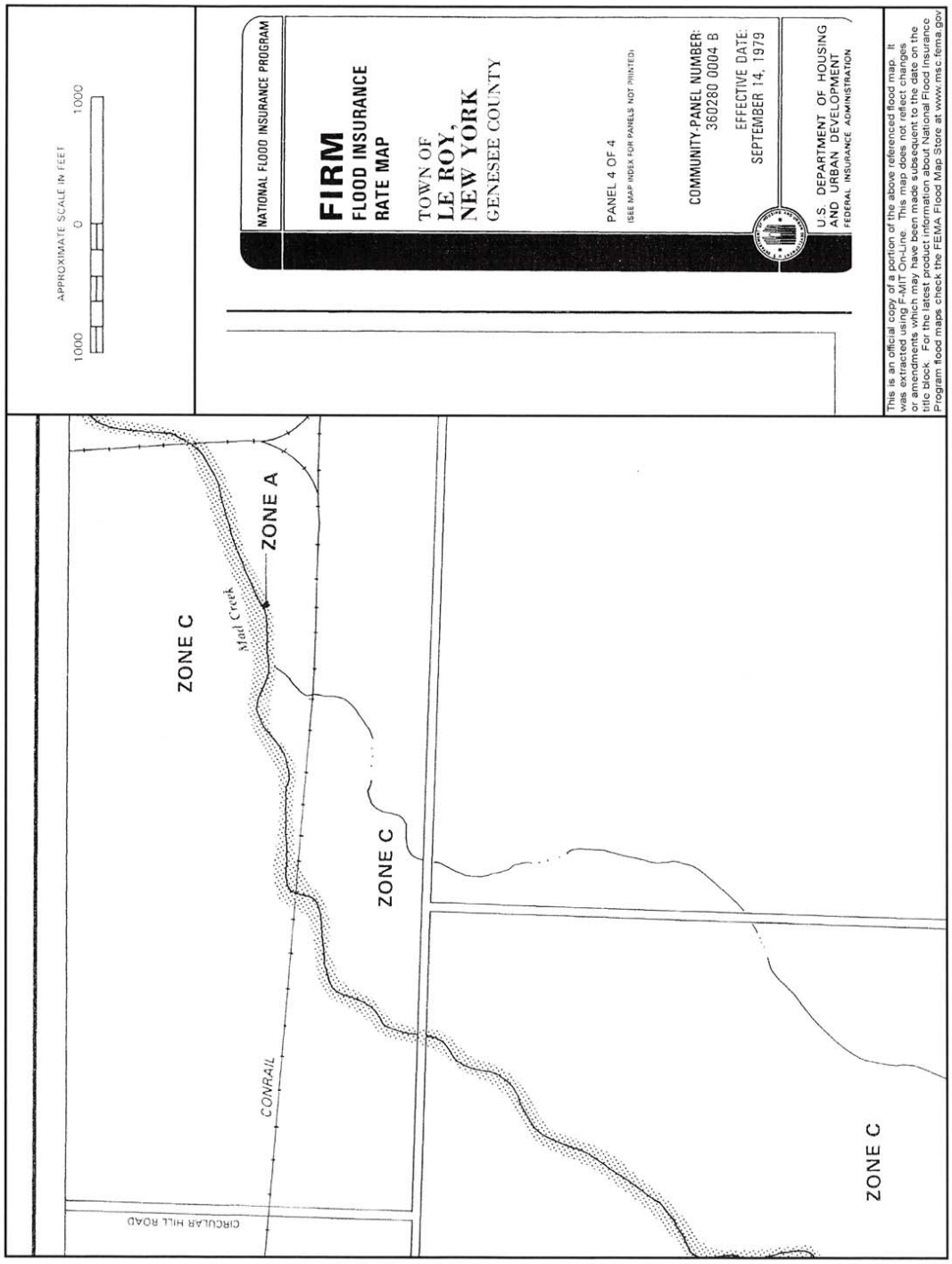
Appendix E

Regulatory Agency Mapping


U.S. Fish and Wildlife Service
National Wetlands Inventory
LeRoy Airport
PSS1/FO1E
PSS1/FO1E
0 0.05 0.1 0.2 mi
0 0.075 0.15 0.3 km
1:6,787
October 10, 2019
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.
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper


LeRoy Airport Wetland Area
1:4,514
0 0.0375 0.075 0.15 mi
0 0.05 0.1 0.2 km
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri
NYS Department of Environmental Conservation
Not a legal document
October 10, 2019


LeRoy Airport Wetland Area
October 10, 2019
1:4,514
0 0.0375 0.075 0.15 mi
0 0.05 0.1 0.2 km
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
NYS Department of Environmental Conservation
Not a legal document


APPROXIMATE SCALE IN FEET
1000
0
1000
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE
RATE MAP
TOWN OF
LE ROY,
NEW YORK
GENESEE COUNTY
PANEL 4 OF 4
(SEE MAP INDEX FOR PANELS NOT PRINTED)
COMMUNITY-PANEL NUMBER:
360280 0004 B
EFFECTIVE DATE:
SEPTEMBER 14, 1979
U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov
ZONE C
Mail Creek
ZONE A
ZONE C
CONRAIL
CIRCULAR HILL ROAD
ZONE C

DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

July 23, 2020

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination for Department of the Army Processing No. LRB-2020-00660

Raymond Detor
283 Westminster Road
Rochester, New York 14607-3229

Dear Mr. Detor:

I have reviewed your request for an Approved Jurisdictional Determination (JD) for aquatic resources identified within two areas; each several miles from the Leroy Airport. Area 1 containing Wetland A is east of Circular Hill Road north of the railroad tracks and Area 2 where Mud Creek is located is east of Circular Hill Road, south of the railroad tracks. The overall review areas are in the Town of LeRoy, Genesee County, New York.

Enclosed is an Approved JD which verifies the limits of waters of the United States (WOUS) within the subject parcel as depicted on Sheets 2 and 3 of 3. This Approved JD will remain valid for a period of five (5) years from the date of this correspondence unless new information warrants revision of the Approved JD before the expiration date. At the end of this period, a new aquatic resource delineation and JD will be required.

I have determined that Mud Creek is a WOUS, as noted on the attached Approved Jurisdictional Determination Form and as depicted on the attached maps.

Therefore, this aquatic resource is regulated under Section 404 of the Clean Water Act. Department of the Army authorization is required if you propose a discharge of dredged or fill material in this WOUS.

I have determined that forested Wetland A **is not** a WOUS as noted on the attached Approved Jurisdictional Determination Form. Therefore, this aquatic resource **is not regulated** under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Department of the Army **authorization is not required** if you propose work or propose a discharge of dredged or fill material in this resource.

Further, this delineation/determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in your request. This delineation/ determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are United States Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a

-2-

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination for Department of the Army Processing No. LRB-2020-00660

certified wetland determination from the local office of the Natural Resource Conservation Service prior to starting work.

If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal the above JD, you must submit a completed RFA form within 60 days of the date on this letter to the Great Lakes/Ohio River Division Office at the following address:

Jacob Siegrist
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: 513-684-2699 Fax: 513-684-2460

In order for an RFA to be accepted, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **September 20, 2020.**

It is not necessary to submit an RFA to the Division office if you do not object to the determination in this letter.

Questions pertaining to this matter should be directed to me at 716-879-6330, by writing to the following address: U.S. Army Corps of Engineers, 7413 County House Road, Auburn, New York 13021, or by e-mail at: judy.a.robinson@usace.army.mil.

Sincerely,

Judy Robinson

Judy A. Robinson
Biologist

Enclosures
cc: Bryan Bancroft, Lu Engineers
Lisa Cheung, Passero

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL		
Applicant: LeRoy Airport	File Number: 2020-00660	Date: July 23, 2020
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT		
REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)		
ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.		
POINT OF CONTACT FOR QUESTIONS OR INFORMATION:		
If you have questions regarding this decision and/or the appeal process you may contact: **Project Manager** U.S. Army Corps of Engineers 7413 County House Road Auburn, New York 13021 716-879-6330 Judy.a.robinson@usace.army.mil	If you only have questions regarding the appeal process you may also contact: Jacob Siegrist Regulatory Appeals Review Officer US Army Corps of Engineers Great Lakes and Ohio River Division 550 Main Street, Room 10-714 Cincinnati, Ohio 45202-3222 Phone: 513-684-2699 Fax: 513-684-2460	
RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.		
_____ Signature of appellant or agent.	Date:	Telephone number:

Appendix F:f
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Appendix G:
List of Preparers

Name	Company	EA Section
Lisa Cheung	Passero Associates	Quality Control
Daniel Jablansky	Passero Associates	Purpose & Need, Alternatives
Chris Johnson	Passero Associates	Affected Environment, Environmental Consequences
Wayne Zian	Passero Associates	Alternative Drawings
Bryan Bancroft	Lu Engineers	Wetland Delineation Report
Mark Ewing	Archaeological Consulting Experts, LLC	Archaeological Phase 1A Report

Appendix H:
Public Participation

LEGAL NOTICE OF AVAILABILITY

LeRoy Airport – Draft Environmental Assessment

Notice is hereby given that copies of a Draft Environmental Assessment (EA) for LeRoy Airport's off-airport obstruction removal project is available for public review digitally and during regular business hours at:

LeRoy Airport, 8267 E Main Rd, Le Roy, NY 14482, http://www.leroyairport.com/projectwork.php

Woodward Memorial Library, 7 Wolcott Street, LeRoy, NY 14482, http://www.woodwardmemoriallibrary.org/

To adhere to COVID-19 regulations, masks and social distancing are required at all physical locations listed above.

In addition, a digital copy of this document can be obtained by visiting www.passero.com/bids, and a hard copy or CD copy can be obtained by emailing Lisa Cheung at Passero Associates at lcheung@passero.com or sending a letter to: Passero Associates, 242 West Main St, Suite 100, Rochester, NY 14614, Attention: Lisa Cheung.

The comment period for this document begins on Monday, February 1, 2021 and is open for 30 days until it closes on Tuesday, March 2, 2021. All comments must be either emailed to Lisa Cheung at Passero Associates at lcheung@passero.com by the comment period closing date, or written and postmarked by the comment period closing date and submitted to: Passero Associates, 242 West Main St, Suite 100, Rochester, NY 14614, Attention: Lisa Cheung.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment –including your personal identifying information –may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

_____

This legal notice was published in the _____ on _____. During the comment period, which closed on _____, and _____ comments were received. The affidavit and physical ad follow.