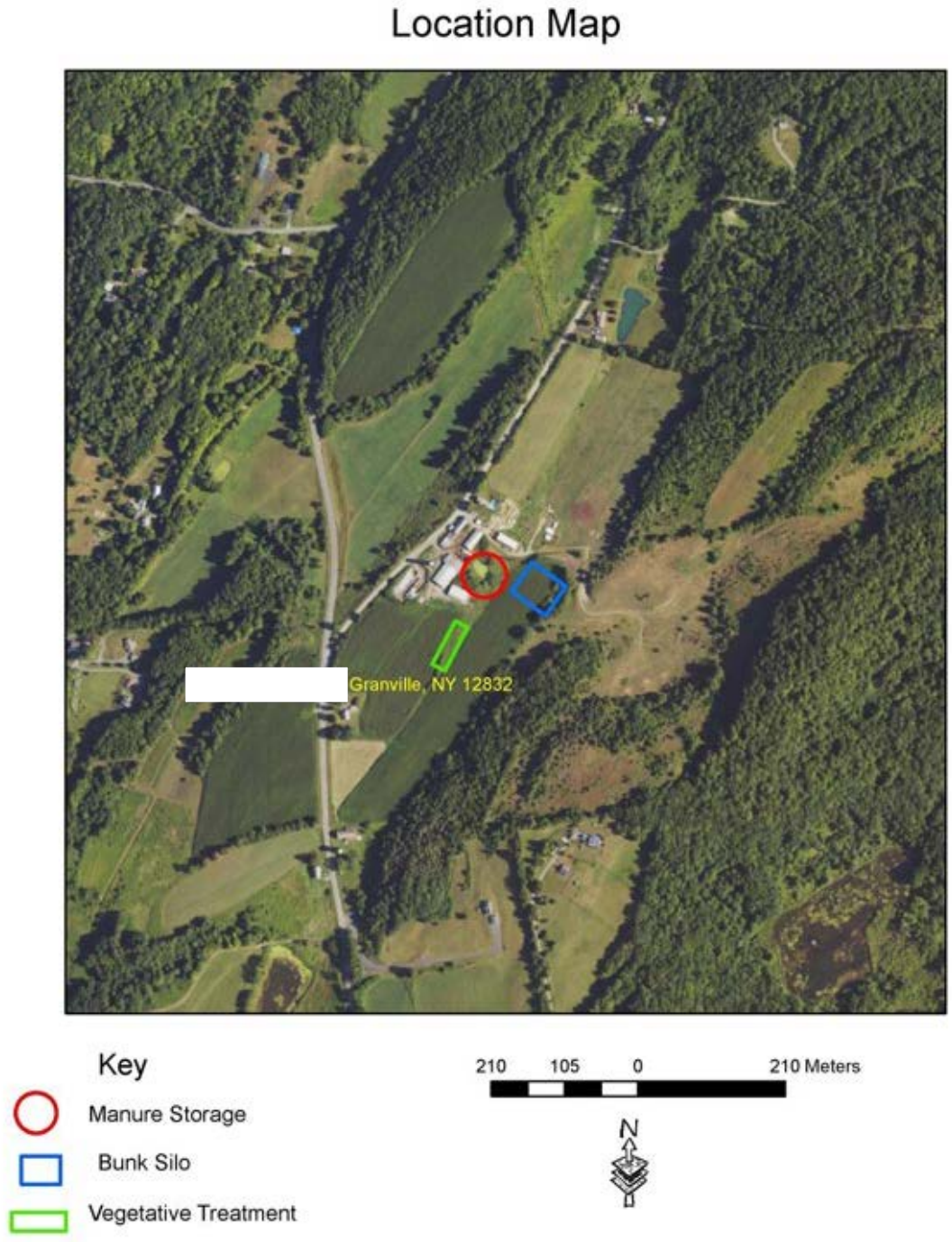
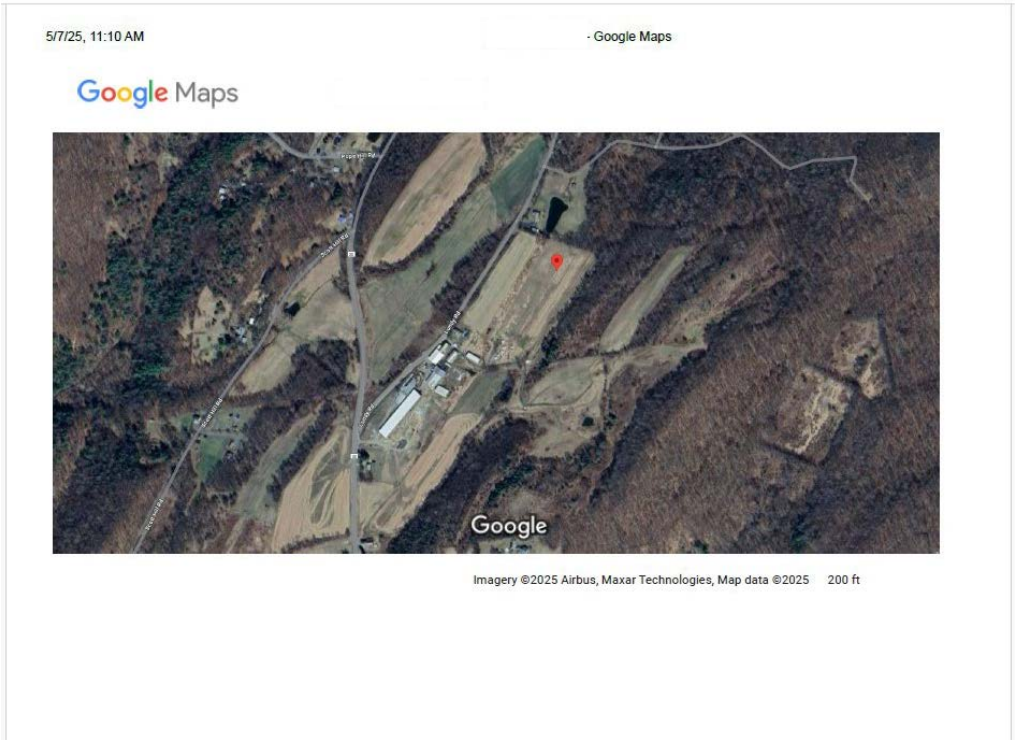
Appendices

A. Project Area Maps

A-1 Site Map

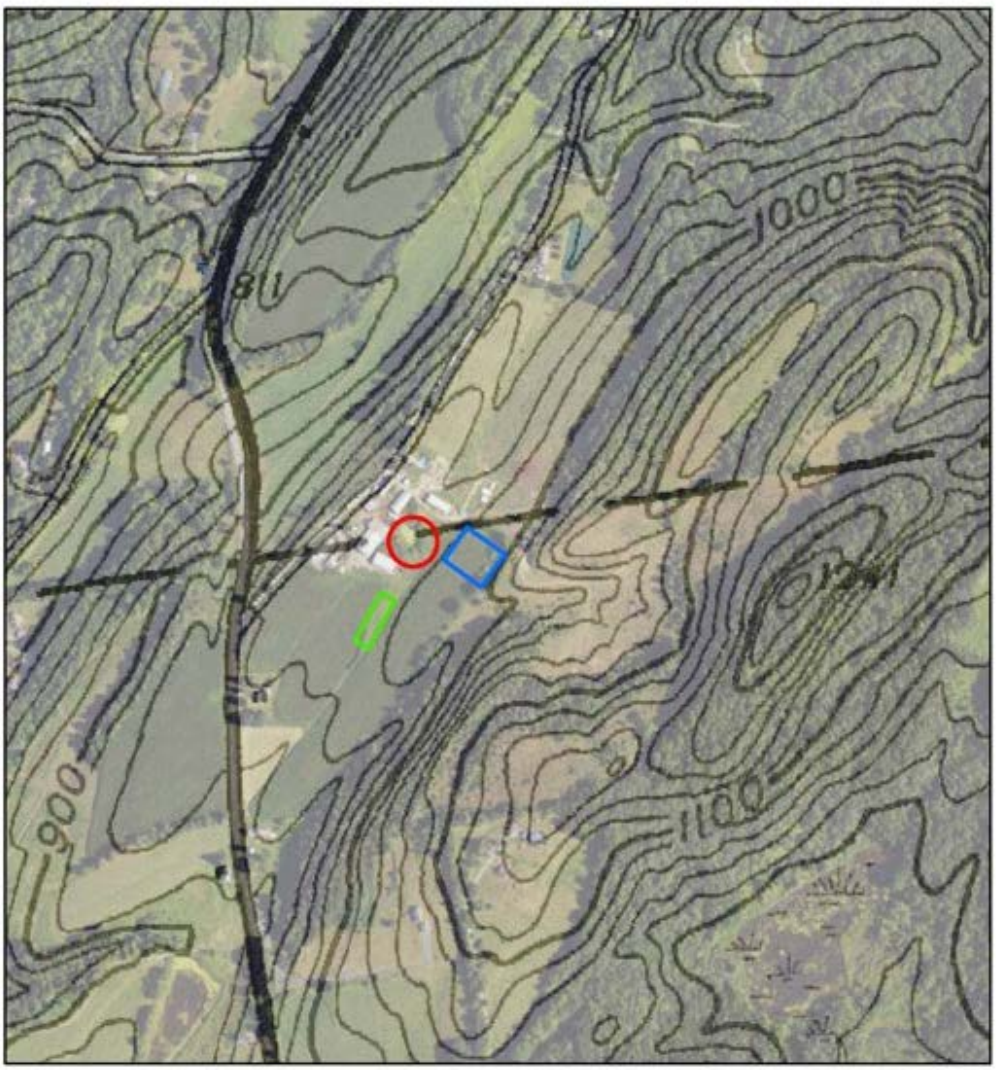


A-2 Farm Location Map



A-3 Topographic Map

Topographic Map of Project Area



Key

Manure Storage

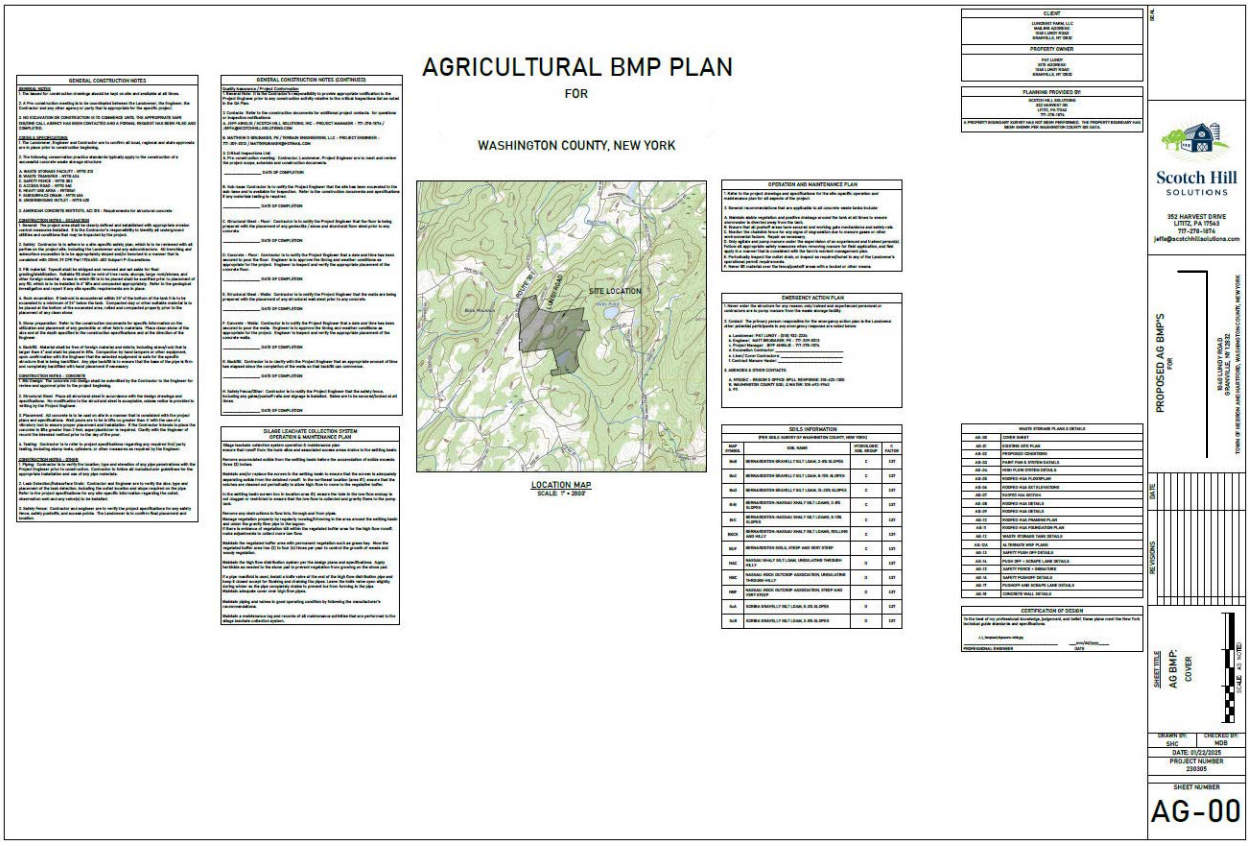
Bunk Silo

Vegetative Treatment

210 105 0 210 Meters

N

A-4 Project Plans



AGRICULTURAL BMP PLAN

FOR

WASHINGTON COUNTY, NEW YORK

SITE LOCATION

LOCATION MAP
SCALE: 1" = 2000'

CLIENT

PROPERTY OWNER

PLANNING PROVIDED BY:
Scotch Hill Solutions
352 Harvest Drive
Lititz, PA 17543
717-278-1874
jeffa@scotchhillsolutions.com

PROPOSED AG BMP'S
FOR
M:48 LUNDY ROAD
GRANVILLE, NY 12832
TOWN OF HEBRON AND ARGYLE, WASHINGTON COUNTY, NEW YORK

SHEET TITLE
AG BMP: COVER

DRAWN BY: SHC
CHECKED BY: MDB
DATE: 01/22/2025
PROJECT NUMBER: 230305

SHEET NUMBER
AG-00

Scotch Hill SOLUTIONS
352 HARVEST DRIVE
LITITZ, PA 17543
717-278-1874
jeff@scotchhillsolutions.com

PROPOSED AG BMP'S
FOR
9648 LUNDY ROAD
GRANVILLE, NY 12832
TOWN OF HEBRON AND WASHINGTON COUNTY, NEW YORK

DATE
REVISIONS

SHEET TITLE
AG BMP: EXISTING SITE PLAN
SCALE: 1" = 50'

DRAWN BY: SHC
CHECKED BY: JAA
DATE: 01/22/2025
PROJECT NUMBER: 230305

SHEET NUMBER
AG-01

PRELIMINARY EARTHWORK QUANTITIES (TANK)		
CUT	16,437	CUBIC YARDS
FILL	1,376	CUBIC YARDS
CUT/FILL RATIO	0.34	

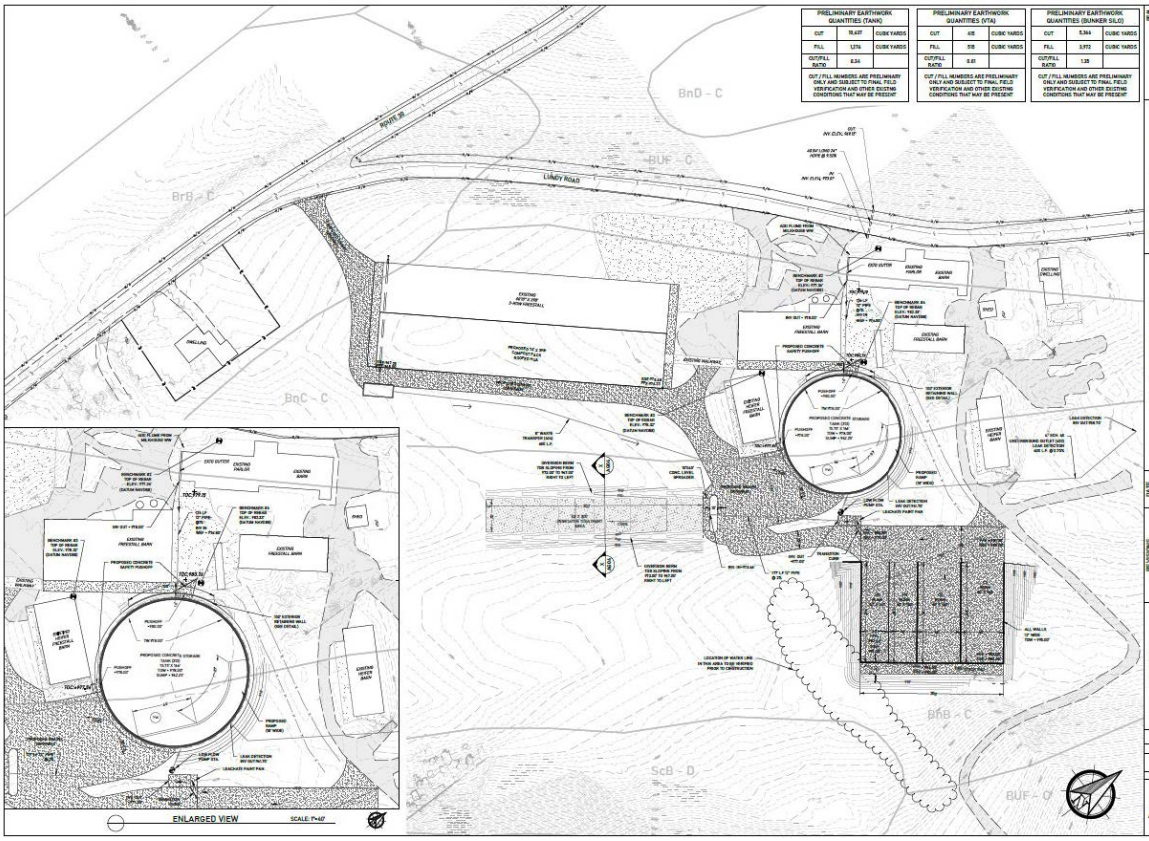
CUT / FILL NUMBERS ARE PRELIMINARY ONLY AND SUBJECT TO FINAL FIELD VERIFICATION AND OTHER EXISTING CONDITIONS THAT MAY BE PRESENT

PRELIMINARY EARTHWORK QUANTITIES (VTA)		
CUT	415	CUBIC YARDS
FILL	915	CUBIC YARDS
CUT/FILL RATIO	0.45	

CUT / FILL NUMBERS ARE PRELIMINARY ONLY AND SUBJECT TO FINAL FIELD VERIFICATION AND OTHER EXISTING CONDITIONS THAT MAY BE PRESENT

PRELIMINARY EARTHWORK QUANTITIES (BUNKER SILO)		
CUT	5,364	CUBIC YARDS
FILL	3,972	CUBIC YARDS
CUT/FILL RATIO	1.35	

CUT / FILL NUMBERS ARE PRELIMINARY ONLY AND SUBJECT TO FINAL FIELD VERIFICATION AND OTHER EXISTING CONDITIONS THAT MAY BE PRESENT



Scotch Hill SOLUTIONS
352 HARVEST DRIVE
LITITZ, PA 17543
717-278-1874
jeff@scotchhillsolutions.com

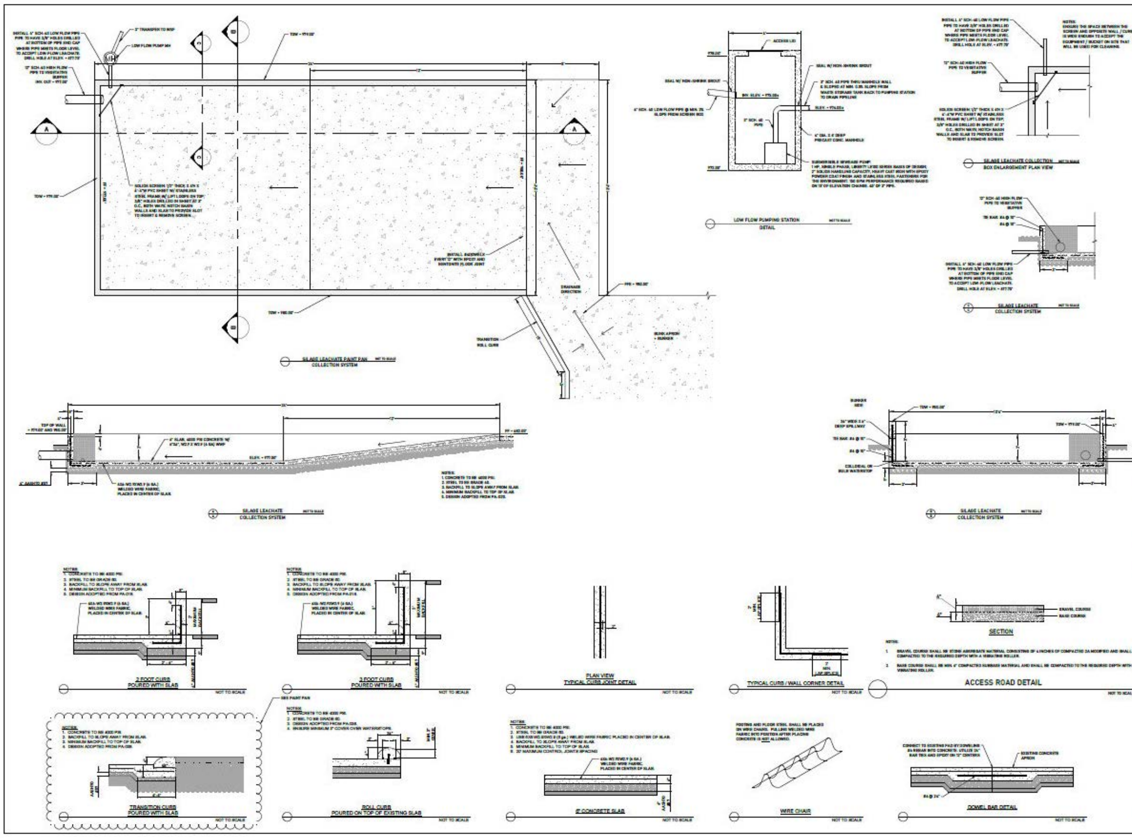
PROPOSED AG BMP'S
FOR
9648 LUNDY ROAD
GRANVILLE, NY 12832
TOWN OF HEBRON AND WASHINGTON COUNTY, NEW YORK

DATE
REVISIONS

SHEET TITLE
AG BMP PLAN: SITE PLAN
SCALE: 1" = 50'

DRAWN BY: SHC
CHECKED BY: JAA
DATE: 01/22/2025
PROJECT NUMBER: 230305

SHEET NUMBER
AG-02



SEAL

Scotch Hill SOLUTIONS
352 HARVEST DRIVE
LITITZ, PA 17543
717-278-1874
jeffe@scotchhillsolutions.com

PROPOSED AG BMP'S FOR

1040 LUNDY ROAD
GRANVILLE, NY 12832
TOWN OF HEBRON AND HARTFORD, WASHINGTON COUNTY, NEW YORK

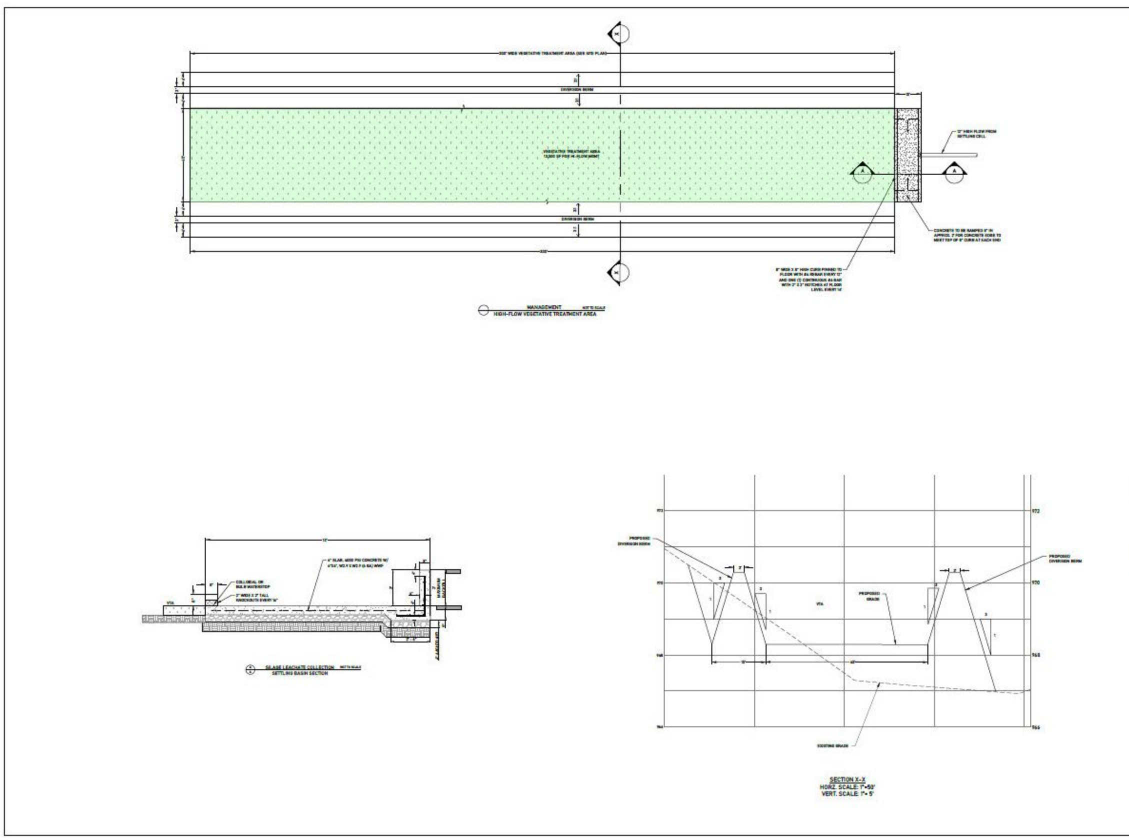
DATE	REVISIONS

SHEET TITLE
LEACHATE COLLECTION SYSTEM DETAILS

SCALE: AS NOTED

DRAWN BY: SHC	CHECKED BY: MDB
DATE: 01/22/2025	
PROJECT NUMBER 230305	

SHEET NUMBER
AG-03



SEAL

Scotch Hill SOLUTIONS
352 HARVEST DRIVE
LITITZ, PA 17543
717-278-1874
jeffe@scotchhillsolutions.com

PROPOSED AG BMP'S FOR

1040 LUNDY ROAD
GRANVILLE, NY 12832
TOWN OF HEBRON AND HARTFORD, WASHINGTON COUNTY, NEW YORK

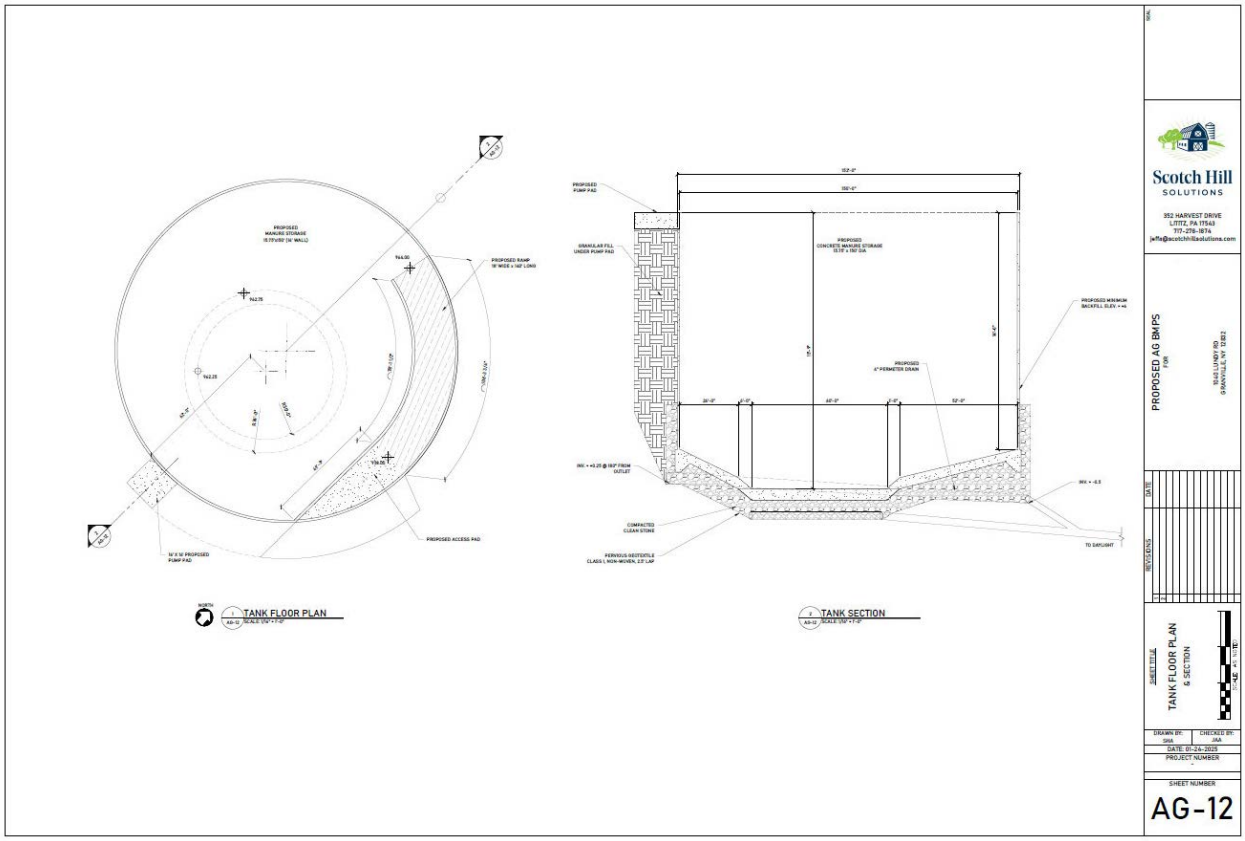
DATE	REVISIONS

SHEET TITLE
HIGH FLOW SYSTEM DETAILS

SCALE: AS NOTED

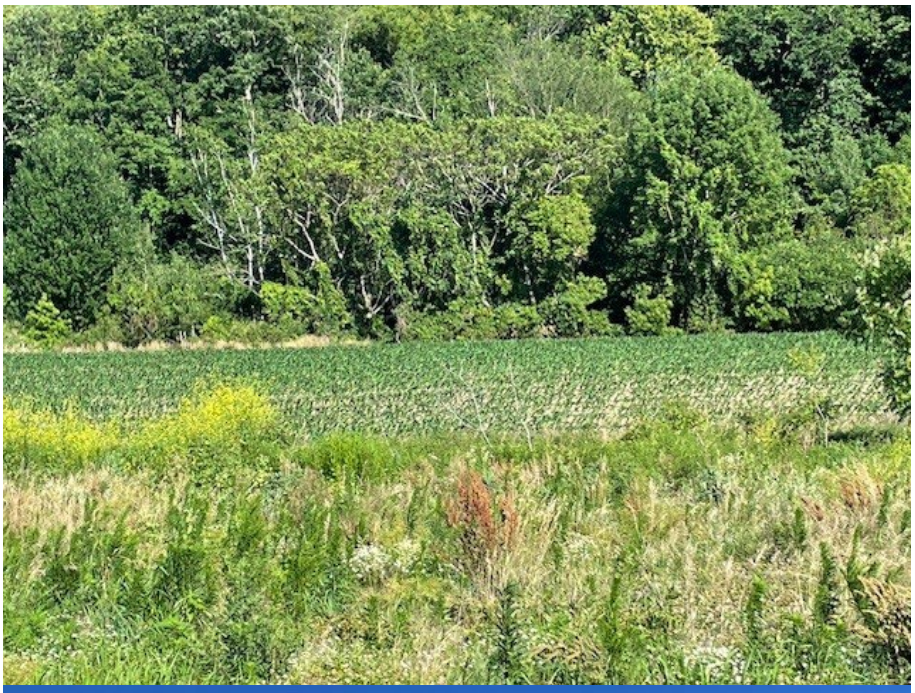
DRAWN BY: SHC	CHECKED BY: MDB
DATE: 01/22/2025	
PROJECT NUMBER 230305	

SHEET NUMBER
AG-04



B. Site Photos

B-1 Photographs of the purposed project area



Location Looking North:

Location Looking South

Bunk Location Looking South

D. Threatened and Endangered Species Documentation

D-1 IPaC Letter

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
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To: 03/27/2025 13:42:52 UTC
Project Code: 2025-0074889
Project Name: Washington County Bunk/ Manure storage

Subject: List of threatened and endangered species that may occur in your proposed project location 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 (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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 Act, 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 IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

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 Act. **Please include the Consultation Code 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

Project Code: 2025-0074889

Project Name: Washington County Bunk/ Manure storage

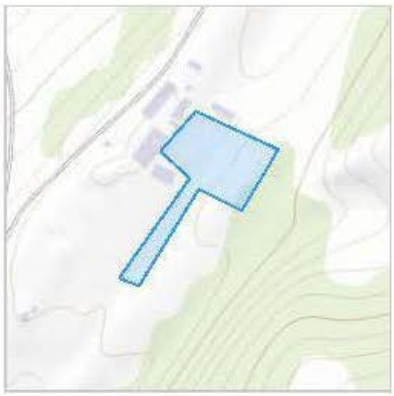
Project Type: Federal Grant / Loan Related

Project Description: USDA is funding the bunk silo project. The leachate system and manure storage is being funding by another source, however they are all connected and therefore being reviewed together. The concrete bunk silo will be 140' x 200'. The maximum depth of disturbance for the bunk will be 8', though the depth of disturbance will range from 4" to 8'. The leachate system will be installed to reduced environmental impacts of leachate created by crops stored within the bunk. There will be a pressure pipe buried 42" deep connecting the bunk to the manure storage for low flow leachate management. There will be underground utilities run from the nearby heifer barn (see diagram) to the low flow pressure pipe. This utility will be run in a trench 3' deep and approximately 150' long. A high-flow vegetative treatment area will also be constructed. The majority of the vegetative treatment area, including the vegetative area and berms, will be built on materials taken from the ground disturbance created by the manure storage. The maximum depth of disturbance for the vegetative treatment is expected to be 6" where the concrete barrier will be poured. The pipe connecting the bunk to the vegetative treatment area is going to be laid at grade and covered by material brought to the site as the new driveway is installed.

The manure storage is going to be 150' diameter with a maximum depth of disturbance of 17'4" There will be a leak detection pipe placed 15' below ground connected to the storage that will run Northeast at a .5% grade until it reaches daylight approximately 400'. There will also be a transfer pipe that will run from the barn to the storage. The transfer pipe will be approximately 600' long and will be placed 42" deep.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.30380015,-73.39682253730885,14z



Counties: Washington County, New York

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 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.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Farm Service Agency
Name: Brittany Washburn
Address: 5425 County Road 48
City: Belmont
State: NY
Zip: 14813
Email brittany.washburn@usda.gov
Phone: 5852685133

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
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To: 05/19/2025 13:57:59 UTC
Project Code: 2025-0074889
Project Name: Washington County Bunk/ Manure storage

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

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Project Location:

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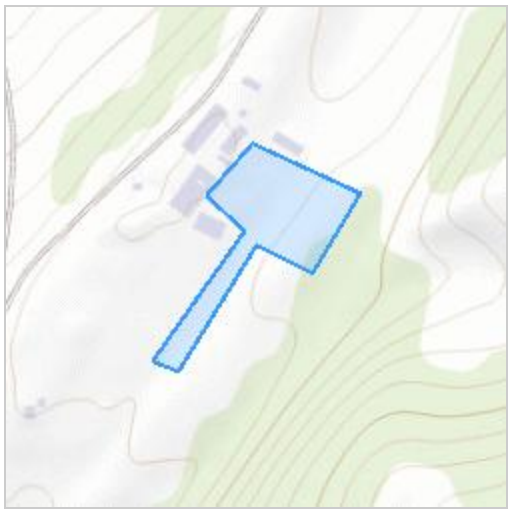

Counties: Washington County, New York

ENDANGERED SPECIES ACT SPECIES

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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.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Farm Service Agency
Name: Ellen deMey
Address: 441 South Salina Street
City: Syracuse
State: NY
Zip: 13202
Email ellen.demey1@usda.gov
Phone: 3154776320

D-2 Northern Long-eared Bat

Image Details

Northern Long-eared Bat

FWS Focus

Northern long-eared Bat Tools and Resources

On November 29, 2022 the U.S. Fish and Wildlife Service (Service) published a final rule to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The species faces extinction due to the range-wide impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. After considering feedback received on draft tools and technical assistance documents, we released final tools and documents on October 23, 2024. These tools and technical assistance documents were developed with the goal of providing Endangered Species Act compliance predictability across sectors and to demonstrate our commitment to proactively working with partners to conserve remaining NLEBs within their range while minimizing impacts to the regulated public. These tools also support the conservation of the proposed endangered tricolored bat (TCB), should the species be listed.

Final Technical Assistance Tools

- Northern long-eared bat and Tricolored Range-wide bat Determination Key
- Technical Assistance for Development Projects
- Northern long-eared bat Wind Technical Assistance
- Sustainable Forest Management Technical Assistance
- Final Tools and Technical Assistance Frequently Asked Questions

Other Resources

- Summer Survey Guidelines for Indiana Bat and Northern Long-eared Bat
- Interim Consultation Framework Reinitiation Memorandum

Overview

The northern long-eared bat is a wide-ranging, federally endangered bat species, found in 37 states and eight provinces in North America. The species typically overwinters in caves or mines and spends the remainder of the year in forested habitats. As its name suggests, the northern long-eared bat is distinguished by its long ears, particularly as compared to other bats in the genus *Myotis*.

Although there are many threats to the species, the predominant threat by far is white-nose syndrome. If this disease had not emerged, it is unlikely the northern long-eared bat would be experiencing such a dramatic population decline. White-nose syndrome was the main reason for listing the species as threatened under the Endangered Species Act in 2015. Since symptoms were first observed in New York in 2006, white-nose syndrome has spread rapidly throughout the species' range in the United States. Numbers of northern long-eared bats, gathered from hibernacula counts, have declined by 97 to 100% across the species' range. Due to continued and increased population declines and impacts from threats, on November 29, 2022, the U.S. Fish and Wildlife Service found that the species now meets the definition of an endangered species and published a final rule to reclassify the northern long-eared bat as endangered under the Endangered Species Act.

Other sources of mortality: Although no significant population declines have been observed due to the sources of mortality listed below alone, they are now important factors affecting this bat's viability until we find ways to address white-nose syndrome.

Wind energy-related mortality: Wind turbines can kill bats by direct collision with turbine blades. Mortality has been documented for northern long-eared bats, although a small number have been found to date. However, there are many wind farms operating within a large portion of the species' range, and many more projects are planned in the future.
Summer habitat loss: Highway construction, commercial development, surface mining and wind facility construction permanently remove habitat and are activities prevalent in many areas of this bat's range. Summer habitat loss may result in longer flights between suitable roosting and foraging habitat, fragmentation of maternity colonies and direct injury or mortality.
Winter habitat loss and disturbance: Gates or other structures intended to exclude people from caves and mines, but do not consider bat needs, may not only restrict bat flight and movement, but also change airflow and internal cave and mine microclimates. A change of even a few degrees can make a cave unsuitable for hibernating bats. Also, cave-dwelling bats are vulnerable to human disturbance while hibernating. Arousal during hibernation causes bats to use up their already reduced energy stores, which may lead to individuals not surviving the winter.
Climate change: Changes in temperature and precipitation may influence the species' available suitable roosting and foraging habitat and prey availability.

What is being done to help the northern long-eared bat?

Disease management: Actions have been taken to try to reduce or slow the spread of white-nose syndrome through human transmission of the fungus into caves and mines, including cave and mine closures and advisories and national decontamination protocols. A national plan was prepared by the U.S. Fish and Wildlife Service and other state and federal agencies that details actions needed to investigate and manage white-nose syndrome. Many state and federal agencies, universities and non-governmental organizations are researching this disease to try to control its spread and address its effect.
Addressing wind turbine mortality: The U.S. Fish and Wildlife Service and others are working to minimize bat mortality from wind turbines on several fronts. The agency funds and conducts research to determine why bats are susceptible to turbines, how to operate turbines to minimize mortality and where important bird and bat migration routes are located. The agency has and continues to work with many wind energy project proponents in developing habitat conservation plans that provide wind farms a mechanism to continue operating legally while minimizing and mitigating mortality of federally endangered or threatened bats.
Hibernacula protection: Many federal and state natural resource agencies and conservation organizations have protected caves and mines that are important hibernacula for cave-dwelling bats.

Scientific Name

Myotis septentrionalis

Common Name

Northern Long-eared Bat, Northern Myotis, Northern Bat

FWS Category

Mammals

Kingdom

Animalia

Location in Taxonomic Tree ()

Subgenus
↳ *Myotis (Pizonyx)*

Species
↳ *Myotis septentrionalis*

Identification Numbers

TSN: ()
180000

Characteristics

PHYSICAL CHARACTERISTICS

LIFE CYCLE

SIMILAR SPECIES

FOOD

HABITAT

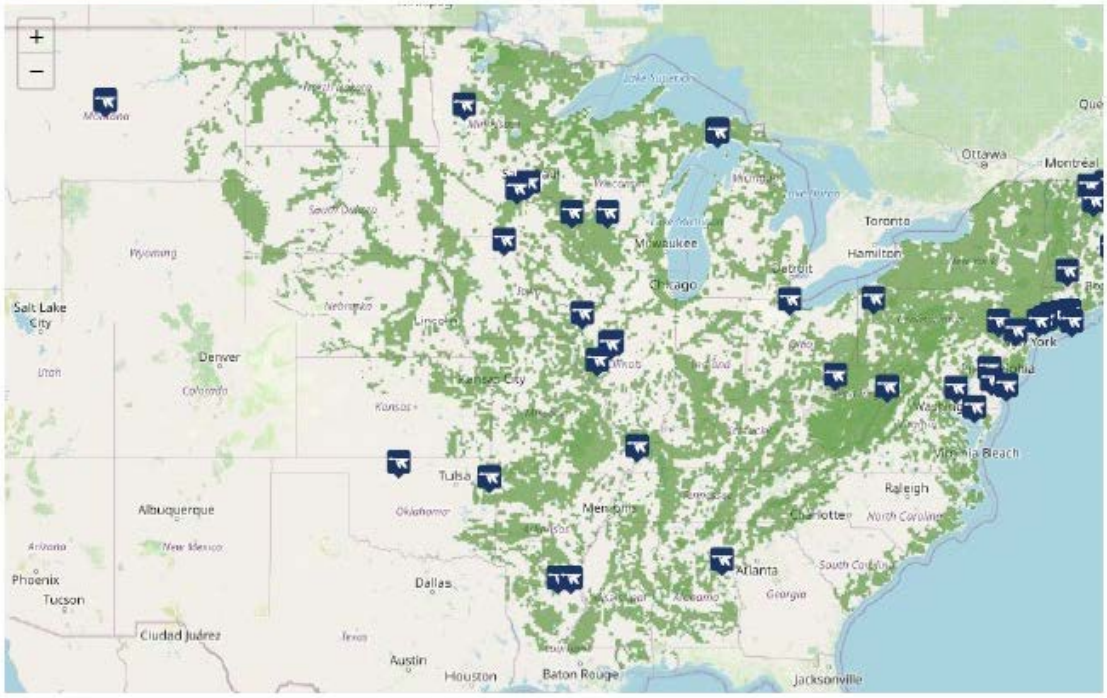
BEHAVIOR

Geography

Range

The species' range includes all or portions of the following 37 states and the District of Columbia: Alabama, Arkansas, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Virginia, West Virginia, Wisconsin and Wyoming. The northern long-eared bat's range also includes eight Canadian provinces.

LAUNCH INTERACTIVE MAP



Timeline

Explore the information available for this taxon's timeline. You can select an event on the timeline to view more information, or cycle through the content available in the carousel below.

21 ITEMS

Jan 26, 2023

Listing

D-3 Tricolored Bat

Image Details

Tricolored Bat

FWS Focus

Proposal to list

On September 13, 2022 the U.S. Fish and Wildlife Service announced a proposal to list the tricolored bat as endangered under the Endangered Species Act. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent.

- Public Meeting and Virtual Public Hearing
- Press Release
- Informational Webinar
- Frequently Asked Questions
- Proposed Rule
- Species Status Assessment
- Saving the Tricolored Bat Story

Final Tools Available

The Service developed final tools and guidance documents for the endangered northern long-eared bat (NLEB) and the proposed endangered tricolored bat (TCB). In the event that the tricolored bat is listed as endangered under the Endangered Species Act, these tools would be applicable to both species. The Service previously shared drafts of the new tools and guidance documents for interested parties to preview and considered feedback in the development of the final documents. These tools and guidance documents were developed with the goal of providing Endangered Species Act compliance predictability across sectors, while continuing to work proactively with partners to conserve remaining bats within the NLEB and TCB ranges.

Final Tools and Guidance Documents

- Northern long-eared bat and Tricolored bat Rangewide Determination Key

- Consultation Guidance for Development Projects
- Tricolored bat Wind Guidance
- Sustainable Forest Management Guidance
- Final Tools and Guidance Frequently Asked Questions

Overview

The tricolored bat (*Perimyotis subflavus*) is one of the smallest bats native to North America. The once common species is wide ranging across the eastern and central United States and portions of southern Canada, Mexico and Central America. During the winter, tricolored bats are found in caves and mines, although in the southern United States, where caves are sparse, tricolored bats are often found roosting in road-associated culverts. During the spring, summer and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves. As its name suggests, the tricolored bat is distinguished by its unique tricolored fur that appears dark at the base, lighter in the middle and dark at the tip.

White-nose syndrome, a disease that impacts bats, is caused by a fungal pathogen. It has led to 90 to 100% declines in tricolored bat winter colony abundance at sites impacted by the disease. Since white-nose syndrome was first observed in New York in 2006, it has spread rapidly across the majority of the tricolored bat range.

Learn more about white-nose syndrome.

Scientific Name

Perimyotis subflavus

Common Name

Tricolored Bat

FWS Category

Mammals

Kingdom

Animalia

Location in Taxonomic Tree ()

Genus
↳ *Perimyotis*
Species
↳ *Perimyotis subflavus*

Identification Numbers

TSN: ()

947299

Characteristics

HABITAT

FOOD

BEHAVIOR

PHYSICAL CHARACTERISTICS

LIFE CYCLE

Geography

Range

Tricolored bats are known from 39 States: Alabama, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Wisconsin, West Virginia, Wyoming, as well as Washington D.C. and four Canadian Provinces: Ontario, Quebec, New Brunswick, Nova Scotia. They also known to live in Guatemala, Honduras, Belize, Nicaragua and Mexico.

LAUNCH INTERACTIVE MAP

Timeline

Explore the information available for this taxon's timeline. You can select an event on the timeline to view more information, or cycle through the content available in the carousel below.

4 ITEMS

Sep 14, 2022

Listing (Endangered)

Endangered Species Status for Tricolored Bat

Publication type: Proposed

VIEW FEDERAL REGISTER DOCUMENT

ITEM 4

Key:

Event Regulatory Status Change

Refine Your Search

Content Type

- [ ] Conservation Plan
- [ ] Critical Habitat

Image Details

Monarch

Fish and Wildlife Service Proposes Endangered Species Act Protection for Monarch Butterfly
Urges Increased Public Engagement to Help Save the Species

- Read the press release
- Proposed rule to list the monarch butterfly as a threatened species
- Monarch Species Status Assessment Version 2.3
- Learn how you can help save the monarch
- Learn more about the monarch initiative, including how to submit comments

Questions and Answers

- Proposed rule to list the monarch butterfly as threatened with critical habitat - Frequently Asked Questions
- Monarch Species Status Assessment - Frequently Asked Questions
- Monarch 4(d) rule - Frequently Asked Questions
- Monarch Critical habitat - Frequently Asked Questions

Overview

Monarch butterflies are pollinators that are well known for their impressive long-distance migration and their recent declines. The species highlights the need for conservation efforts for all pollinators across the nation. Learn more about monarch conservation efforts, including what the U.S. Fish and Wildlife Service is doing and how you can help.

With its iconic orange and black markings, the monarch butterfly is one of the most recognizable butterfly species in North America. Their bright coloration serves as a warning to predators that eating them can be toxic, and monarchs obtain these toxins (called cardenolides) by consuming milkweed plants.

Originally native to North America, the monarch butterfly has dispersed to other parts of the world and non-migratory populations are found from islands in the Pacific Ocean to the western edge of Europe. Despite this expansion, most monarchs continue to live and migrate in North America. North American migratory monarchs are divided into eastern and western populations. The Rocky Mountains

generally divide these two populations, limiting their contact. However, the two populations are not completely isolated from each other and still occasionally interbreed. There are also non-migratory monarchs that remain year-round at the southern end of their breeding range in North America, including in parts of Florida, the Gulf Coast and California.

The eastern North American migratory monarch population is the largest population of monarchs, in both individuals and range. The eastern population encompasses upwards of 70% of the total North American monarch range. In the fall, they may fly more than 2,000 miles (3,000 km) to reach overwintering sites in Mexico.

The western North American migratory monarch population is generally found west of the Rocky Mountains. These butterflies can migrate annually 300 to 1,000 miles (about 500 to 1,600 km). The western population overwinters in hundreds of groves (clusters of trees) along the California coast and into northern Baja California, Mexico.

Scientific Name

Danaus plexippus

Common Name

monarch butterfly, Monarch

FWS Category

Insects

Kingdom

Animalia

Location in Taxonomic Tree ()

Subgenus ↳ *Danaus (Danaus)*
Species ↳ *Danaus plexippus*

Identification Numbers

TSN: ()

117273

Characteristics

FOOD

HABITAT

FOOD

BEHAVIOR

PHYSICAL CHARACTERISTICS

LIFE CYCLE

SIMILAR SPECIES

Geography

Range

Monarchs are native to North and South America but have since spread to many other locations where milkweed and suitable temperatures exist, including Australia, New Zealand and portions of the Iberian Peninsula.

LAUNCH INTERACTIVE MAP

Timeline

Explore the information available for this taxon's timeline. You can select an event on the timeline to view more information, or cycle through the content available in the carousel below.

9 ITEMS

Mar 19, 2025

Notice

Endangered and Threatened Wildlife and Plants; Reopening Comment Periods for Three Proposed Rules; A…

Publication type: Comment Period Reopening

VIEW FEDERAL REGISTER DOCUMENT

ITEM 9

Key:

Event Regulatory Status Change

Refine Your Search

Content Type

- [ ] 4d
- [ ] Biological Opinion
- [ ] Conservation Plan
- [ ] Critical Habitat
- [ ] Document
- [ ] Image

E. Cultural Resources Documentation

E-1 Stockbridge Munsee Community & Response

USDA United States Department of Agriculture

Allegany County Farm Service Agency
5425 County Rd. 48
Belmont, NY 14813
Phone: 585-268-5133 (opt 2)

03/19/2025

TO: Jeffrey C. Bendremer
THPO
86 Spring Street,
Williamstown, MA - 01267
thpo@mohican-nsn.gov

FROM: Brittany Washburn EFT

SUBJECT: Request for Concurrence

The USDA, Farm Service Agency (FSA) is completing an environmental review for the construction of a bunk silo, leachate system, driveway and manure storage in Washington County. The location of the project is Granville, NY.

The concrete bunk silo will be 140' x 200'. The maximum depth of disturbance for the bunk will be 8', though the depth of disturbance will range from 4" to 8'. The leachate system will be installed to reduced environmental impacts of leachate created by crops stored within the bunk. There will be a pressure pipe buried 42" deep connecting the bunk to the manure storage for low flow leachate management. There will be underground utilities run from the nearby heifer barn (see diagram) to the low flow pressure pipe. This utility will be run in a trench 3' deep and approximately 150' long. A high-flow vegetative treatment area will also be constructed. The majority of the vegetative treatment area, including the vegetative area and berms, will be built on materials taken from the ground disturbance created by the manure storage. The maximum depth of disturbance for the vegetative treatment is expected to be 6" where the concrete barrier will be poured. The pipe connecting the bunk to the vegetative treatment area is going to be laid at grade and covered by material brought to the site as the new driveway is installed.

The manure storage is going to be 150' diameter with a maximum depth of disturbance of 17'4" There will be a leak detection pipe placed 15' below ground connected to the storage that will run Northeast at a .5% grade until it reaches daylight approximately 400'. There will also be a transfer pipe that will run from the barn to the storage. The transfer pipe will be approximately 600' long and will be placed 42" deep.

A driveway is going to be constructed to service both the bunk silo and the manure storage however no ground disturbance below previous levels is anticipated for the driveway. The plan is to bring in 6" of base material and 6" of course top material to construct the driveway. Attached are the project maps, construction plans, soil and a flood map for the project area.

In considering FSA's responsibilities pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations in 36 CFR Part 800, "Protection of Historic Properties (Section 106), we are requesting your assistance in identifying historic properties and/or other cultural resources that might be affected by this undertaking.

nse

FSA has reviewed the National Register of Historic Places list and our State Environmental Guide. (As appropriate add other actions that may have been completed, including but not limited to specific reference to having completed a site visit, consulted with the State Environmental Coordinator, local historical society, etc.)

To the best of our knowledge there is no indication of the presence, or the probability of an historic property or cultural resource at the site. Attached for reference are:

- Location map
- Aerial Map
- GIS topo map
- Construction Plans
- Soil map
- FEMA Flood Map
- Site Photos

[If historic properties or those eligible for listing in the National Register of Historic Places are present describe and insert a summary of the mitigation measures proposed to avoid or lessen the effect and any related Memorandum of Agreement for the proposed activity.]

FSA has made a finding that no effect by this proposed project. Your concurrence with this determination is requested within thirty (30) days of the email delivery receipt or delivery of this letter based on standard United States Post Office delivery schedules not to exceed 5 days from the related post mark. If we do not hear from you within the specified time frame it will be assumed that you are in agreement and have no further interest in this matter.

Please feel free to contact me at 585-268-5133 Opt 2 or Brittany.washburn@usda.gov should you have any questions or need further information. Correspondence may be sent to: Brittany Washburn Allegany County Farm Service Agency 5425 County Road 48 Belmont, NY 14813

Sincerely,

Brittany Washburn

Brittany Washburn
EFT
Attachments

From: thpo
To: Washburn, Brittany - FPAC-FSA, NY
Subject: RE: Washington County NY Consultation Request
Date: Wednesday, March 19, 2025 3:04:39 PM
Attachments: image001.png

Dear Brittany,

Thank you for the notice regarding proposed construction of a bunk silo, leachate system, driveway and manure storage at Granville, Washington County, NY.

The Stockbridge-Munsee Tribal Historic Preservation Office concurs with the finding of "*No Adverse Effect*" and has no issue with the project moving forward with the following standard stipulations:

- If previously undocumented archaeological resources are encountered, please contact me promptly and follow the Inadvertent Discovery Policy on the Stockbridge-Munsee Community website: https://www.mohican.com/mt-content/uploads/2022/09/smc-inadvertent-discovery-policy.pdf.
- Please give due attention to the incidental or routine movement of heavy machinery both inside and outside the stated area of potential effects (APE) that may cause unintended or inadvertent impacts to cultural resources.
- Should the proposed work be altered to expand beyond the current scope of work and/or APE, we ask to be notified.

Regards,
Jeff

Jeffrey C Bendremer Ph.D., RPA
Tribal Historic Preservation Officer
Stockbridge-Munsee Community
Tribal Historic Preservation Extension Office
86 Spring St.
Williamstown, MA 01267
413-884-6029 (o)
715-881-2254 (c)

www.mohican.com

E-2 Delaware Tribe – Larry Heady, Susan Bachor

USDA United States Department of Agriculture

Allegany County Farm Service Agency
5425 County Rd. 48
Belmont, NY 14813
Phone: 585-268-5133 (opt 2)

03/19/2025

TO: Larry Heady
THPO
125 Dorry Lane,
Grants Pass Oregon, OR – 97527
lheady@delawaretribe.org

FROM: Brittany Washburn EFT

SUBJECT: Request for Concurrence

The USDA, Farm Service Agency (FSA) is completing an environmental review for the construction of a bunk silo, leachate system, driveway and manure storage in Washington County. The location of the project is Granville, NY.

The concrete bunk silo will be 140' x 200'. The maximum depth of disturbance for the bunk will be 8', though the depth of disturbance will range from 4" to 8'. The leachate system will be installed to reduced environmental impacts of leachate created by crops stored within the bunk. There will be a pressure pipe buried 42" deep connecting the bunk to the manure storage for low flow leachate management. There will be underground utilities run from the nearby heifer barn (see diagram) to the low flow pressure pipe. This utility will be run in a trench 3' deep and approximately 150' long. A high-flow vegetative treatment area will also be constructed. The majority of the vegetative treatment area, including the vegetative area and berms, will be built on materials taken from the ground disturbance created by the manure storage. The maximum depth of disturbance for the vegetative treatment is expected to be 6" where the concrete barrier will be poured. The pipe connecting the bunk to the vegetative treatment area is going to be laid at grade and covered by material brought to the site as the new driveway is installed.

The manure storage is going to be 150' diameter with a maximum depth of disturbance of 17'4" There will be a leak detection pipe placed 15' below ground connected to the storage that will run Northeast at a .5% grade until it reaches daylight approximately 400'. There will also be a transfer pipe that will run from the barn to the storage. The transfer pipe will be approximately 600' long and will be placed 42" deep.

A driveway is going to be constructed to service both the bunk silo and the manure storage however no ground disturbance below previous levels is anticipated for the driveway. The plan is to bring in 6" of base material and 6" of course top material to construct the driveway. Attached are the project maps, construction plans, soil and a flood map for the project area.

In considering FSA's responsibilities pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations in 36 CFR Part 800, "Protection of Historic Properties (Section 106), we are requesting your assistance in identifying historic properties and/or other cultural resources that might be affected by this undertaking.

FSA has reviewed the National Register of Historic Places list and our State Environmental Guide. (As appropriate add other actions that may have been completed, including but not limited to specific reference to having completed a site visit, consulted with the State Environmental Coordinator, local historical society, etc.)

To the best of our knowledge there is no indication of the presence, or the probability of an historic property or cultural resource at the site. Attached for reference are:

- Location map
- Aerial Map
- GIS topo map
- Construction Plans
- Soil map
- FEMA Flood Map
- Site Photos

[If historic properties or those eligible for listing in the National Register of Historic Places are present describe and insert a summary of the mitigation measures proposed to avoid or lessen the effect and any related Memorandum of Agreement for the proposed activity.]

FSA has made a finding that no effect by this proposed project. Your concurrence with this determination is requested within thirty (30) days of the email delivery receipt or delivery of this letter based on standard United States Post Office delivery schedules not to exceed 5 days from the related post mark. If we do not hear from you within the specified time frame it will be assumed that you are in agreement and have no further interest in this matter.

Please feel free to contact me at 585-268-5133 Opt 2 or Brittany.washburn@usda.gov should you have any questions or need further information. Correspondence may be sent to: Brittany Washburn Allegany County Farm Service Agency 5425 County Road 48 Belmont, NY 14813

Sincerely,

Brittany Washburn
EFT
Attachments

USDA United States Department of Agriculture

Allegany County Farm Service Agency
5425 County Rd. 48
Belmont, NY 14813
Phone: 585-268-5133 (opt 2)

03/19/2025

TO: Susan Bachor
THPO
5100 Tuxedo Blvd,
Bartlesville, OK - 64006
sbachor@delawaretribe.org

FROM: Brittany Washburn EFT

SUBJECT: Request for Concurrence

The USDA, Farm Service Agency (FSA) is completing an environmental review for the construction of a bunk silo, leachate system, driveway and manure storage in Washington County. The location of the project is Granville, NY.

The concrete bunk silo will be 140' x 200'. The maximum depth of disturbance for the bunk will be 8', though the depth of disturbance will range from 4" to 8'. The leachate system will be installed to reduced environmental impacts of leachate created by crops stored within the bunk. There will be a pressure pipe buried 42" deep connecting the bunk to the manure storage for low flow leachate management. There will be underground utilities run from the nearby heifer barn (see diagram) to the low flow pressure pipe. This utility will be run in a trench 3' deep and approximately 150' long. A high-flow vegetative treatment area will also be constructed. The majority of the vegetative treatment area, including the vegetative area and berms, will be built on materials taken from the ground disturbance created by the manure storage. The maximum depth of disturbance for the vegetative treatment is expected to be 6" where the concrete barrier will be poured. The pipe connecting the bunk to the vegetative treatment area is going to be laid at grade and covered by material brought to the site as the new driveway is installed.

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A driveway is going to be constructed to service both the bunk silo and the manure storage however no ground disturbance below previous levels is anticipated for the driveway. The plan is to bring in 6" of base material and 6" of course top material to construct the driveway. Attached are the project maps, construction plans, soil and a flood map for the project area.

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Please feel free to contact me at 585-268-5133 Opt 2 or Brittany.washburn@usda.gov should you have any questions or need further information. Correspondence may be sent to: Brittany Washburn Allegany County Farm Service Agency 5425 County Road 48 Belmont, NY 14813

Sincerely,

BRITTANY WASHBURN

Digitally signed by BRITTANY WASHBURN
Date: 2025.03.19 13:06:25 -04'00'

Brittany Washburn
EFT
Attachments

E-3 St. Regis – Darren Bonaparte

USDA United States Department of Agriculture

Allegany County Farm Service Agency
5425 County Rd. 48
Belmont, NY 14813
Phone: 585-268-5133 (opt 2)

03/19/2025

TO: Darren Bonaparte
THPO Director
Bldg 71 Margaret Terrance Memorial Way, Akwesasne, NY - 13655
darren.bonaparte@srmt-nsn.gov

FROM: Brittany Washburn EFT

SUBJECT: Request for Concurrence

The USDA, Farm Service Agency (FSA) is completing an environmental review for the construction of a bunk silo, leachate system, driveway and manure storage in Washington County. The location of the project is 1040 Lundy Road Granville, NY.

The concrete bunk silo will be 140' x 200'. The maximum depth of disturbance for the bunk will be 8', though the depth of disturbance will range from 4" to 8'. The leachate system will be installed to reduced environmental impacts of leachate created by crops stored within the bunk. There will be a pressure pipe buried 42" deep connecting the bunk to the manure storage for low flow leachate management. There will be underground utilities run from the nearby heifer barn (see diagram) to the low flow pressure pipe. This utility will be run in a trench 3' deep and approximately 150' long. A high-flow vegetative treatment area will also be constructed. The majority of the vegetative treatment area, including the vegetative area and berms, will be built on materials taken from the ground disturbance created by the manure storage. The maximum depth of disturbance for the vegetative treatment is expected to be 6" where the concrete barrier will be poured. The pipe connecting the bunk to the vegetative treatment area is going to be laid at grade and covered by material brought to the site as the new driveway is installed.

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Please feel free to contact me at 585-268-5133 Opt 2 or Brittany.washburn@usda.gov should you have any questions or need further information. Correspondence may be sent to: Brittany Washburn Allegany County Farm Service Agency 5425 County Road 48 Belmont, NY 14813

Sincerely,

Brittany Washburn
EFT
Attachments

E-4 SHPO Response Letter

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

March 21, 2025

Brittany Washburn
EFT
Farm Service Agency
5425 County Road 48
Belmont, NY 14813

Re: USDA/FSA
Bunk/Manure storage Project Washington County
Granville, NY 12832
25PR02400

Dear Brittany Washburn:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

Based upon this review, it is the opinion of the New York SHPO that no historic properties, including archaeological and/or historic resources, will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Jessica Vavrasek at the following email address:

Jessica.Vavrasek@parks.ny.gov

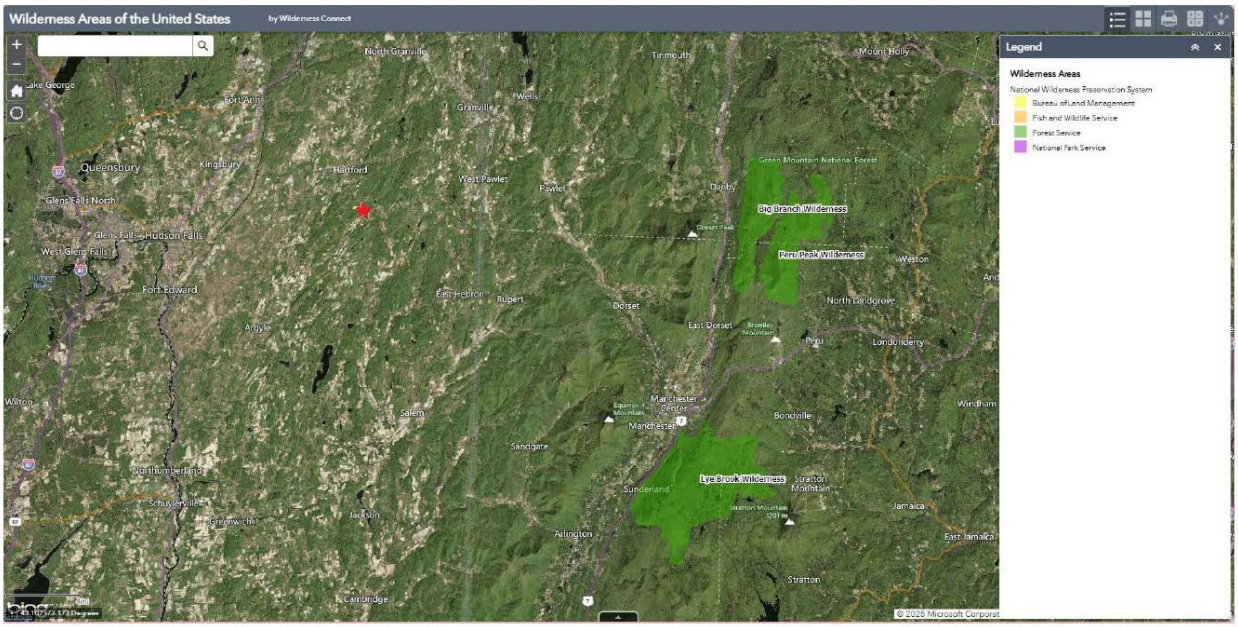
Sincerely,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

F. Wilderness Areas Supporting Documentation

F-1 Wilderness Areas Map



G. Wild & Scenic Rivers/Nationwide Rivers Inventory Supporting Documentation

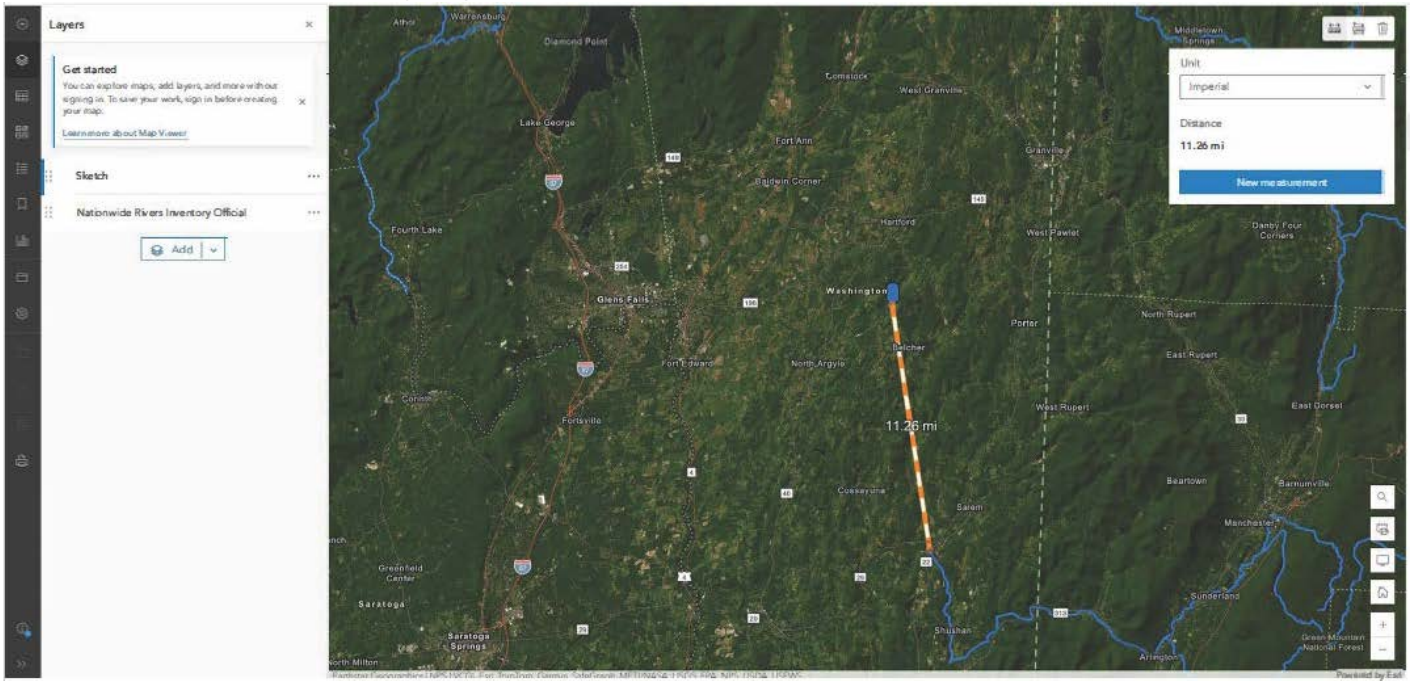
G-1 Wild and Scenic Rivers Map

Rivers In New York

Delaware (Upper) River

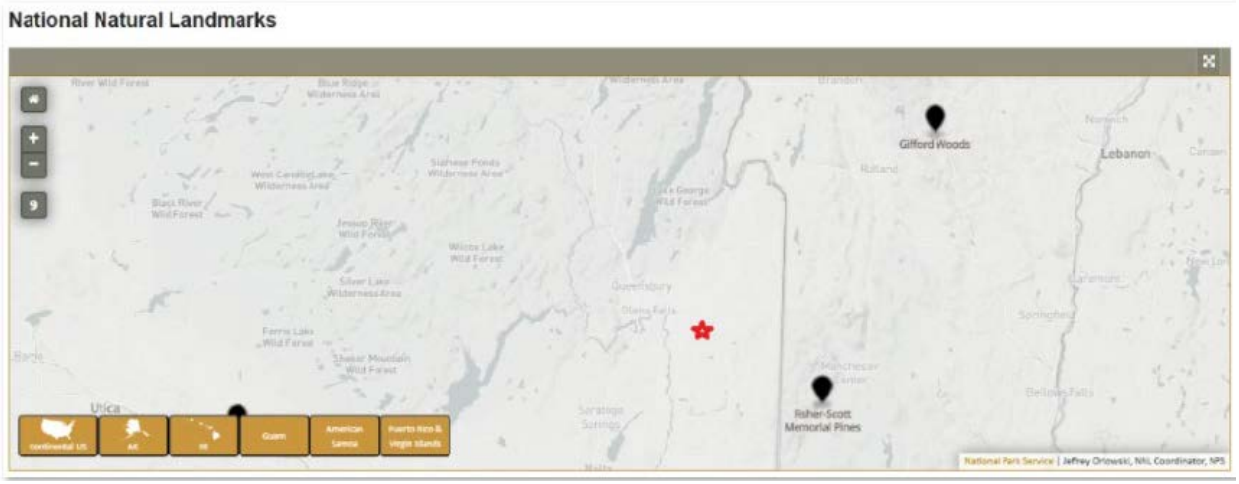
New York, Pennsylvania

G-2 Nation Wide Rivers Inventory Map



H. National Natural Landmark Supporting Documentation

H-1 National Natural Landmark Map



Fisher-Scott Memorial Pines

An old-growth stand of white pine, Fisher-Scott Memorial Pines illustrates the successional white-pine subclimax forest typical to New England. The even-aged trees reach heights of 120 feet and diameters of 40 inches and are the largest pines in Vermont.

Location: Bennington County, VT

Year designated: 1976

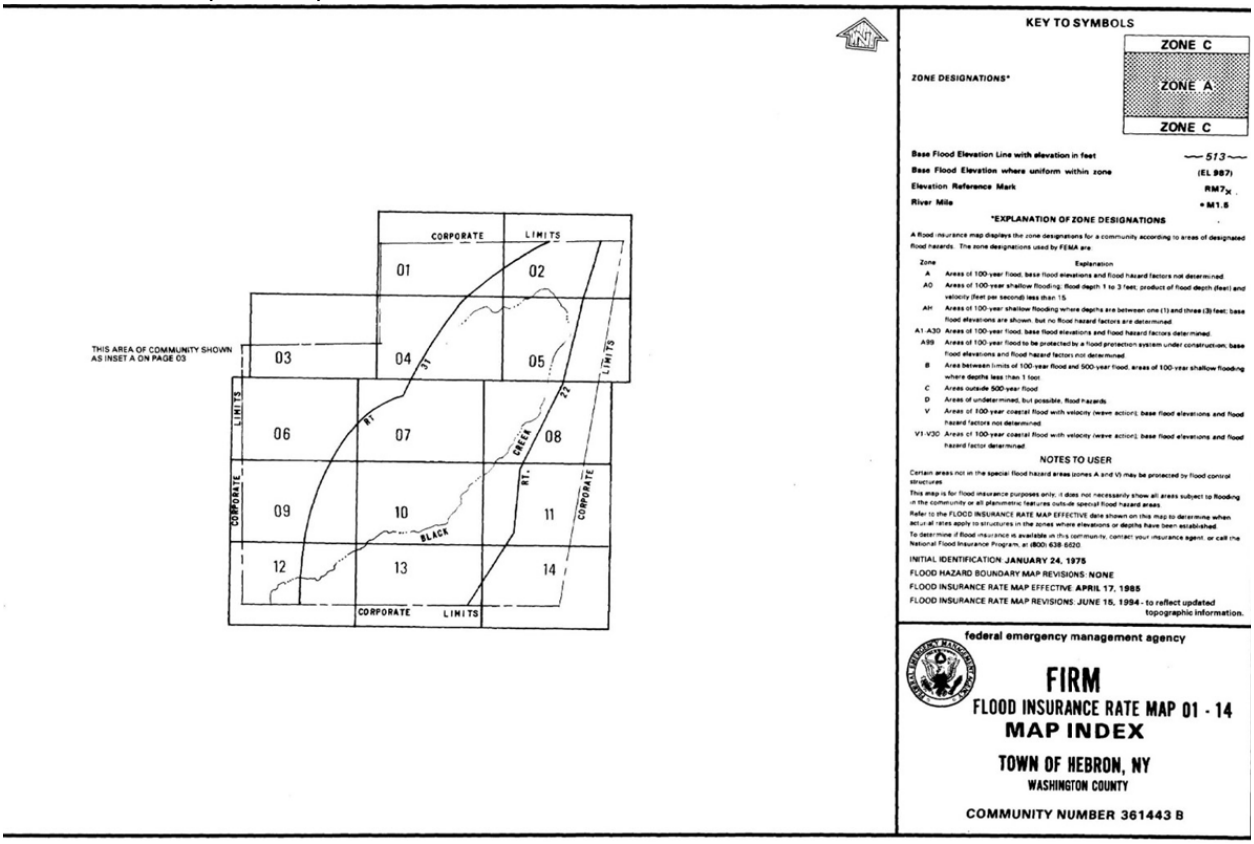
Acres: 13

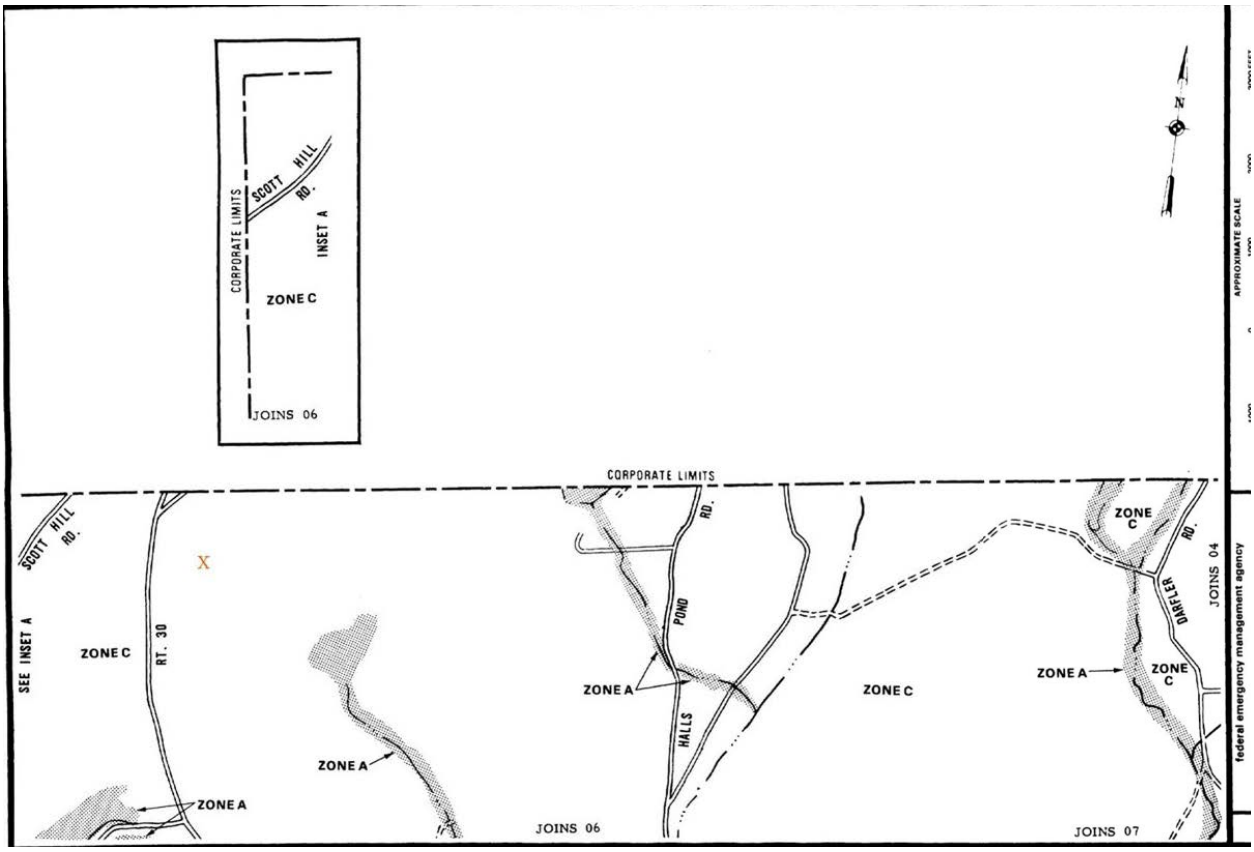
Ownership:

Fisher-Scott Memorial Pines

I. Floodplains Supporting Documentation

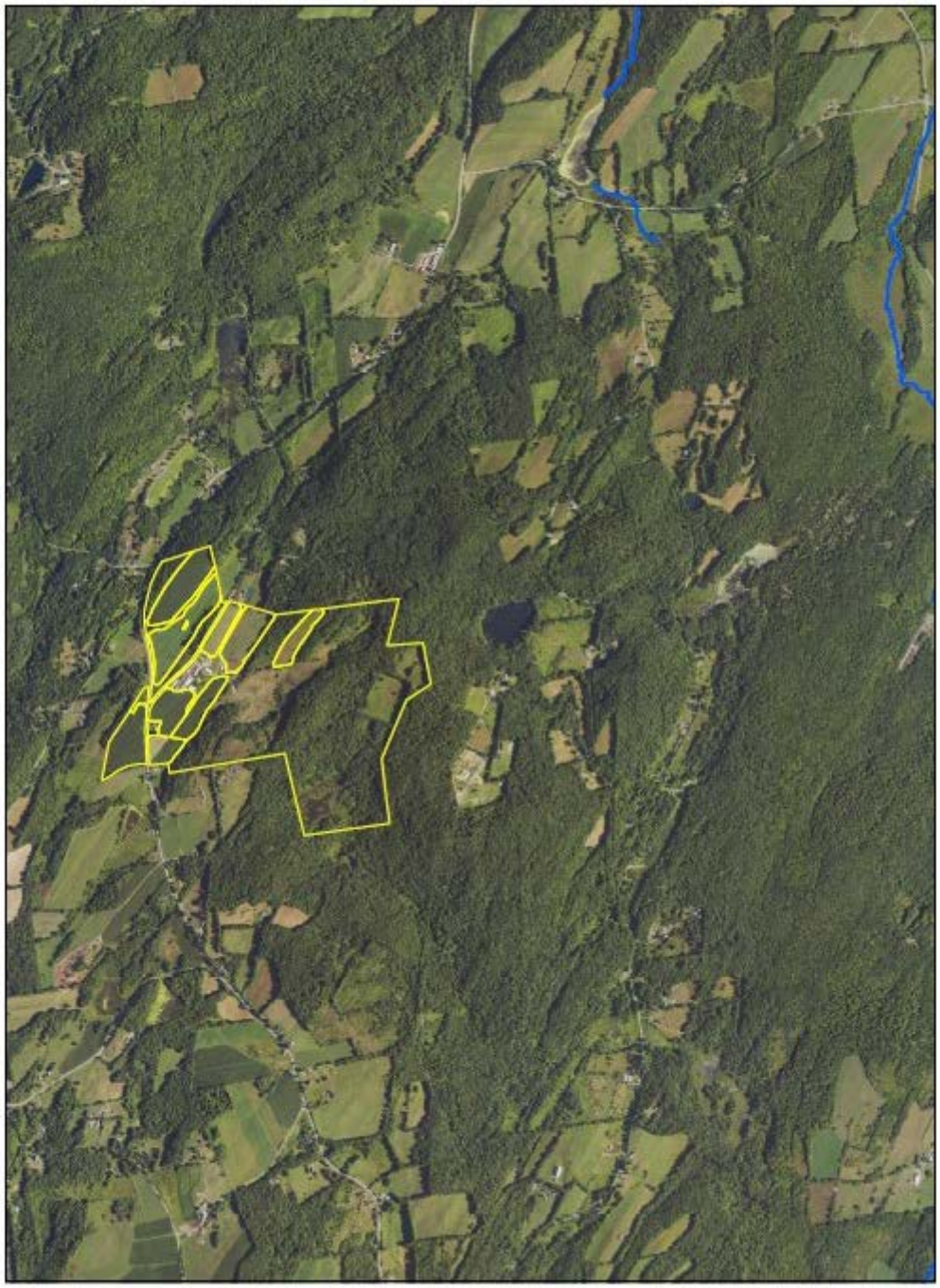
I-1 Floodplain Map




CORPORATE LIMITS
SCOTT HILL RD.
INSET A
ZONE C
JOINS 06
N
APPROXIMATE SCALE
CORPORATE LIMITS
SCOTT HILL RD.
SEE INSET A
ZONE C
RT. 30
X
ZONE A
ZONE A
POND RD.
ZONE A
HALLS
ZONE C
JOINS 06
ZONE C
DAFLER RD.
JOINS 04
ZONE A
ZONE C
JOINS 07
federal emergency management agency

I-2 Flood Map

Washington County F 5594 T 327



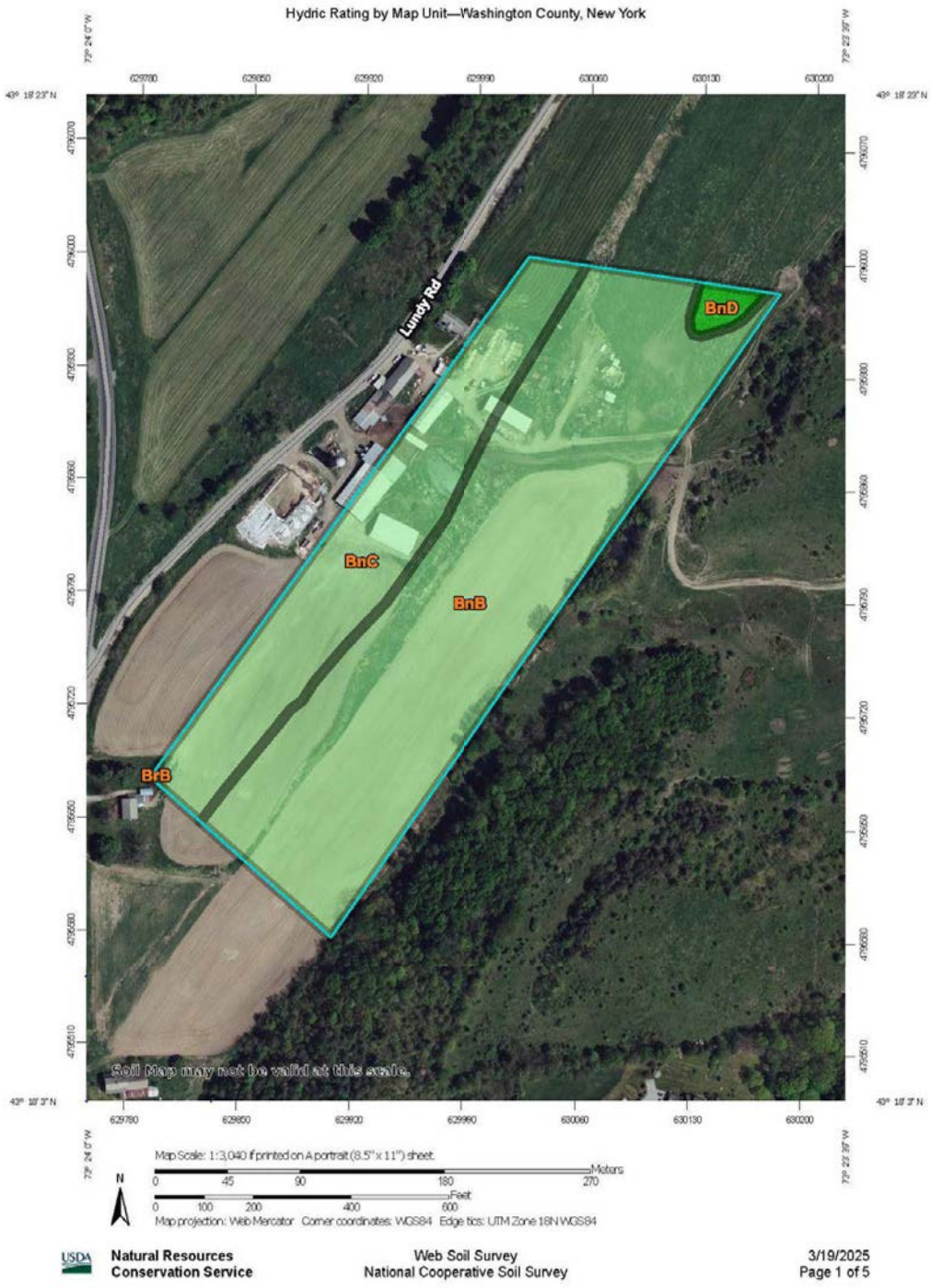
Legend

water_dm_l_ny115

water_dm_l_ny115
Dynamap Water - Lines
Washington Co, NY

J. Wetland Supporting Documentation

J-1 USDA Web Soil Survey Hydric Rating Map



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 1:20,000.

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: Washington County, New York
Survey Area Data: Version 24, Aug 29, 2024

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

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

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
BnB	Bernardston gravelly silt loam, 3 to 8 percent slopes	3	11.0	69.2%
BnC	Bernardston gravelly silt loam, 8 to 15 percent slopes	3	4.6	29.1%
BnD	Bernardston gravelly silt loam, 15 to 25 percent slopes	0	0.3	1.6%
BrB	Bernardston-Nassau shaly silt loams, 3 to 8 percent slopes	4	0.0	0.1%
Totals for Area of Interest			**15.9**	**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.

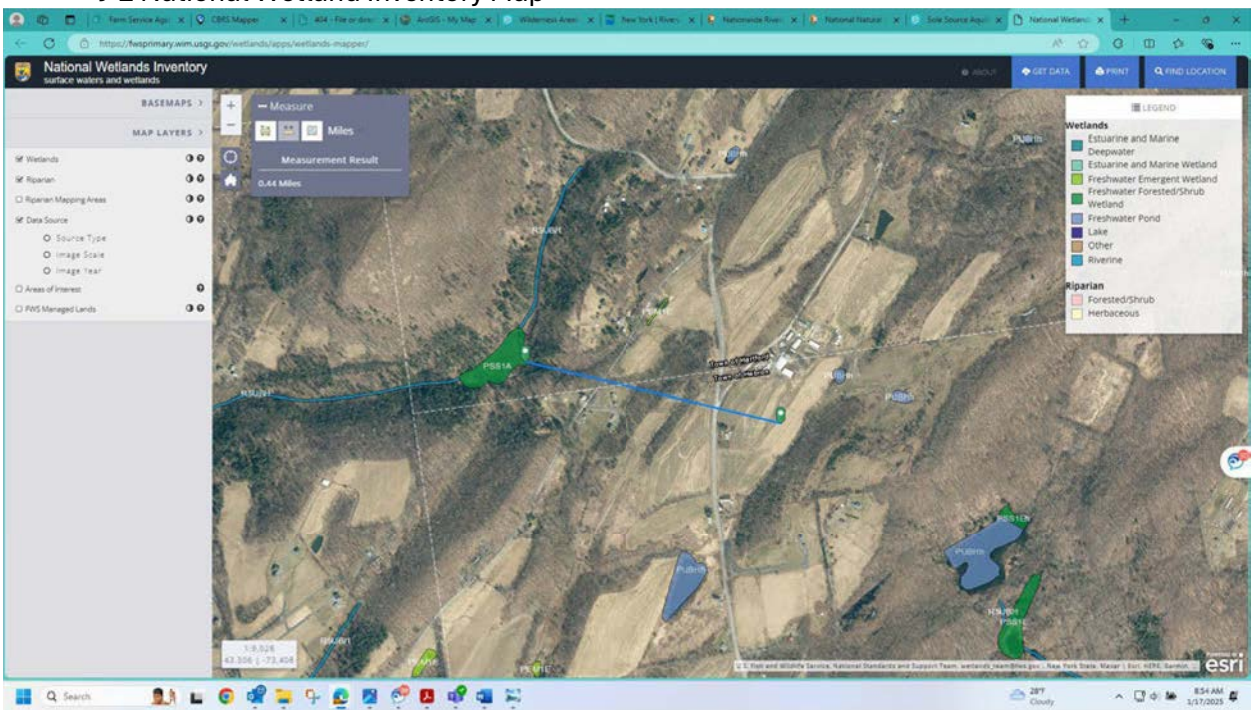
Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

J-2 National Wetland Inventory Map



J-2 FSA-858 “Determining if a Wetland May Be Present”

FSA-858 (07-26-22)	U.S. DEPARTMENT OF AGRICULTURE Farm Service Agency	1. Date 04/17/2025
		2. State Office New York
	DETERMINING IF A WETLAND MAY BE PRESENT	3. County Office Washington

INSTRUCTIONS: This form is used by FSA officials when a project has the potential to adversely impact a wetland and a wetland determination has not been previously completed or provided for the project area.

NOTE: If a violation has not been identified by NRCS for cropland which has historically been in production and for which NRCS is responsible for identification, it will be assumed not to be adversely impacted by annual operating loans for the production of an agricultural commodity by annual tilling of the soil, as "agricultural commodity" is defined by 7 CFR 12.2(a). The completion of this form is not necessary for annual operating loans in these circumstances.

PART A – BASIC INFORMATION

4. Applicant Name	5. Project Location
	Granville, NY

6. Description of Project and Impact Area

construction of a bunk silo. The silo will be made of concrete, approximately 140'x200'. The concrete will be 6 inches above ground and sitting on 12"-15" of a shale base. Project area will also include manure storage and VTA

7. **How Wetlands Can Be Recognized**

Wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are delineated by examining a site for the presence of wetland indicators. Three categories of wetland indicators are vegetation, soils, and hydrology. Wetland vegetation and hydrophytic vegetation are identified by making a list of the most abundant plant species in the project area and comparing it to a wetland plant species list. Wetland soils and hydric soils are identified by evidence of long-term saturation during the growing season and development under conditions with depleted oxygen. Wetland hydrology is identified by field indicators of periodic flooding or soil saturation. The definition of wetland can be found in the Agriculture Improvement Act of 2018 in SEC. 1201. [16 U.S.C. 380] (a).

8. **Project Area Pre-Screening**

When the nature of a proposed project or action requiring FSA assistance has the potential to cause an adverse wetland impact, the project area must be identified and evaluated for the potential presence of a wetland. When a wetland determination for the project area is not available, the FSA approving official will follow the screening process outlined below.

NOTE: If the completed screening process cannot conclusively rule out the existence of a wetland, issue appeal rights in accordance with FSA Handbook 1-APP (Rev. 2), unless the applicant:

- relocates the project; or
- provides documentation from the US Army Corps of Engineers (USACE) or another qualified expert that a wetland is not present on the proposed site; or
- provides documentation that the project is legally permissible through a permit or mitigation.

PART B - PRE-SCREENING

Check the applicable YES or NO:	YES	NO
9. Hydric soils have characteristics that indicate they were developed in conditions where soil oxygen is limited by the presence of saturated conditions for long periods during the growing season. If the soil in the project area is listed as hydric by NRCS it is an indicator that the area might be a wetland. Identify the project area and consult the NRCS Web Soil Survey: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx Does the web soil survey indicate at least a partially hydric rating within the project area? If **YES**, continue screening (**Parts C & D** below). **NOTE:** If there are hydric soils or soils with hydric inclusions in or directly adjoining the project area, a site visit can provide assessment of the hydrology and, if necessary, wetland vegetation in and adjacent to the proposed project site. If **NO**, proceed to **Item 10** below.	☐	☑
10. Consult the National Wetlands Inventory (NWI) online Data Mapper at: http://www.fws.gov/wetlands/Data/Mapper.html Does the wetland map clearly indicate some part of the project area is in a wetland? If **YES**, continue screening (**Parts C & D** below). If **NO**, proceed to **Part F, Item A**.	☐	☑

Tool

PART C - HYDROLOGY INDICATORS

Check the applicable box YES, NO, or INCONCLUSIVE:	YES	NO	INCL
11. **Hydrology** - Wetland hydrology refers to ***the presence of water*** at or above the soil surface for a sufficient period of the year to significantly influence the plant types and soils that occur in the area. The following indicators, which may be possible to observe on a site visit, provide some evidence of the periodic presence of flooding or soil saturation. Photographs of the hydrologic indicators are encouraged. Evidence of **one or more** indicator(s) listed below requires a selection of **YES**. • **Inundated.** Visible observation of inundation, i.e., standing water. • **Saturated in Upper 12 Inches.** Observable saturation or waterlogged soils. • **Water Marks.** Stains on trees, fences, or other fixed objects indicating water periodically covers the area to the depth shown on the object. • **Drainage Patterns in Wetlands.** Surface evidence of drainage flow into or through an area (scour marks in soils, water-stained leaves, vegetative debris deposits). • **Drift Lines.** Evidence consists of deposition of debris in a line on the surface or debris entangled in above ground vegetation or other fixed objects. • **Sediment Deposits.** Plants and other vertical objects often have thin layers, coatings, or depositions of mineral or organic matter on them after inundation. • **Inconclusive (INCL).** The site has been significantly disturbed or indicators at the site cannot be confirmed.			
Based on a site visit, were **any** hydrology indicators observed in the project area? If "**YES**", list or describe and attach photos if available.	☐	☐	☐
If **YES or INCONCLUSIVE**, proceed to **Part F**, complete **Item B** and take appropriate action. If **NO**, continue screening process (**Part D**).			

PART D – WETLAND VEGETATION INDICATORS

Check the applicable box YES, NO, or INCONCLUSIVE:	YES	NO	INCL
12. Plants known as ***hydrophytic vegetation*** thrive in wetlands. A complete listing can be accessed at https://cwbi-app.sec.usace.army.mil/nwpl_static/v34/home/home.html and predominant regional plant information can be found at http://plants.usda.gov. It is important to become familiar with wetland vegetation types which commonly occur in the geographic area of the project. Review the Regional Field Guide of hydrophytic vegetation listings and related pictorial references to become familiar with the appearance and physical characteristics of predominant wetland plants in the region. During the site visit observe plants, when possible, within and adjacent to the project area. Add photographs of wetland vegetation if available. Take pictures of anything questionable and research back at the office. Consult with available wetland experts when unsure. **Inconclusive (INCL).** The site has been significantly disturbed or indicators at the site cannot be confirmed.			
Based on a site visit, were any indicators of hydrophytic vegetation observed in a prevalence of any portion of the project area? If **YES**, enter the scientific and common names if available of two representative species and attach photos: Scientific Name: _____ Common Name: _____ Scientific Name: _____ Common Name: _____	☐	☐	☐
If **YES or INCONCLUSIVE**, proceed to **Part F**, complete **Item B** and take appropriate action. If **NO**, continue to **Part F**, **Item C**, and proceed with application or request processing.			

PART E – COMMENTS

13. Attach additional pages as needed.

PART F – CONCLUSION

I have reviewed all available information including documents in the loan file, if necessary, made a site inspection, and attached copies of the website maps, soil surveys consulted, and photographs, if available, showing results of the field visit if conducted. The determination is:

14. A. ☑ The NRCS Web Soil Survey rating is nonhydric or predominantly nonhydric in the project area **AND** wetland inventories (NWI maps) indicate the project area does not have a recognized wetland. Application or request processing can continue.

B. ☐ The project area is likely to include and affect a wetland because hydric soils **or** wetland inventories (NWI Maps) and at least **one** of the two other wetland indicators listed in **Parts C** and **D** were found **or** results were inconclusive.

Processing will not continue. FSA has determined the site to be unsuitable based on available information; ***unless*** the applicant submits an alternative site, provides a wetland determination demonstrating there will be no project impacts to wetlands, or permit documentation that the project is legally permissible. Issue appeal rights in accordance with FSA Handbook 1-APP (Rev. 2) as appropriate.

C. ☐ Hydric soils or NWI wetlands were identified. I certify that a site inspection was made. None of the wetland indicators listed in **Parts C** and **D** were found or observed. Application or request processing can continue.

PART G - SIGNATURES

15A. Signature of Preparer	15B. Printed Name of Preparer
JAMIE EPSTEIN Digitally signed by JAMIE EPSTEIN Date: 2025.04.17 12:51:01 -04'00'	Jamie Epstein
15C. Title of Preparer	**15D. Date Signed by Preparer**
State Environmental Coordinator	04/17/2025
15E. Office and Email Address	**15F. Phone Number *(Including Area Code)***
Washington County FSA	518-692-9940

NOTE: SECs may supplement this form as needed to reflect wetland indicators in their area. Any modification to this form requires the FPAC Business Center, Environmental Activities Division approval.

J-3 AD-1026

This form is available electronically. (See Page 2 for Privacy Act and Paperwork Reduction Act Statements)

AD-1026
(10-30-14)

U.S. DEPARTMENT OF AGRICULTURE
Farm Service Agency

HIGHLY ERODIBLE LAND CONSERVATION (HELC) AND WETLAND CONSERVATION (WC) CERTIFICATION

Read attached AD-1026 Appendix before completing form.

PART A – BASIC INFORMATION

1. Name of Producer	2. Tax Identification Number (Last 4 digits)	3. Crop Year
		2024

4. Names of affiliated persons with farming interests. Enter "None," if applicable.

RL

Affiliated persons with farming interests must also file an AD-1026. See item 7 in the Appendix for a definition of an affiliated person.

5. Check one of these boxes if the statement applies; otherwise continue to Part B.

A. ☐ The producer in Part A does not have interest in land devoted to agriculture. Examples include bee keepers who place their hives on another person's land, producers of crops grown in greenhouses, and producers of aquaculture AND these producers do not own/lease any agricultural land themselves. **Note:** Do not check this box if the producer shares in a crop.

B. ☐ The producer in Part A meets all three of the following:
- does not participate in any USDA program that is subject to HELC and WC compliance except Federal Crop Insurance,
- only has interest in land devoted to agriculture which is exclusively used for perennial crops, except sugarcane, and
- has not converted a wetland after February 7, 2014.

Perennial crops include, but are not limited to, tree fruit, tree nuts, grapes, olives, native pasture and perennial forage. A producer that produces alfalfa should contact the Natural Resources Conservation Service at the nearest USDA Service Center to determine whether such production qualifies as production of a perennial crop.

Note: *If either box is checked, and the producer in Part A does not participate in Farm Service Agency (FSA) or Natural Resources Conservation Service (NRCS) programs, the full tax identification number of the producer must be provided, but establishment of detailed farm records with FSA is not required. Go to Part D and sign and date.*

PART B - HELC/WC COMPLIANCE QUESTIONS

Indicate YES or NO to each question. *If you are unsure of whether a HEL determination, wetland determination, or NRCS evaluation has been completed, contact your local USDA Service Center.*	YES	NO
6. During the crop year entered in Part A or the term of a requested USDA loan, did or will the producer in Part A plant or produce an agricultural commodity (including sugarcane) on land for which an HEL determination has not been made?		V
7. Has anyone performed (since December 23, 1985), or will anyone perform any activities to:		
A. Create new drainage systems, conduct land leveling, filling, dredging, land clearing, or excavation that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* ____		V
B. Improve or modify an existing drainage system that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* ____		V
C. Maintain an existing drainage system that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* ____ **Note:** *Maintenance is the repair, rehabilitation, or replacement of the capacity of existing drainage systems to allow for the continued use of wetlands currently in agricultural production and the continued management of other areas as they were used before December 23, 1985. This allows a person to reconstruct or maintain the capacity of the original system or install a replacement system that is more durable or will realize lower maintenance or costs.*		V

Note: *If "YES" is checked for item 7A or 7B, then Part C must be completed to authorize NRCS to make an HELC/WC and/or certified wetland determination on the identified land. If "YES" is checked for item 7C, NRCS does not have to conduct a certified wetland determination.*

8. Check one or both boxes, if applicable; otherwise, continue to Part C or D.

A. ☐ Check this box only if the producer in Part A has FCIC reinsured crop insurance and filing this form represents the first time the producer in Part A, including any affiliated person, has been subject to HELC and WC provisions.

B. ☐ Check this box if either of the following applies to the producer and crop year entered in Part A:
- Is a tenant on a farm that is/will not be in compliance with HELC and WC provisions because the landlord refuses to allow compliance, but all other farms not associated with that landlord are in compliance. (AD-1026B, Tenant Exemption Request, must be completed).
- Is a landlord of a farm that is/will not be in compliance with HELC and WC provisions because of a violation by the tenant on that farm, but all other farms not associated with that tenant are in compliance. (AD-1026C, Landlord or Landowner Exemption Request, must be completed).

PART C – ADDITIONAL INFORMATION

9. If "YES" was checked in item 6 or 7, provide the following information for the land to which the answer applies:

A. Farm and/or tract/field number: _____
If unknown, contact the Farm Service Agency at the nearest USDA Service Center.

B. Activity: _____

C. Current land use (*specify crops*): _____

D. County: _____

PART D – CERTIFICATION OF COMPLIANCE

I have received and read the AD-1026 Appendix and understand and agree to the terms and conditions therein on all land in which I (or the producer in Part A if different) and any affiliated person have or will have an interest. I understand that eligibility for certain USDA program benefits is contingent upon this certification of compliance with HELC and WC provisions and I am responsible for any non-compliance. I understand and agree that this certification of compliance is considered continuous and will remain in effect unless revoked or a violation is determined. I further understand and agree that:

- all applicable payments must be refunded if a determination of ineligibility is made for a violation of HELC or WC provisions.
- NRCS may verify whether a HELC violation or WC has occurred.
- a revised Form AD-1026 must be filed if there are any operation changes or activities that may affect compliance with the HELC and WC provisions. I understand that failure to revise Form AD-1026 for such changes may result in ineligibility for certain USDA program benefits or other consequences.
- affiliated persons are also subject to compliance with HELC and WC provisions and their failure to comply or file Form AD-1026 will result in loss of eligibility for applicable benefits to any individuals or entities with whom they are considered affiliated.

Producer's Certification:

I hereby certify that the information on this form is true and correct to the best of my knowledge.

10A. Producer's Signature (By)	10B. Title/Relationship (If Signing in Representative Capacity)	10C. Date (MM-DD-YYYY)
2/22/24	member	2/22/2024
FOR FSA USE ONLY (for referral to NRCS) Sign and date if NRCS determination is needed.	11A. Signature of FSA Representative	11B. Date (MM-DD-YYYY)

IMPORTANT: If you are unsure about the applicability of HELC and WC provisions to your land, contact your local USDA Service Center for details concerning the location of any highly erodible land or wetland and any restrictions apply to/to your land according to NRCS determinations before planting an agricultural commodity or performing any drainage or manipulation. Failure to certify and properly revise your compliance certification when applicable may: (1) affect your eligibility for USDA program benefits, including whether you qualify for reinstatement of benefits through the Good Faith process; and (2) result in other consequences.

NOTE: *The following statement is made in accordance with the Privacy Act of 1974 (5 USC 552a – as amended). The authority for requesting the information identified on this form is 7 CFR Part 12, the Food Security Act of 1985 (Pub. L. 99-198), and the Agricultural Act of 2014 (Pub. L. 113-79). The information will be used to certify compliance with HELC and WC provisions and to determine producer eligibility to participate in and receive benefits under programs administered by USDA agencies. The information collected on this form may be disclosed to other Federal, State, Local government agencies, Tribal agencies, and nongovernmental entities that have been authorized access to the information by statute or regulation and/or as described in applicable Routine Uses identified in the System of Records Notice for USDA/FSA-2, Farm Records File (Automated) and USDA/FSA-14, Applicant/Borrower. Providing the requested information is voluntary. However, failure to furnish the requested information will result in a determination of producer ineligibility to participate in and receive benefits under programs administered by USDA agencies.*

This information collection is exempted from the Paperwork Reduction Act as specified in the Agricultural Act of 2014 (Pub. L. 113-79, Title II, Subtitle G, Funding and Administration). The provisions of appropriate criminal and civil fraud, privacy, and other statutes may be applicable to the information provided. RETURN THIS COMPLETED FORM AD-1026 TO YOUR COUNTY FARM SERVICE AGENCY (FSA) OFFICE.

This form is available electronically.

AD-1026
(10-30-14)

(See Page 2 for Privacy Act and Paperwork Reduction Act Statements)

U.S. DEPARTMENT OF AGRICULTURE
Farm Service Agency

HIGHLY ERODIBLE LAND CONSERVATION (HELC) AND WETLAND CONSERVATION (WC) CERTIFICATION

Read attached AD-1026 Appendix before completing form.

PART A – BASIC INFORMATION

1. Name of Producer	2. Tax Identification Number (Last 4 digits)	3. Crop Year
		2024

4. Names of affiliated persons with farming interests. Enter "None," if applicable.

AL

Affiliated persons with farming interests must also file an AD-1026. See Item 7 in the Appendix for a definition of an affiliated person.

5. Check one of these boxes if the statement applies; otherwise continue to Part B.

A. ☐ The producer in Part A does not have interest in land devoted to agriculture. Examples include bee keepers who place their hives on another person's land, producers of crops grown in greenhouses, and producers of aquaculture AND these producers do not own/lease any agricultural land themselves. **Note:** Do not check this box if the producer shares in a crop.

B. ☐ The producer in Part A meets all three of the following:
- does not participate in any USDA program that is subject to HELC and WC compliance except Federal Crop Insurance
- only has interest in land devoted to agriculturewhich is exclusively used for perennial crops, except sugarcane, and
- has not converted a wetland after February 7, 2014.

Perennial crops include, but are not limited to, tree fruit, tree nuts, grapes, olives, native pasture and perennial forage. A producer that produces alfalfa should contact the Natural Resources Conservation Service at the nearest USDA Service Center to determine whether such production qualifies as production of a perennial crop.

DEC 3 2 2024

Note: If either box is checked, and the producer in Part A does not participate in Farm Service Agency(FSA) or Natural Resources Conservation Service (NRCS) programs, the full tax identification number of the producer must be provided, but establishment of detailed farm records with FSA is not required. Go to Part D and sign and date.

PART B - HELC/WC COMPLIANCE QUESTIONS

Indicate YES or NO to each question. *If you are unsure of whether a HEL determination, wetland determination, or NRCS evaluation has been completed, contact your local USDA Service Center.*	YES	NO
6. During the crop year entered in Part A or the term of a requested USDA loan, did or will the producer in Part A plant or produce an agricultural commodity (including sugarcane) on land for which an HEL determination has not been made?		✓
7. Has anyone performed (since December 23, 1985), or will anyone perform any activities to:		
A. Create new drainage systems, conduct land leveling, filling, dredging, land clearing, or excavation that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* _____		✓
B. Improve or modify an existing drainage system that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* _____		✓
C. Maintain an existing drainage system that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* _____ **Note:** *Maintenance is the repair, rehabilitation, or replacement of the capacity of existing drainage systems to allow for the continued use of wetlands currently in agricultural production and the continued management of other areas as they were used before December 23, 1985. This allows a person to reconstruct or maintain the capacity of the original system or install a replacement system that is more durable or will realize lower maintenance or costs.*		✓

Note: *If "YES" is checked for Item 7A or 7B, then Part C must be completed to authorize NRCS to make an HELC/WC and/or certified wetland determination on the identified land. If "YES" is checked for Item 7C, NRCS does not have to conduct a certified wetland determination.*

8. Check one or both boxes, if applicable; otherwise, continue to Part C or D.

A. ☐ Check this box only if the producer in Part A has FCIC reinsured crop insurance and filing this form represents the first time the producer in Part A, including any affiliated person, has been subject to HELC and WC provisions.

B. ☐ Check this box if either of the following applies to the producer and crop year entered in Part A:
- Is a tenant on a farm that is/will not be in compliance with HELC and WC provisions because the landlord refuses to allow compliance, but all other farms not associated with that landlord are in compliance. (AD-1026B, Tenant Exemption Request, must be completed).
- Is a landlord of a farm that is/will not be in compliance with HELC and WC provisions because of a violation by the tenant on that farm, but all other farms not associated with that tenant are in compliance. (AD-1026C, Landlord or Landowner Exemption Request, must be completed).

PART C – ADDITIONAL INFORMATION

9. If "YES" was checked in Item 6 or 7, provide the following information for the land to which the answer applies:

A. Farm and/or tract/field number: _____
If unknown, contact the Farm Service Agency at the nearest USDA Service Center.

B. Activity: _____

C. Current land use *(specify crops)*: _____

D. County: _____

PART D – CERTIFICATION OF COMPLIANCE

I have received and read the AD-1026 Appendix and understand and agree to the terms and conditions therein on all land in which I (or the producer in Part A if different) and any affiliated person have or will have an interest. I understand that eligibility for certain USDA program benefits is contingent upon this certification of compliance with HELC and WC provisions and I am responsible for any non-compliance. I understand and agree that this certification of compliance is considered continuous and will remain in effect unless revoked or a violation is determined. I further understand and agree that:

- all applicable payments must be refunded if a determination of ineligibility is made for a violation of HELC or WC provisions.
- NRCS may verify whether a HELC violation or WC has occurred.
- a revised Form AD-1026 must be filed if there are any operation changes or activities that may affect compliance with the HELC and WC provisions. I understand that failure to revise Form AD-1026 for such changes may result in ineligibility for certain USDA program benefits or other consequences.
- affiliated persons are also subject to compliance with HELC and WC provisions and their failure to comply or file Form AD-1026 will result in loss of eligibility for applicable benefits to any individuals or entities with whom they are considered affiliated.

Producer's Certification:
I hereby certify that the information on this form is true and correct to the best of my knowledge.

10A. Producer's Signature *(By)*	10B. Title/Relationship *(If Signing in Representative Capacity)*	10C. Date *(MM-DD-YYYY)*
	POA	2/22/2024
FOR FSA USE ONLY *(for referral to NRCS)* Sign and date if NRCS determination is needed.	11A. Signature of FSA Representative	11B. Date *(MM-DD-YYYY)*

IMPORTANT: If you are unsure about the applicability of HELC and WC provisions to your land, contact your local USDA Service Center for details concerning the location of any highly erodible land or wetland and any restrictions applying to your land according to NRCS determinations before planting an agricultural commodity or performing any drainage or manipulation. Failure to certify and properly revise your compliance certification when applicable may: (1) affect your eligibility for USDA program benefits, including whether you qualify for reinstatement of benefits through the Good Faith process; and (2) result in other consequences.

NOTE: *The following statement is made in accordance with the Privacy Act of 1974 (5 USC 552a – as amended). The authority for requesting the information identified on this form is 7 CFR Part 12, the Food Security Act of 1985 (Pub. L. 99-198), and the Agricultural Act of 2014 (Pub. L. 113-79). The information will be used to certify compliance with HELC and WC provisions and to determine producer eligibility to participate in and receive benefits under programs administered by USDA agencies. The information collected on this form may be disclosed to other Federal, State, Local government agencies, Tribal agencies, and nongovernmental entities that have been authorized access to the information by statute or regulation and/or as described in applicable Routine Uses identified in the System of Records Notice for USDA/FSA-2, Farm Records File (Automated) and USDA/FSA-14, Applicant/Borrower. Providing the requested information is voluntary. However, failure to furnish the requested information will result in a determination of producer ineligibility to participate in and receive benefits under programs administered by USDA agencies.*

This information collection is exempted from the Paperwork Reduction Act as specified in the Agricultural Act of 2014 (Pub. L. 113-79, Title II, Subtitle G, Funding and Administration). The provisions of appropriate criminal and civil fraud, privacy, and other statutes may be applicable to the information provided. RETURN THIS COMPLETED FORM AD-1026 TO YOUR COUNTY FARM SERVICE AGENCY (FSA) OFFICE.

This form is available electronically. *(See Page 2 for Privacy Act and Paperwork Reduction Act Statements)*

AD-1026
(10-30-14)

U.S. DEPARTMENT OF AGRICULTURE
Farm Service Agency

HIGHLY ERODIBLE LAND CONSERVATION (HELC) AND WETLAND CONSERVATION (WC) CERTIFICATION

Read attached AD-1026 Appendix before completing form.

PART A – BASIC INFORMATION

1. Name of Producer	2. Tax Identification Number (Last 4 digits)	3. Crop Year
[redacted] (PLP)	6135	2024

4. Names of affiliated persons with farming interests. *Enter "None," if applicable.*

[redacted] (PLP) RL

Affiliated persons with farming interests must also file an AD-1026. See Item 7 in the Appendix for a definition of an affiliated person.

5. Check one of these boxes if the statement applies; otherwise continue to Part B.

A. ☐ The producer in Part A does not have interest in land devoted to agriculture. Examples include bee keepers who place their hives on another person's land, producers of crops grown in greenhouses, and producers of aquaculture AND these producers do not own/lease any agricultural land themselves. **Note:** Do not check this box if the producer shares in a crop.

FEB 22 2024

B. ☐ The producer in Part A meets all three of the following:
- does not participate in any USDA program that is subject to HELC and WC compliance except Federal Crop Insurance
- only has interest in land devoted to agriculture which is exclusively used for perennial crops, except sugarcane, and
- has not converted a wetland after February 7, 2014.

Perennial crops include, but are not limited to, tree fruit, tree nuts, grapes, olives, native pasture and perennial forage. A producer that produces alfalfa should contact the Natural Resources Conservation Service at the nearest USDA Service Center to determine whether such production qualifies as production of a perennial crop.

Note: *If either box is checked, and the producer in Part A does not participate in Farm Service Agency (FSA) or Natural Resources Conservation Service (NRCS) programs, the full tax identification number of the producer must be provided, but establishment of detailed farm records with FSA is not required. Go to Part D and sign and date.*

PART B - HELC/WC COMPLIANCE QUESTIONS

Indicate YES or NO to each question. *If you are unsure of whether a HEL determination, wetland determination, or NRCS evaluation has been completed, contact your local USDA Service Center.*	YES	NO
6. During the crop year entered in Part A or the term of a requested USDA loan, did or will the producer in Part A plant or produce an agricultural commodity (including sugarcane) on land for which an HEL determination has not been made?		N
7. Has anyone performed (since December 23, 1985), or will anyone perform any activities to:		
A. Create new drainage systems, conduct land leveling, filling, dredging, land clearing, or excavation that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* _____		N
B. Improve or modify an existing drainage system that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* _____		N
C. Maintain an existing drainage system that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* _____ **Note:** *Maintenance is the repair, rehabilitation, or replacement of the capacity of existing drainage systems to allow for the continued use of wetlands currently in agricultural production and the continued management of other areas as they were used before December 23, 1985. This allows a person to reconstruct or maintain the capacity of the original system or install a replacement system that is more durable or will realize lower maintenance or costs.*		N

Note: *If "YES" is checked for Item 7A or 7B, then Part C must be completed to authorize NRCS to make an HELC/WC and/or certified wetland determination on the identified land. If "YES" is checked for Item 7C, NRCS does not have to conduct a certified wetland determination.*

8. Check one or both boxes, if applicable; otherwise, continue to Part C or D.

A. ☐ Check this box only if the producer in Part A has FCIC reinsured crop insurance and filing this form represents the first time the producer in Part A, including any affiliated person, has been subject to HELC and WC provisions.

B. ☐ Check this box if either of the following applies to the producer and crop year entered in Part A:
- Is a tenant on a farm that is/will not be in compliance with HELC and WC provisions because the landlord refuses to allow compliance, but all other farms not associated with that landlord are in compliance. (AD-1026B, Tenant Exemption Request, must be completed).
- Is a landlord of a farm that is/will not be in compliance with HELC and WC provisions because of a violation by the tenant on that farm, but all other farms not associated with that tenant are in compliance. (AD-1026C, Landlord or Landowner Exemption Request, must be completed).

PART C – ADDITIONAL INFORMATION

9. If "YES" was checked in Item 6 or 7, provide the following information for the land to which the answer applies:

A. Farm and/or tract/field number: _____
If unknown, contact the Farm Service Agency at the nearest USDA Service Center.

B. Activity: _____

C. Current land use *(specify crops)*: _____

D. County: _____

PART D – CERTIFICATION OF COMPLIANCE

I have received and read the AD-1026 Appendix and understand and agree to the terms and conditions therein on all land in which I (or the producer in Part A if different) and any affiliated person have or will have an interest. I understand that eligibility for certain USDA program benefits is contingent upon this certification of compliance with HELC and WC provisions and I am responsible for any non-compliance. I understand and agree that this certification of compliance is considered continuous and will remain in effect unless revoked or a violation is determined. I further understand and agree that:

- all applicable payments must be refunded if a determination of ineligibility is made for a violation of HELC or WC provisions.
- NRCS may verify whether a HELC violation or WC has occurred.
- a revised Form AD-1026 must be filed if there are any operation changes or activities that may affect compliance with the HELC and WC provisions. I understand that failure to revise Form AD-1026 for such changes may result in ineligibility for certain USDA program benefits or other consequences.
- affiliated persons are also subject to compliance with HELC and WC provisions and their failure to comply or file Form AD-1026 will result in loss of eligibility for applicable benefits to any individuals or entities with whom they are considered affiliated.

Producer's Certification:

I hereby certify: that the information on this form is true and correct to the best of my knowledge.

10A. Producer's Signature *(By)*	10B. Title/Relationship *(If Signing in Representative Capacity)*	10C. Date *(MM-DD-YYYY)*
		7/23/2024
FOR FSA USE ONLY *(for referral to NRCS)* Sign and date if NRCS determination is needed.	11A. Signature of FSA Representative	11B. Date *(MM-DD-YYYY)*

IMPORTANT: If you are unsure about the applicability of HELC and WC provisions to your land, contact your local USDA Service Center for details concerning the location of any highly erodible land or wetland and any restrictions apply ing to your land according to NRCS determinations before planting an agricultural commodity or performing any drainage or manipulation. Failure to certify and properly revise your compliance certification when applicable may: (1) affect your eligibility for USDA program benefits, including whether you qualify for reinstatement of benefits through the Good Faith process, and (2) result in other consequences.

NOTE: *The following statement is made in accordance with the Privacy Act of 1974 (5 USC 552a - as amended). The authority for requesting the information identified on this form is 7 CFR Part 12, the Food Security Act of 1985 (Pub. L. 99-198), and the Agricultural Act of 2014 (Pub. L. 113-79). The information will be used to certify compliance with HELC and WC provisions and its determine producer eligibility to participate in and receive benefits under programs administered by USDA agencies. The information collected on this form may be disclosed to other Federal, State, Local government agencies, Tribal agencies, and nongovernmental entities that have been authorized access to the information by statute or regulation and/or as described in applicable Routine Uses identified in the System of Records Notice for USDA/FSA-2, Farm Records File (Automated) and USDA/FSA-14, Applicant/Borrower. Providing the requested information is voluntary. However, failure to furnish the requested information will result in a determination of producer ineligibility to participate in and receive benefits under programs administered by USDA agencies.*

This information collection is exempted from the Paperwork Reduction Act as specified in the Agricultural Act of 2014 (Pub. L. 113-79, Title II, Subtitle G, Funding and Administration). The provisions of appropriate criminal and civil fraud, privacy, and other statutes may be applicable to the information provided. RETURN THE COMPLETED FORM AD-1026 TO YOUR COUNTY FARM SERVICE AGENCY (FSA) OFFICE.

This form is available electronically. (See Page 2 for Privacy Act and Paperwork Reduction Act Statements)

AD-1026
(10-30-14)

U.S. DEPARTMENT OF AGRICULTURE
Farm Service Agency

HIGHLY ERODIBLE LAND CONSERVATION (HELC) AND WETLAND CONSERVATION (WC) CERTIFICATION

Read attached AD-1026 Appendix before completing form.

PART A – BASIC INFORMATION

1. Name of Producer	2. Tax Identification Number (Last 4 digits)	3. Crop Year
		2024

4. Names of affiliated persons with farming interests. *Enter "None," if applicable.*

U

Affiliated persons with farming interests must also file an AD-1026. See Item 7 in the Appendix for a definition of an affiliated person.

5. Check one of these boxes if the statement applies ; otherwise continue to Part B.

A. ☐ The producer in Part A does not have interest in land devoted to agriculture. Examples include bee keepers who place their hives on another person's land, producers of crops grown in greenhouses, and producers of aquaculture AND these producers do not own/lease any agricultural land themselves. **Note:** Do not check this box if the producer shares in a crop.

B. ☐ The producer in Part A meets all three of the following:
- does not participate in any USDA program that is subject to HELC and WC compliance except Federal Crop Insurance
- only has interest in land devoted to agriculturewhich is exclusively used for perennial crops, except sugarcane, and
- has not converted a wetland after February 7, 2014.

Perennial crops include, but are not limited to, tree fruit, tree nuts, grapes, olives , native pasture and perennial forage. A producer that produces alfalfa should contact the Natural Resources Conservation Service at the nearest USDA Service Center to determine whether such production qualifies as production of a perennial crop.

Note: *If either box is checked, and the producer in Part A does not participate in Farm Service Agency(FSA) or Natural Resources Conservation Service (NRCS) programs, the full tax identification number of the producer must be provided, but establishment of detailed farm records with FSA is not required. Go to Part D and sign and date.*

PART B - HELC/WC COMPLIANCE QUESTIONS

Indicate YES or NO to each question. *If you are unsure of whether a HEL determination, wetland determination, or NRCS evaluation has been completed, contact your local USDA Service Center.*	YES	NO
6. During the crop year entered in Part A or the term of a requested USDA loan, did or will the producer in Part A plant or produce an agricultural commodity (including sugarcane) on land for which an HEL determination has not been made?		\
7. Has anyone performed (since December 23, 1985), or will anyone perform any activities to:		
A. Create new drainage systems, conduct land leveling, filling, dredging, land clearing, or excavation that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* _____		\
B. Improve or modify an existing drainage system that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* _____		\
C. Maintain an existing drainage system that has NOT been evaluated by NRCS? *If "YES", indicate the year(s):* _____ **Note:** *Maintenance is the repair, rehabilitation, or replacement of the capacity of existing drainage systems to allow for the continued use of wetlands currently in agricultural production and the continued management of other areas as they were used before December 23, 1985. This allows a person to reconstruct or maintain the capacity of the original system or install a replacement system that is more durable or will realize lower maintenance or costs.*		\

Note: *If "YES" is checked for Item 7A or 7B, then Part C must be completed to authorize NRCS to make an HELC/WC and/or certified wetland determination on the identified land. If "YES" is checked for Item 7C, NRCS does not have to conduct a certified wetland determination.*

8. Check one or both boxes, if applicable; otherwise, continue to Part C or D.

A. ☐ Check this box only if the producer in Part A has FCIC reinsured crop insurance and filing this form represents the first time the producer in Part A, including any affiliated person, has been subject to HELCand WC provisions.

B. ☐ Check this box if either of the following applies to the producer and crop year entered in Part A:
- Is a tenant on a farm that is/will not be in compliance with HELC and WC provisions because the landlord refuses to allow compliance, but all other farms not associated with that landlord are in compliance. (AD-1026B, Tenant Exemption Request, must be completed).
- Is a landlord of a farm that is/will not be in compliance with HELC and WC provisions because of a violation by the tenant on that farm, but all other farms not associated with that tenant are in compliance. (AD-1026C, Landlord or Landowner Exemption Request, must be completed).

PART C – ADDITIONAL INFORMATION

9. If "YES" was checked in Item 6 or 7, provide the following information for the land to which the answer applies:

A. Farm and/or tract/field number: _____
If unknown, contact the Farm Service Agency at the nearest USDA Service Center.

B. Activity: _____

C. Current land use (*specify crops*): _____

D. County: _____

PART D – CERTIFICATION OF COMPLIANCE

I have received and read the AD-1026 Appendix and understand and agree to the terms and conditions therein on all land in which I (or the producer in Part A if different) and any affiliated person have or will have an interest. I understand that eligibility for certain USDA program benefits is contingent upon this certification of compliance with HELC and WC provisions and I am responsible for any non-compliance. I understand and agree that this certification of compliance is considered continuous and will remain in effect unless revoked or a violation is determined. I further understand and agree that:

- all applicable payments must be refunded if a determination of ineligibility is made for a violation of HELC or WC provisions.
- NRCS may verify whether a HELC violation or WC has occurred.
- a revised Form AD-1026 must be filed if there are any operation changes or activities that may affect compliance with the HELC and WC provisions. I understand that failure to revise Form AD-1026 for such changes may result in ineligibility for certain USDA program benefits or other consequences.
- affiliated persons are also subject to compliance with HELC and WC provisions and their failure to comply or file Form AD-1026 will result in loss of eligibility for applicable benefits to any individuals or entities with whom they are considered affiliated.

Producer's Certification:

I hereby certify that the information on this form is true and correct to the best of my knowledge.

10A. Producer's Signature (By)	10B. Title/Relationship (If Signing in Representative Capacity)	10C. Date (MM-DD-YYYY)
	POA	2/22/2024
FOR FSA USE ONLY *(for referral to NRCS)* Sign and date if NRCS determination is needed.	11A. Signature of FSA Representative	11B. Date (MM-DD-YYYY)

IMPORTANT: If you are unsure about the applicability of HELC and WC provisions to your land, contact your local USDA Service Center for details concerning the location of any highly erodible land or wetland and any restrictions apply ing to your land according to NRCS determinations before planting an agricultural commodity or performing any drainage or manipulation. Failure to certify and properly revise your compliance certification when applicable may: (1) affect your eligibility for USDA program benefits, including whether you qualify for reinstatement of benefits through the Good Faith process; and (2) result in other consequences.

NOTE: *The following statement is made in accordance with the Privacy Act of 1974 (5 USC 552a - as amended). The authority for requesting the information identified on this form is 7 CFR Part 12, the Food Security Act of 1985 (Pub. L. 99-198), and the Agricultural Act of 2014 (Pub. L. 113-79). The information will be used to certify compliance with HELC and WC provisions and to determine producer eligibility to participate in and receive benefits under programs administered by USDA agencies. The information collected on this form may be disclosed to other Federal, State, Local government agencies, Tribal agencies, and nongovernmental entities that have been authorized access to the information by statute or regulation and/or as described in applicable Routine Uses identified in the System of Records Notice for USDA/FSA-2, Farm Records File (Automated) and USDA/FSA-14, Applicant/Borrower. Providing the requested information is voluntary. However, failure to furnish the requested information will result in a determination of producer ineligibility to participate in and receive benefits under programs administered by USDA agencies.*

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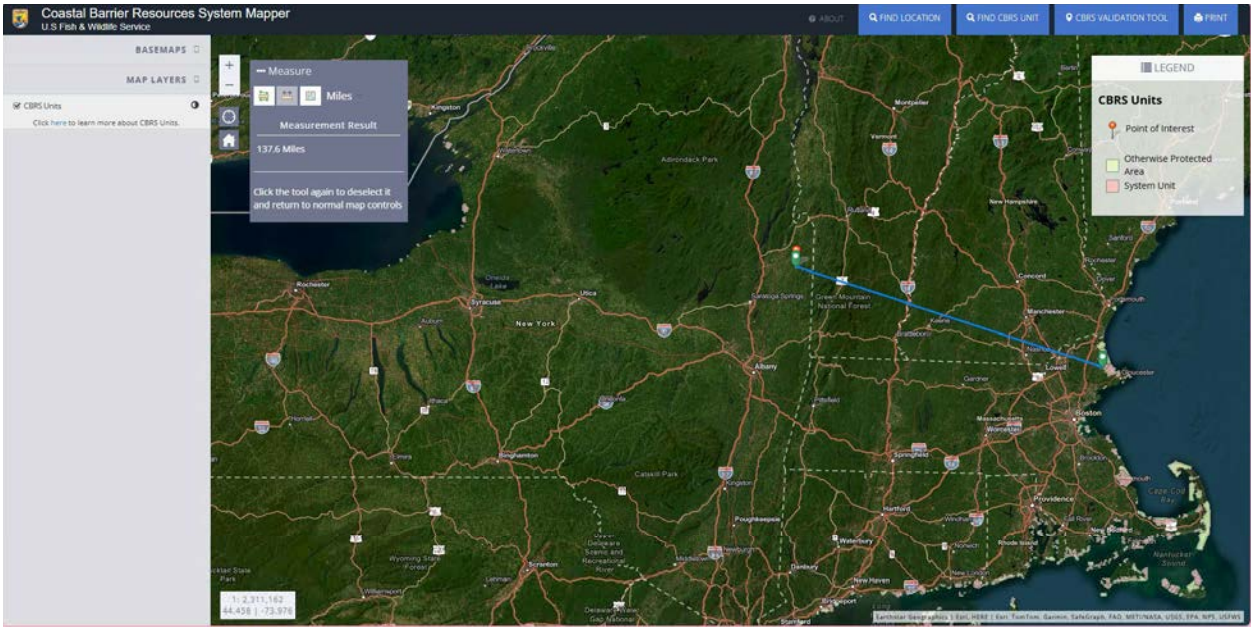
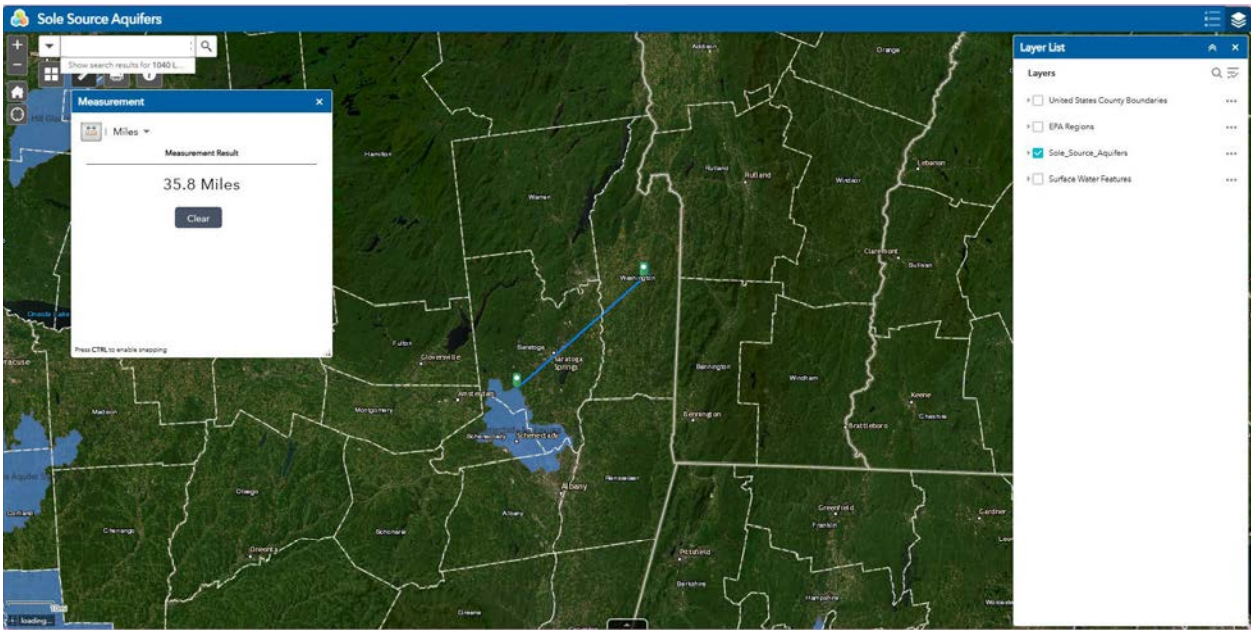
L. Coastal Barrier Resource Area Map

L-1 Coastal Barrier Resource Map



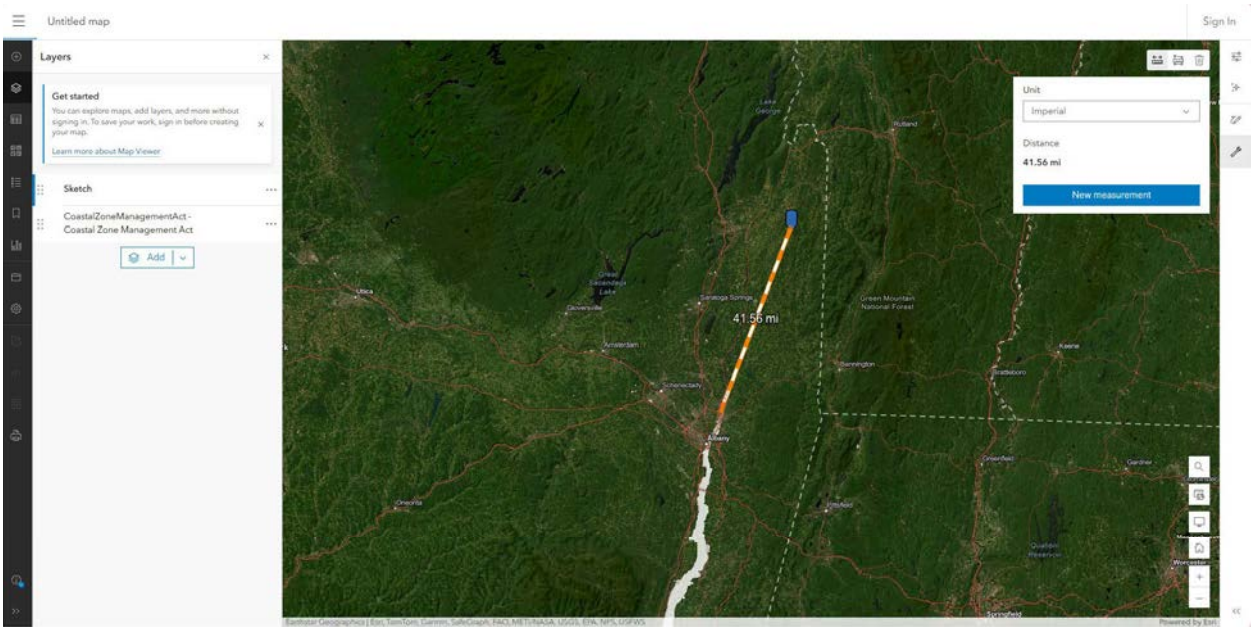
M. Sole Source Aquifer

M-1 Sole Source Aquifer Map

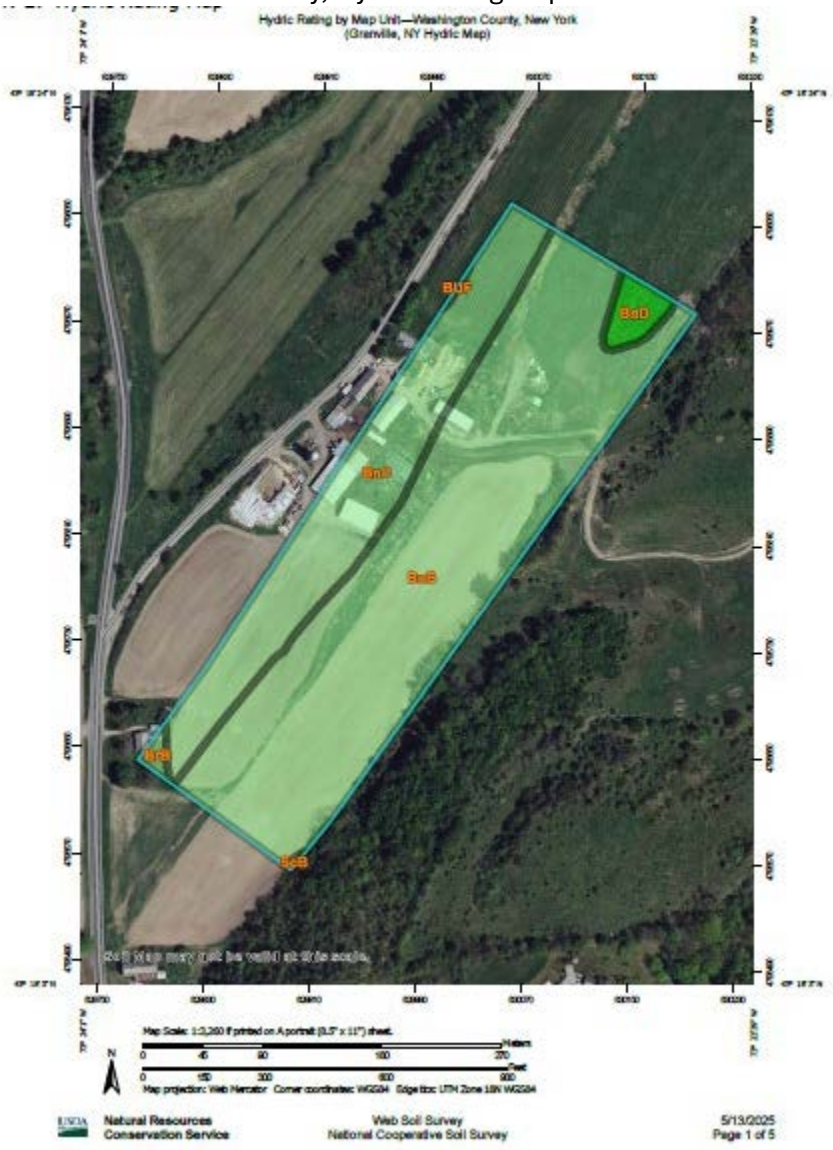


N. Coastal Zone

N-1 Coastal Zone Map



N-2 USDA NRCS Web Soil Survey, Hydric Rating Map



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 1:20,000.

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: Washington County, New York
Survey Area Data: Version 24, Aug 29, 2024

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

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

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
BnB	Bernardston gravelly silt loam, 3 to 8 percent slopes	3	13.3	69.2%
BnC	Bernardston gravelly silt loam, 8 to 15 percent slopes	3	5.3	27.6%
BnD	Bernardston gravelly silt loam, 15 to 25 percent slopes	0	0.5	2.4%
BrB	Bernardston-Nassau shaly silt loams, 3 to 8 percent slopes	4	0.1	0.7%
BUF	Bernardston soils, steep and very steep	0	0.0	0.1%
ScB	Scriba gravelly silt loam, 3 to 8 percent slopes	10	0.0	0.1%
Totals for Area of Interest			**19.2**	**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.

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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

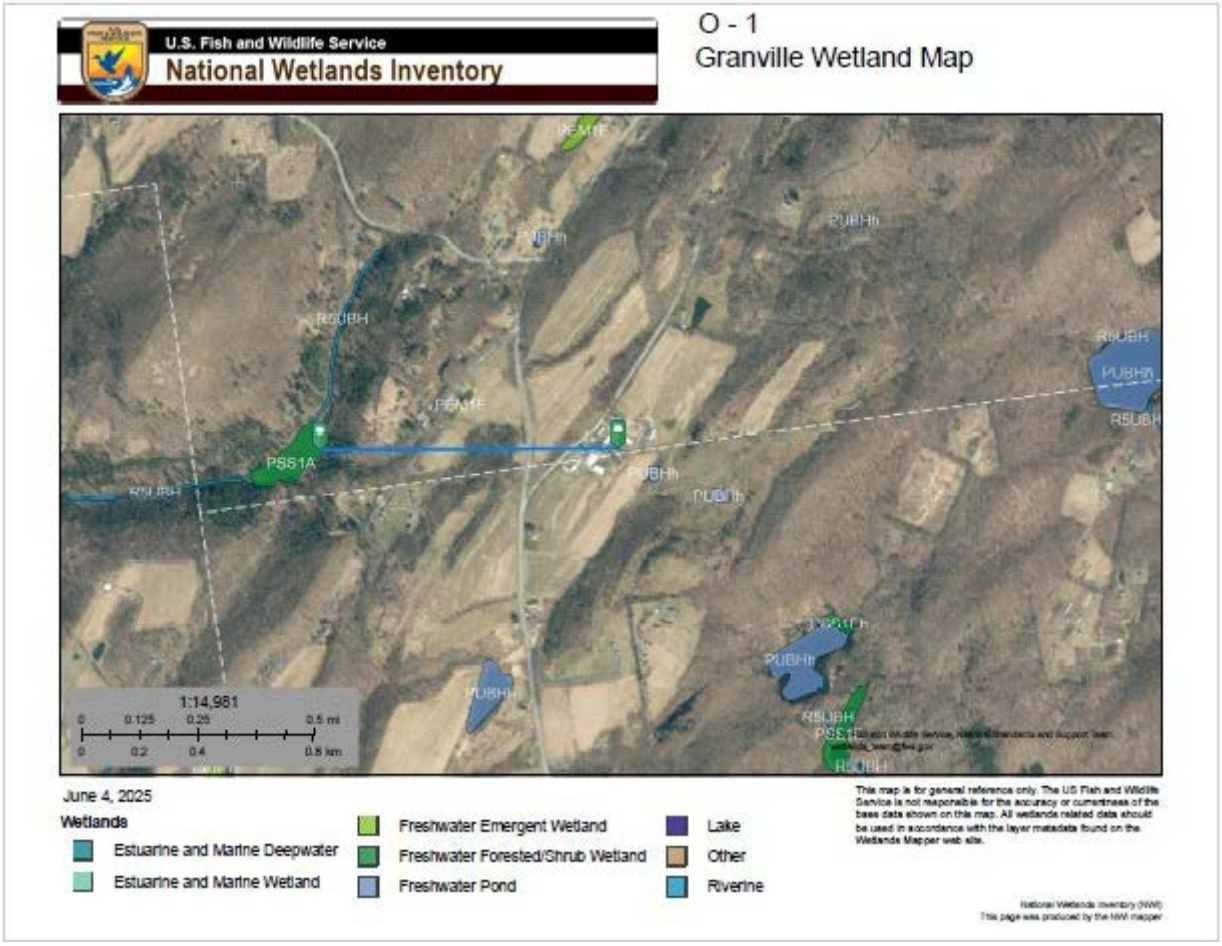
Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

O. Water Quality Site Map

O-1 Wetland Map



Comprehensive Nutrient Management Plan

Champlain Valley AGRONOMICS

(518)-643-2360

CNMP

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Section #1 Farm Introduction

Champlain Valley AGRONOMICS

Comprehensive Nutrient Management Plan (2021)

I. General Information					
Purpose of CNMP development:	☐ Permitted Facility	☐ EQIP	☒ DAP		
SPDES #	N/A				
Authorization #	N/A				
Permit	N/A				
Owner/Operator					
Main Permit Contact (Owner, Operator, or designated contact)	Name:				
	Address:				
	City:	Granville			
	Zip/County:	12832	Washington		
	Phone:				
Certified Planner Contact	Name:				
	Address:				
	City:	Peru			
	Zip/County:	12972	Clinton		
	Phone:				
Associate Planner(s) Contact	Name:				
	Address:				
	City:	Peru			
	Zip/County:	12972	Clinton		
	Phone:	518-643-2360			
Livestock Production Area #1					
Operation Type	Dairy	Lat.-Lon.		25yr/24hr	4.7”
Name:				100yr/24hr	5.5”
Address:					
City:	Granville				
Zip:	12832				
County:	Washington				
Phone:					

II. CNMP Purpose

A Comprehensive Nutrient Management Plan (CNMP) describes the production practices, equipment, and structure(s) that the owner/operator of an agricultural operation now uses and/or will implement to sustain livestock and/or crop production in a manner that is both environmentally and economically sound. It combines conservation practices and management activities into a system that addresses animal production operations from feed inputs through the use of animal manure and other organic by-products. The CNMP is a planning tool as well as a record of decisions in that it details the activities that the landowner/operator implements. It also documents all the land (cropland, facilities, etc.), which the landowner/operator owns or has decision-making authority over, on which manure or organic by-products will be generated, handled or applied.

The CNMP will help ensure compliance with the NYS Department of Environmental Conservation General Permit for CAFO's and exposes non-regulated farms to challenges and opportunities to maximize production, while efficiently managing their natural resources and protecting the environment. A CNMP is required to be eligible for many state and federal cost-share programs.

CNMP's are developed according to NRCS technical standards and design criteria.

III. Duty to Amend / Update The CNMP

The CNMP is intended to be a live and dynamic document that is regularly updated. At a minimum, the document should be completely updated annually. All farms should update the management plan if/when the following conditions are met.

1. A change is proposed to the planned crop of crop rotations, or the introduction of a new crop.
2. A change/addition in nutrient source or soil test results.
3. Addition/Subtraction of land under the farms management.

If your farm is covered under a NYS Department of Environmental Conservation General Permit for CAFO's, the CNMP must be amended and notification sent to DEC if/when the following conditions are met.

1. Prior to any change in design, construction, operation or maintenance that has the potential to impact the discharge of pollutants from the operation to the *surface waters of the State*.

2. Prior to constructing or expanding a liquid or semisolid waste storage facility by greater than one million gallons.

3. Prior to expanding operations beyond the contingencies specified in the CNMP.

4. The CNMP Proves to be ineffective in preventing pollutants in discharges from the CAFO.

5. All other revisions to the CNMP, conducted in accordance with all applicable NRCS standards, are not considered major changes. However, they must be noted in the annual compliance report submittal as applicable.

IV. Farm Enterprise Summary

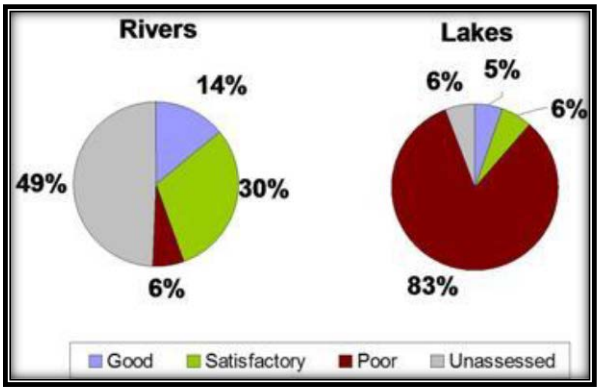
Luncrest Farm is a fourth-generation dairy ran by the Lundy family. The farm is now enrolled in the Dairy Acceleration Program, the state funded program will provide the farm a comprehensive nutrient management plan. The CNMP will allow the farm to pursue funding to make both farmstead and crop management improvements. The Lundy family is a well-known breeder of Holsteins and recently received recognition from the New York Holstein Association, winning the 2017 Active Master Breeder Award.

V. Watershed Evaluation

Watersheds/Sub-Watersheds that livestock production or land application areas are located.	
HUC #	Name
Primary	Lake Champlain
020200030507	Moses Kill
041504010104	Wood Creek-Lake Champlain Canal
020200030103	Black Creek

NY DEC Watershed Narrative:

Water quality in the Lake Champlain watershed is generally good to excellent. Lake Champlain itself is the dominant feature of the watershed and the most significant water quality issues are associated with the lake. These include fish consumption advisories and phosphorus loadings, primarily from nonpoint sources throughout the watershed. Atmospheric deposition of acid rain and mercury also impact water quality and are of concern.



Priority Waterbodies in close proximity to livestock production or land application areas.					
Name	Classified Use	Use Impairment	Severity	Pollutants of Concern	Source
Moses Kill and Tribs	No Known Impact				
Big Creek and Tribs	C(T)	Aquatic Life	Stressed	Nutrients, Silt	Agriculture
Black Creek and Tribs	No Known Impact				

VI. Cultural Resources and Threatened or Endangered Species

Cultural Resources are evidence of past human activity. These may include pioneer homes, buildings or old roads; structures with unique architecture; prehistoric village sites; historic or prehistoric artifacts or objects; rock inscription; human burial sites; earthworks, such as battlefield entrenchments, prehistoric canals, or mounds. These nonrenewable resources often yield unique information about past societies and environments, and provide answers for modern day social and conservation problems. Although many have been discovered and protected, there are numerous forgotten, undiscovered, or unprotected cultural resources in rural America.

Your Farm:
Cultural resource maps from the NYS Office of Parks, Recreation and Historic Preservation website, attached hereafter, have been examined for the presence of archaeologically sensitive features in and around your farming operation. No registered, eligible, archaeologically sensitive sites have been identified on your farm. No further NY State Historic Preservation Office (SHPO) review is required at this time.

VII. Ground Disturbing Practices / Dig Safely

The CNMP will oftentimes recommend best management practices that require digging and/or excavation to occur in or around your farm. State law requires you to place a location request with Dig Safely New York at least two (2) full working days, but no more than 10 working days, before beginning your project, to ensure all underground utility lines are properly marked by their owners. Working days are defined as weekdays (Monday through Friday), excluding holidays. You can place a location request by calling 811 or by using the online location request programs: i-notice and Single Address Ticket.

<u>Site Marking Color Codes</u>
Red = Electric
Yellow = Gas/Oil/Steam
Orange = Communications/CATV
Blue = Water
Green = Sewer
Pink = Survey Markings
White = Proposed Excavation

VIII. Livestock and Land Base Evaluation

Land Base	
Rented Acres	*160.7*
Owned Acres	*210.72*
Total Cropland Acres	*371.42*
Acres available for manure application	*359.47*

*See Cropland Report in this section of the CNMP for details

Animal Type	Maxium Amount	Average Wt.	Animal Units
Lactating #1	200	1450	290
Dry	28	1450	40.6
Heifer #1	100	800	80
Heifer #2	70	600	42
Calf #1	25	300	7.5
Total	423		460.1
Total Acres	359.47	AU/Acres	1.28

*See Waste Production Report in Section #3 of the CNMP for details

0 37.5 75 150 225 300 Feet

Champlain Valley AGRONOMICS

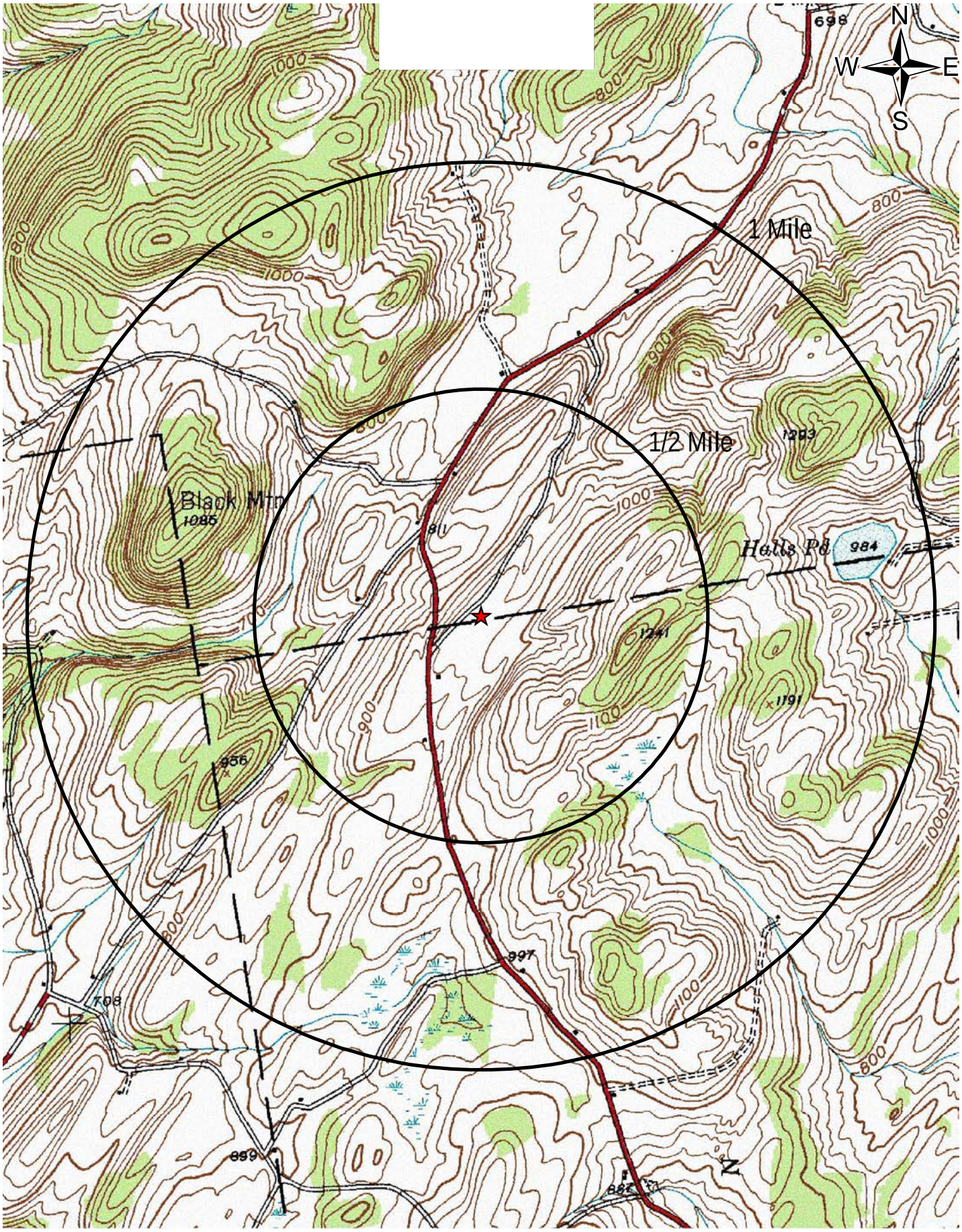
10 Train Road
Peru, NY 12972

Facility Overview

Drawn By: Champlain Valley Agronomics

Date: 7/10/2017

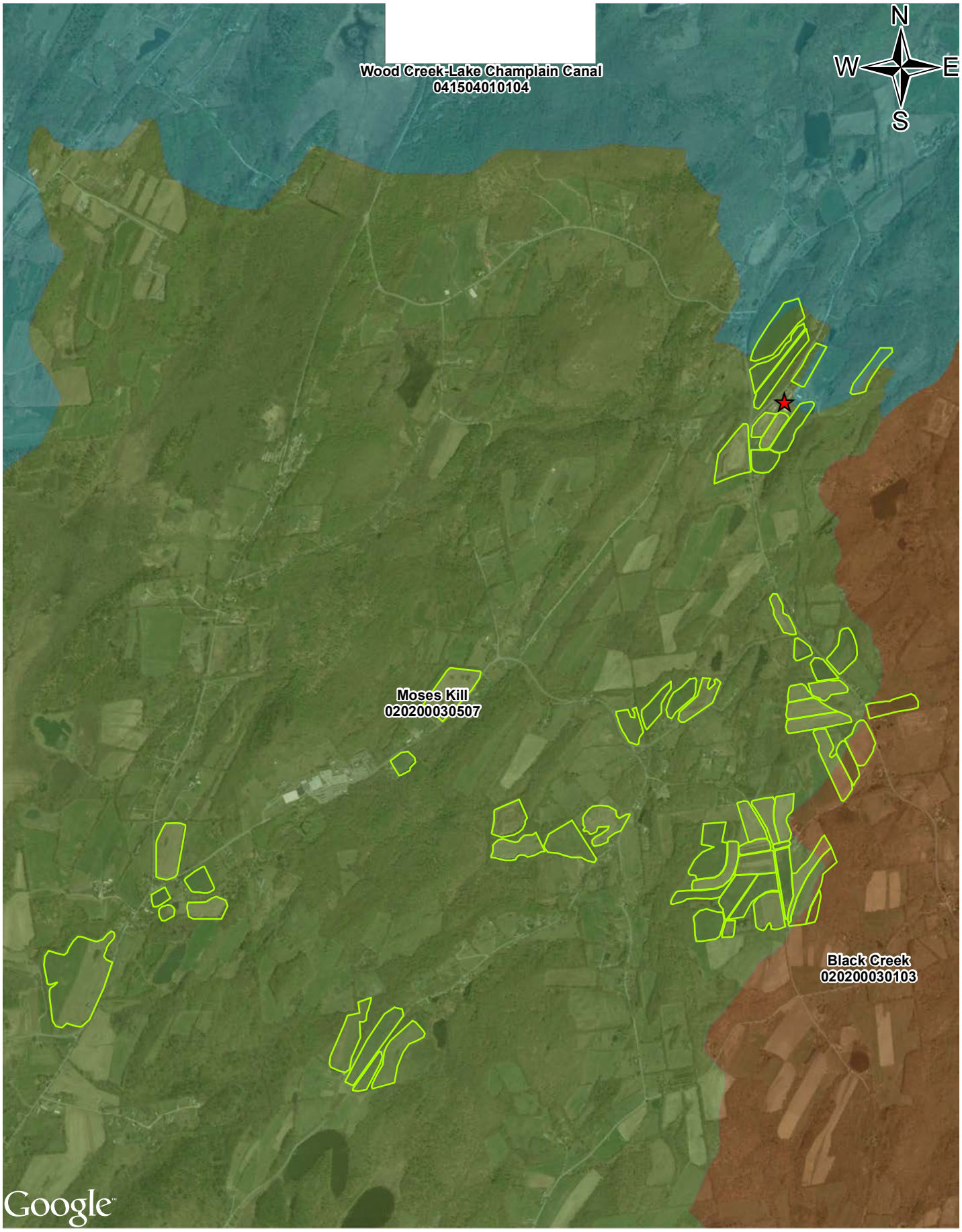
Purpose: Outline existing farmstead features and areas of interest.



Champlain Valley AGRONOMICS

0 750 1,500 3,000 4,500 6,000 Feet

Topo Map



Champlain Valley AGRONOMICS

0 1,125 2,250 4,500 6,750 9,000 Feet

HUC Map

Champlain Valley AGRONOMICS

0 1,150 2,300 4,600 6,900 9,200 Feet

Aquifer Map

Cropland Report 2021

Field	FSA Farm Number	FSA Tract Number	FSA Field / CLU Number	Field Group	Field Center Coordinates	Field Size (acres)
C #1						1.59
C #3						3.54
C #4						4.77
C #5						9.05
C #6						2.60
C #7						7.74
CH #1						5.94
CH #2						3.36
CH #3						7.40
CH #4						4.89
CH #5						4.12
CH #6						6.90
CN #4						2.17
CN #5						3.69
CN #6						4.72
CN #7						5.69
CN #8						4.78
CP #1						7.85
CS #1						5.44
CS #2						5.29
CS #3						8.47
CS #4						1.53

Cropland Report 2021

Field	FSA Farm Number	FSA Tract Number	FSA Field / CLU Number	Field Group	Field Center Coordinates	Field Size (acres)
CW #1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	6.59
CW #2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.74
CW #4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.54
CW #5	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.44
CW #6	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.53
CW #7	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.49
CW #8	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.33
CW #9	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.67
CW #10	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	9.83
CW #11	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4.45
E #1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.98
E #2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	18.45
E #3A	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.36
E #3B	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.94
E #4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.98
E #5	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4.92
E #6	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.54
E #7	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	9.09
E #8A	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4.01
E #8B	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4.30
GI #2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	8.09
GI #3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	6.36

Cropland Report 2021

Field	FSA Farm Number	FSA Tract Number	FSA Field / CLU Number	Field Group	Field Center Coordinates	Field Size (acres)
GI #4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	6.49
GS #1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	8.61
GS #4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	8.87
H #1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.39
H #2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.26
H #3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.50
H #4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.76
H #5	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.95
H #6	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4.37
H #7	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10.08
H #8	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.11
H #9	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	6.12
H #10	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	9.24
H #11	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	6.64
HK #1A	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	13.70
HK #1B	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	16.25
RT #1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.16
RT #2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5.05
RT #3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4.03
RT #4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.68
Fields=64						**371.42**

Washington County
Agricultural Environmental Management (AEM)
Program Team

AEM Tier 2 Summary Report

AEM Project

Farm Name			
Contact Name			
Address			
Phone			
Evaluator			**Phone:**
Date Prepared	6/30/16	**Date Delivered**	

Worksheet Name and Number	Level of Concern (1-4)	Items of Concern	Evaluation & Recommendations
1. Watershed Site Evaluation		Moses Kill	**Details Captured on Tier 2 Worksheet**
2. Manure and Fertillizer Storage	3	*No Manure Storage	*Farm daily spread manure and process wastewater despite adverse weather conditions.
3. Process Wash Water	4	*Uncertified Storage *MHWW discharge	*Washdown water is sent to an undersized uncertified storage facility. *MHWW is discharged to existing crop produciton field.
4. Farmstead Water Supply	3	*Farm Well	*Farms well in close proximity to barnyard runoff that ponds around the Holding Area and Milk House.
5. Barnyard Heavy Use Area	4	*Main Barnyard	*The uncovered main barnyard has no means of collecting or excluding clean water runoff that comes in contact with the HUA.

Worksheet Name and Number	Level of Concern (1-4)	Items of Concern	Evaluation & Recommendations
6. Silage Storage	3	*Horizontal Storage Bunks	*No leachate collection system exists for the Feed Storage Bunks. *Adjacent cropfields show excessive levels of Phosphorus at 143 pounds per acre.
7. Pasture Management	2	*Pastures	*Pastures are adequately sized for current animal numbers. *Animals may have drinking access to pond located in existing pasture system.
8. Waste Disposal	1	*Mortality Staging Area	*Mortalities handled by local rendering service.
9. Waterborne Pathogens	2	*Calf Hutches	*No formal collection system exists for stormwater that comes in contact with the Calf Hutches area. *Runoff flows untreated into adjacent cropland and pasture.

Archeo Sensitive Areas

Legend

Background Maps (Scanned Quads)

Archeo Sensitive Area

State/National Register

Federal Eligibility

National Register Listed

State Register Listed (only)

Listing in Progress

State Parks

County Boundaries

Champlain Valley AGRONOMICS

Disclaimer: This map was prepared by the New York State Parks, Recreation and Historic Preservation National Register Listing Internet Application. The information was compiled using the most current data available. It is deemed accurate, but is not guaranteed.

Environmental Resource Mapper

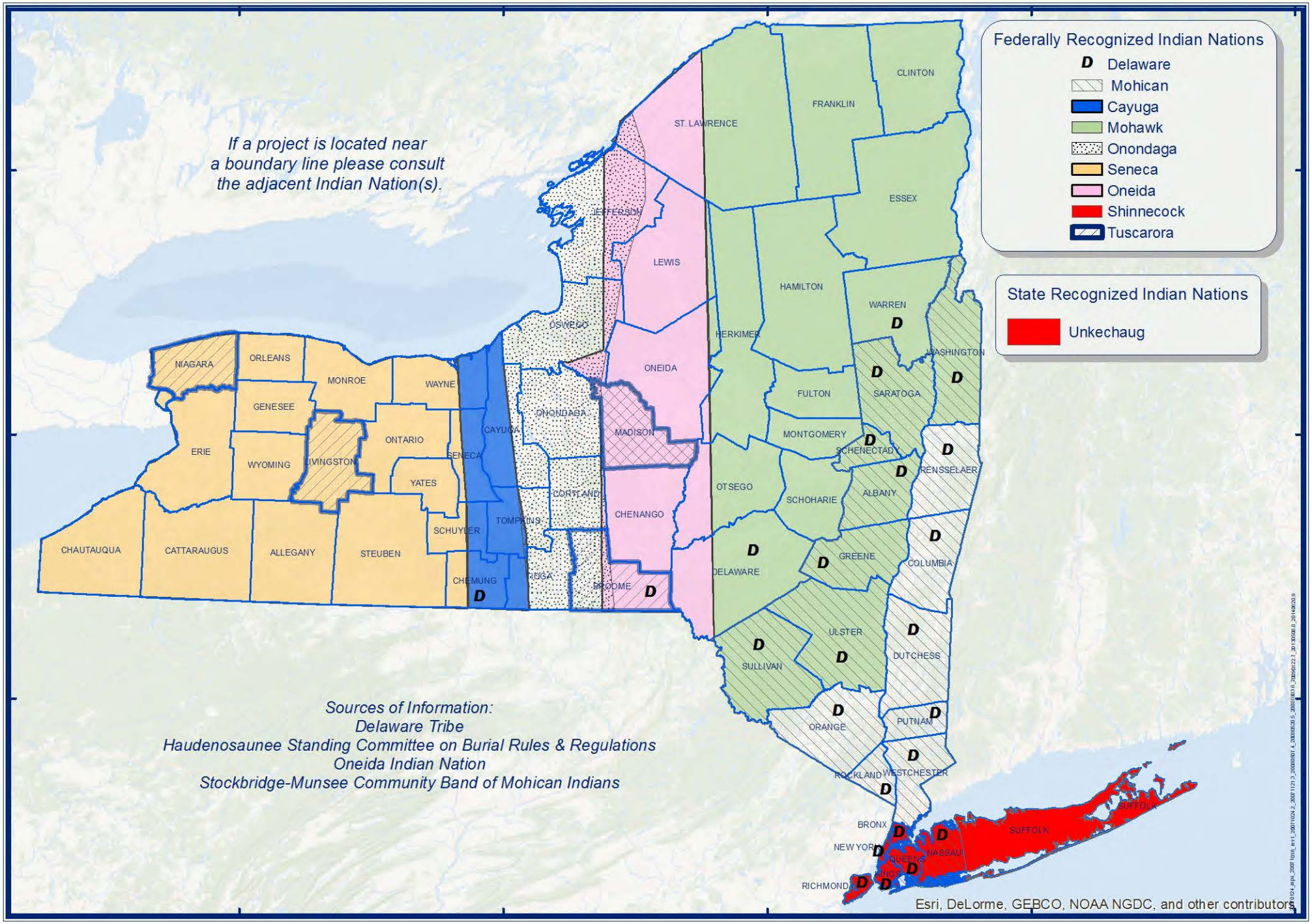
Champlain Valley AGRONOMICS

Disclaimer: This map was prepared by the New York State Department of Environmental Conservation using the most current data available. It is deemed accurate but is not guaranteed. NYS DEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data.

Indian Nation Areas of Interest

For Tribal Consultation Purposes ONLY

August 2015



1:2,800,000
1 in = 44 miles

Prepared by the New York State Historic Preservation Office in Consultation with the Indian Nations of New York State

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation and Historic Preservation

The Five Steps To A Safe Excavation

1) Call Before You Dig.

If you plan to dig or do any type of excavation work, New York State law requires you call Dig Safely New York Prior to doing so. Stake Out Request=1-800-962-7962 Administration=315-437-7394

2) Wait the Required Time:

You need to provide two full working days notice prior to starting your work, not counting the day of your call, weekends or holidays. This provides time for the utilities to locate your proposed dig site.

3) Confirm Utility Response

Dig Safely New York will notify all member utilities of the pending excavation so that that they can come out and mark the location of their underground lines. Before digging on your stated commencement date confirm that all utilities have responded to you indicating they have marked your property or they have no facilities present.

4) Respect the Marks

Before you begin your excavation, walk through the site to familiarize yourself with the markings and the locations of buried facilities.

5) Dig With Care.

It is important excavators take a proactive approach to safety not only for themselves but for the public by initiating the One Call Process and adhering to the five steps of a safe excavation.

Red	Electric
Yellow	Gas / Oil / Steam
Orange	Communications / CATV
Blue	Water
Green	Sewer
Pink	Survey Markings
White	**Proposed Excavation**

Champlain Valley AGRONOMICS

Best Management Practice Summary

Planned Practices: Waste Storage and Transfer						
BMP Id	Location	NRCS Id	Units	Risk Level (1-4)	Comments	Implementation
1.1	Evaporation Pond	Waste Facility Closure (360)	1	4	Land apply contents of evaporation pond. Then conduct closure of the uncertified structure.	12/31/2021
1.2	Home Farm	Waste Storage Facility (313)	± 409,536 ft^3	3	Installation of 180' x 16' (± 2,952,313 gals) concrete waste storage facility.	12/31/2021
1.3	Home Farm	Waste Transfer (360)	1	1	Installation of Flume system to service existing and proposed structures.	12/31/2021
1.4	Home Farm	Waste Separation Facility (632)	1	1	Installation of bedding separation system (sand lanes), to remove bedding prior to being sent to manure storage.	12/31/2021
Planned Practices: Barnyard Management						
2.1	Concrete Barnyard	Access Control (472)	+/- 3,552 ft^2	4	Permanently exclude livestock from portions of the barnyard and lean-to.	12/31/2021
Planned Practices: Feed Storage						
3.1	Feed Bunk	Heavy Use Area Protection (561)	+/- 45,000 ft^2	4	Installation of impervious base layer to serve as new feed storage location. Use of existing location will discontinue.	12/31/2021
3.2	Feed Bunk	Vegetative Treatment Area (635)	+/- 15,000 ft^2	4	Installation of +/- 50' x 300' vegetative treatment area to receive diluted high flow effluent from feed storage area.	12/31/2021
3.3	Feed Bunk	Waste Separation Facility (632)	1.	4	Installation of low flow effluent collection and separation facility.	12/31/2021
Planned Practices: MHWW/Process Waste Water						
4.1	Home Pastures	Fence (382)	+/- 333 ft.	2	Installation of fence to ensure animals do not have physical access to pond.	12/31/2021
4.2	Home Pastures	Watering Facility (614)	2-3	1	Installation of 2-3 watering facilities in existing pasture system to draw water from pond.	12/31/2021

Champlain Valley AGRONOMICS

Luncrest Farm
Best Management Practice Summary

Planned Practices: Pasture Management						
BMP Id	Location	NRCS Id	Units	Risk Level (1-4)	Comments	Implementation
5.1	Home Farm	Animal Mortality Facility (316)	1	1	If rendering services are not available begin composting mortalities according to NRCs standards.	12/31/2021
Planned Practices: Nutrient Management						
6.1	Cropland	Nutirent Management (590)	353.33 ac	1	Adhere to nutrient management plan requirements found in Section 3	Annual
6.2	Cropland	Conservation Crop Rotation (328)	353.33 ac	1	Adhere to planned crop rotations found in Section 4	Annual
6.3*	Cropland	Cover Crop (340)	329.71 ac	2	Cover crops are recommended on all highly erodible crop production fields.	Annual

** Denotes enhancement practice not required for CAFO compliance at this time.*

Operation and Maintenance Procedures

Proposed EWSF

1. Check backfill areas around facilities often for excessive settlement. Determine if settlement is caused by consolidation, piping or failure of the structure walls or floor. Necessary repairs must be made. Refer to safety items.
2. Check earth berms and embankments for sloughing, erosion or settlement. Maintain embankment and backfill elevations as specified in the design. Check a minimum of two times a year and when the facility is empty. Maintain design elevation of berms and earthfill. Refer to safety items.
3. Outlets of foundation drains should be checked frequently and kept open. The outflow from these drains should be checked periodically when the storage facility is being used to determine if there is leakage from the facility into these drains. Leakage may be detected by the color and smell of the outflowing liquid, by lush dark green growth of vegetation around the outlet, by the growth of algae in the surface ditch or by the vegetation being killed by the outflowing liquid. If leakage is detected, repairs should be planned and made to prevent the possible contamination of groundwater. Refer to safety items when planning and making repairs.
4. Install and maintain fences around the facility in order to exclude unauthorized entry by people or livestock. Fencing must meet NRCS fencing standards. The fence shall be inspected a minimum of once per month.
5. Divert surface water away from the storage facility. Check the channels and berms of the clean water diversions around the barnyard, buildings and storage facility frequently. Channels must be protected from erosion and berms must be maintained at proper height so the diversion channels have adequate capacity. These channels and berms should not be used as haul roads unless they were designed and constructed as haul roads.
6. Check frequently for burrowing animals around buildings, structures, berms and backfill. Remove them and repair any damage.
7. Inspect haul roads and approaches to and from the storage facility frequently to determine the need for stone, gravel or other stabilizing material.
8. Do not allow runoff from loading areas and/or spills to flow into streams or road ditches.
9. Inspect and repair/replace, as needed, all warning and hazard signs. Signs shall be installed at a minimum of every 150' on the fence.
10. Install and maintain a marking or gauge post that clearly shows the design one-half and full levels of the facility. A mark designating the 16" reserved for freeboard must be visible.
11. Maintain all pumps, agitators, piping, valves and all other electrical and mechanical equipment in good operating condition as per manufacturer's specifications. Immediately remove foreign debris that could damage pumps and agitators. Maintain grounding rods for all electrical equipment.
12. A good vegetative cover of recommended grasses should be maintained on earth berms and embankments. If the vegetative cover is damaged, it should be reseeded as soon as possible. The vegetative cover should be mowed at least twice a year to control weeds and encourage vigorous growth.

Operation and Maintenance Guidelines

Proposed Stacking Facility

The proposed storage facility will store up to 4876 cubic feet of solid manure and bedding. Typically, periodic scraping of manure is required to move the material into the storage facility. Bedding, or similar material, may need to be added to the manure for it to stack to the design height of 8 feet.

To allow time for land applying the material, consider the following. This structure is sized for 6 months storage. If the facility was emptied and land applied using a 320-cu. ft. spreader, it would take approximately 15.2 loads. Assuming 1 load per hour, a total of 15.2 hours may be required.

The following items shall be visually inspected according to the timelines provided for each. Any deficiencies must be repaired as soon as possible.

- Inspect exterior concrete walls weekly for cracks, fissures or signs of degradation.
- When empty inspect interior floors and walls for cracks, fissures or signs of degradation. They should be conducted at a minimum of twice per calendar year.
- Inspect roof/cover weekly or following precipitation events greater than 1 inch for signs of leaks.

Nutrients must not be mechanically surface applied if a high probability of offsite nutrient loss is identified. Except as specifically defined hereafter, this precludes spreading when the following field conditions are present:

- Frozen and/or snow-covered soils or
- When soils are saturated from rainfall or snow melt, as indicated by visible water on the soil surface with the potential to runoff (isolated areas of saturation not prone to runoff must be avoided, but do not prohibit spreading on a given field).

If nutrient applications are made according to the criteria and conservations measures in one or more of the scenarios in this section to safeguard against offsite delivery, then such applications may be made to frozen and/or snow covered soil. (For the purpose of this operation and maintenance plan, only the mechanical application scenario is provided). In instances where mechanical surface applications of manure, litter or process wastewater to frozen and/or snow-covered soils are necessary, the applications will:

- be in accordance with the Cornell University Nutrient Guidelines, NY P Index, NY NLI and RUSLE2;
- be based on a check of the 48 hour weather forecast to assess if rainfall and/or temperatures are predicted to cause snowmelt and/or runoff conditions;
- not be applied to soils designated by the soil survey as frequently flooded;
- be in accordance with Section 1 (“Limestone areas”) in “ Manure and Groundwater: the Case for Protective Measures and Supporting Guidelines” for fields with soils less than 40 inches deep over carbonate bedrock;
- not be within a 100-foot flow path distance from surface waters, surface inlets, springs, sinkholes, and swallets;

- not be within 100 feet of wells; and
- not be applied in concentrated flow areas (i.e., well-defined channels within fields).

Section #2 Field Maps

Waste Application Setback Compliance Alternatives

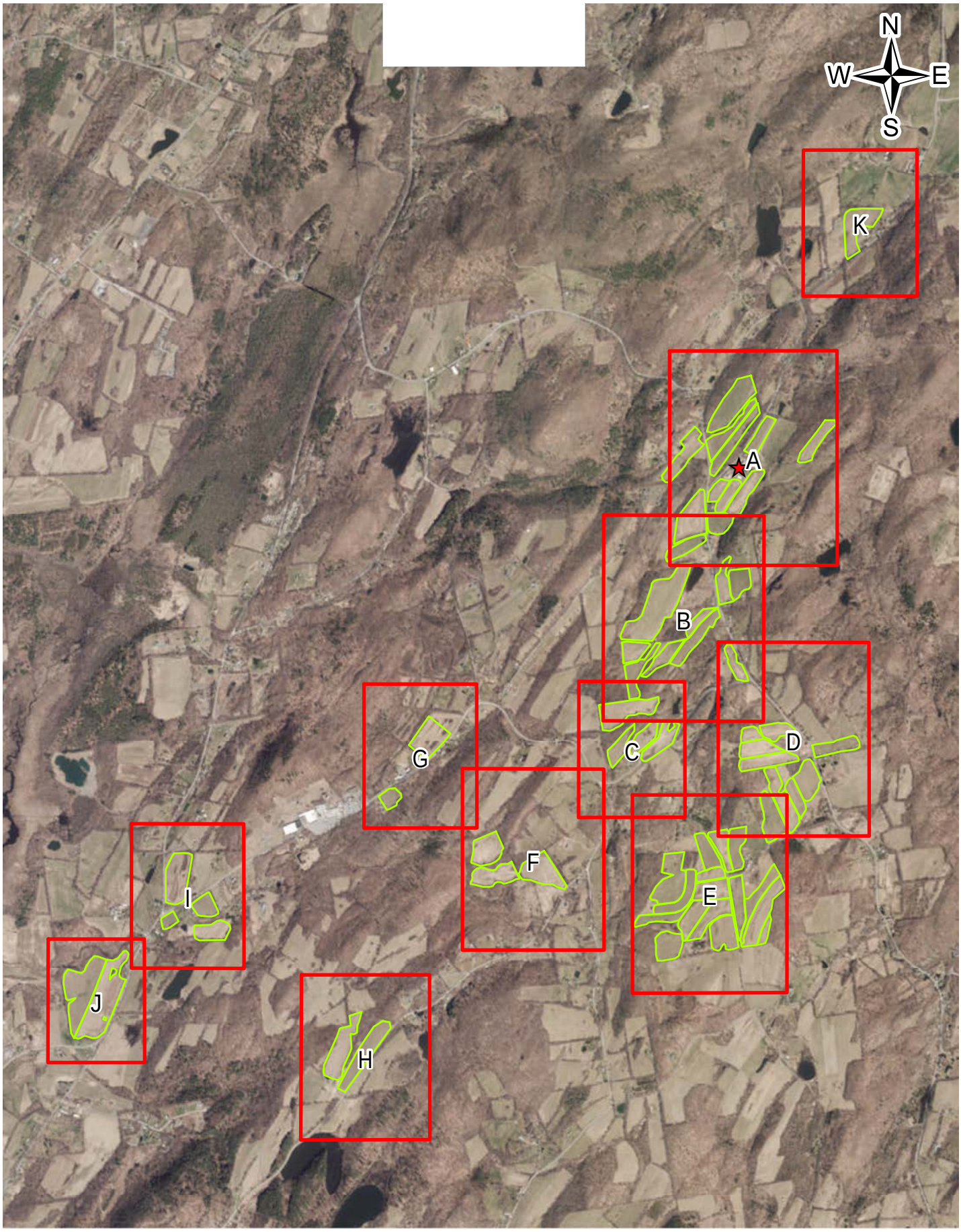
ECL Permit Setback Requirement: Manure, litter, or process wastewater may not be applied closer than 100 feet from: (1) the top of the bank of any down-gradient surface waters of New York State as defined below, including both Perennial and Intermittent streams, (2) to a New York State Regulatory Freshwater Wetland with a surface connection to the field, or (3) to an open tile line intake structure, sinkhole, wellhead, or other down-gradient conduits to surface or ground waters.

a. *Vegetated buffer. As a compliance alternative, the CAFO may substitute the 100 foot-setback described above with a 35-foot wide vegetated buffer to down-gradient waters as described in Part VI.D.(1), (2), and (3) above.*

b. Alternative practice. As a compliance alternative, the CAFO may substitute the 100 foot- setback described above with a 15-foot wide setback to down-gradient waters as described in Part VI.D. (1), (2), and (3) above when manure, litter or process wastewater is applied under the conservation practice of incorporation within 24 hours of the application as documented in the CNMP.

Waters or Waters of the State means lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial limits of the State of New York and all other bodies of surface or underground water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the State or within its jurisdiction. Storm sewers or conveyances, e.g. ditches, are not waters of the State unless they are mapped in NYCRR Parts 800 to 941 or continuously flowing. Nonetheless, an overflow to the conveyance shall be regulated as a discharge at the point where the conveyance discharges to waters of the State.

Champlain Valley AGRONOMICS



Champlain Valley AGRONOMICS

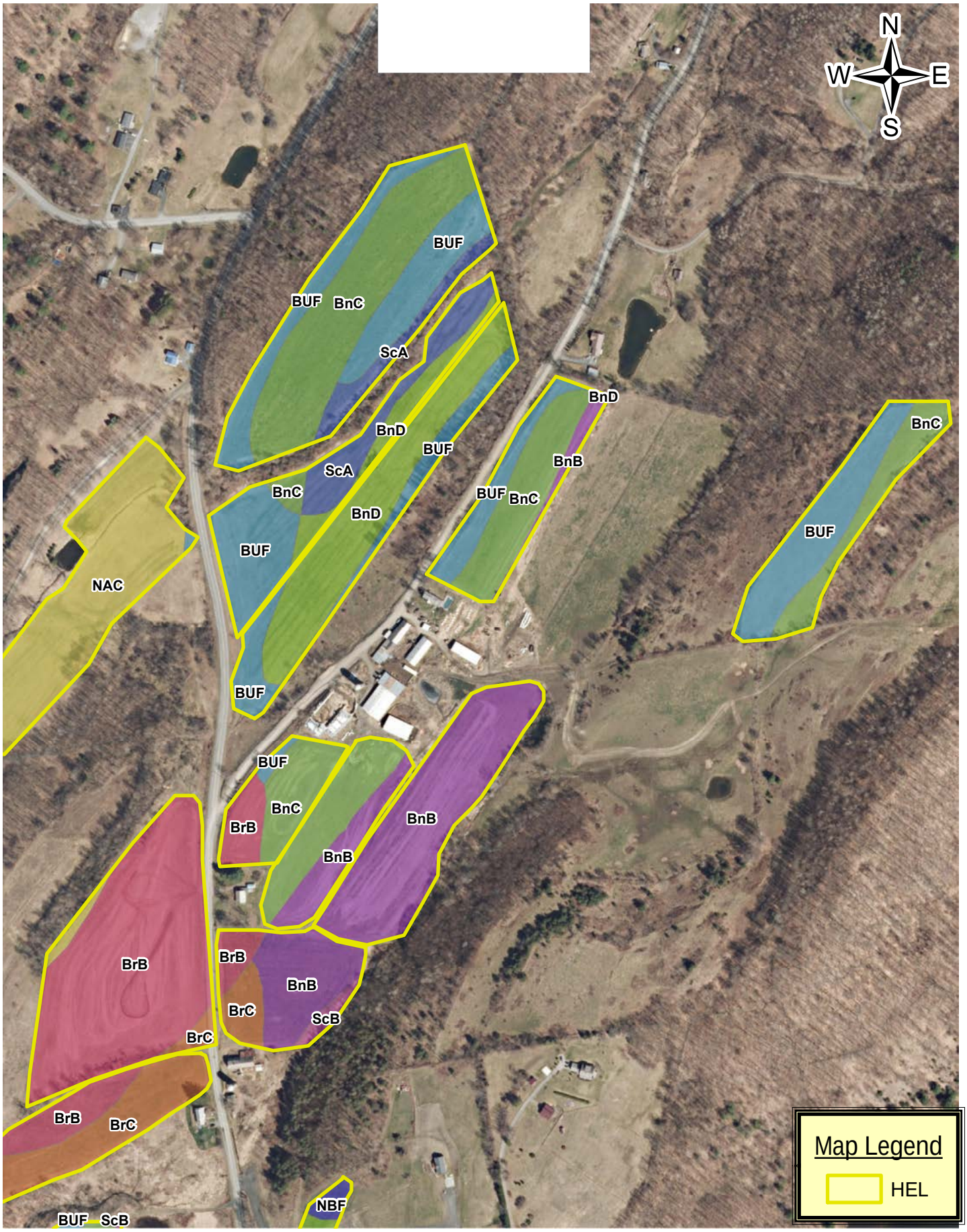
0 1,000 2,000 4,000 6,000 8,000 Feet

Map Key

Champlain Valley AGRONOMICS

0 175 350 700 1,050 1,400 Feet

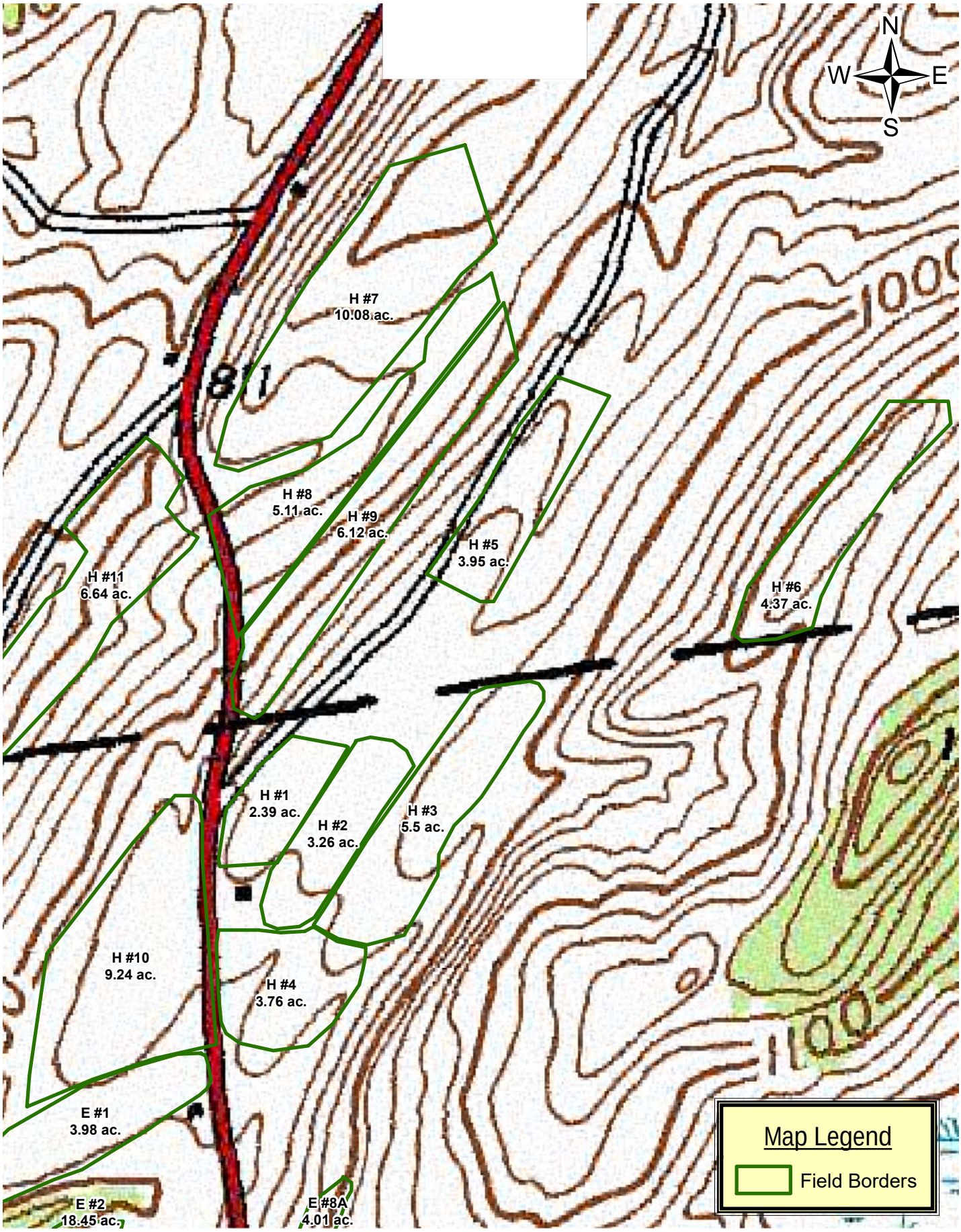
Plan Map: A



Champlain Valley AGRONOMICS

0 175 350 700 1,050 1,400 Feet

Soil Map: A



Champlain Valley AGRONOMICS

0 175 350 700 1,050 1,400 Feet

Topo Map: A

Champlain Valley AGRONOMICS

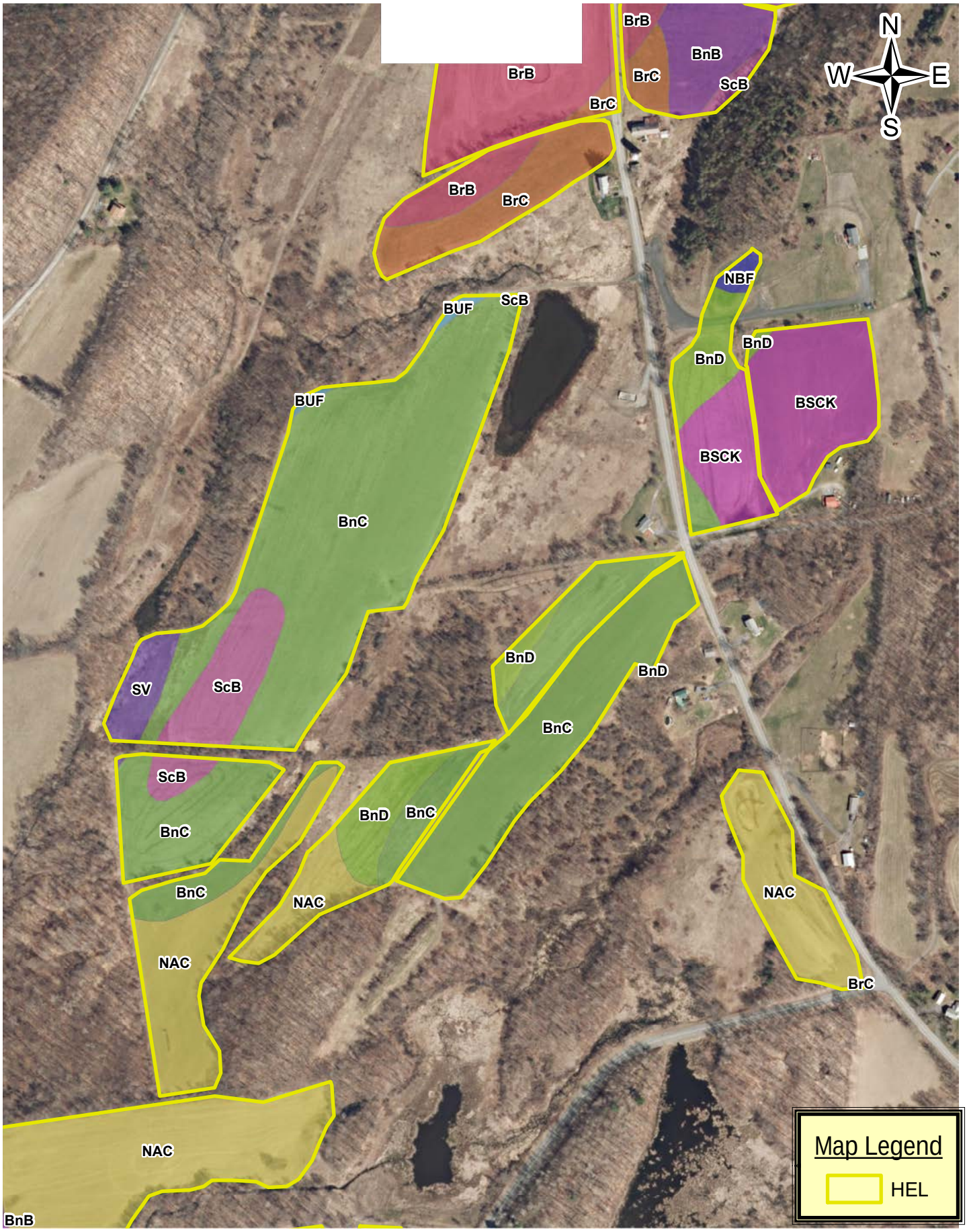
0 175 350 700 1,050 1,400 Feet

HSA Map: A

Champlain Valley AGRONOMICS

0 170 340 680 1,020 1,360 Feet

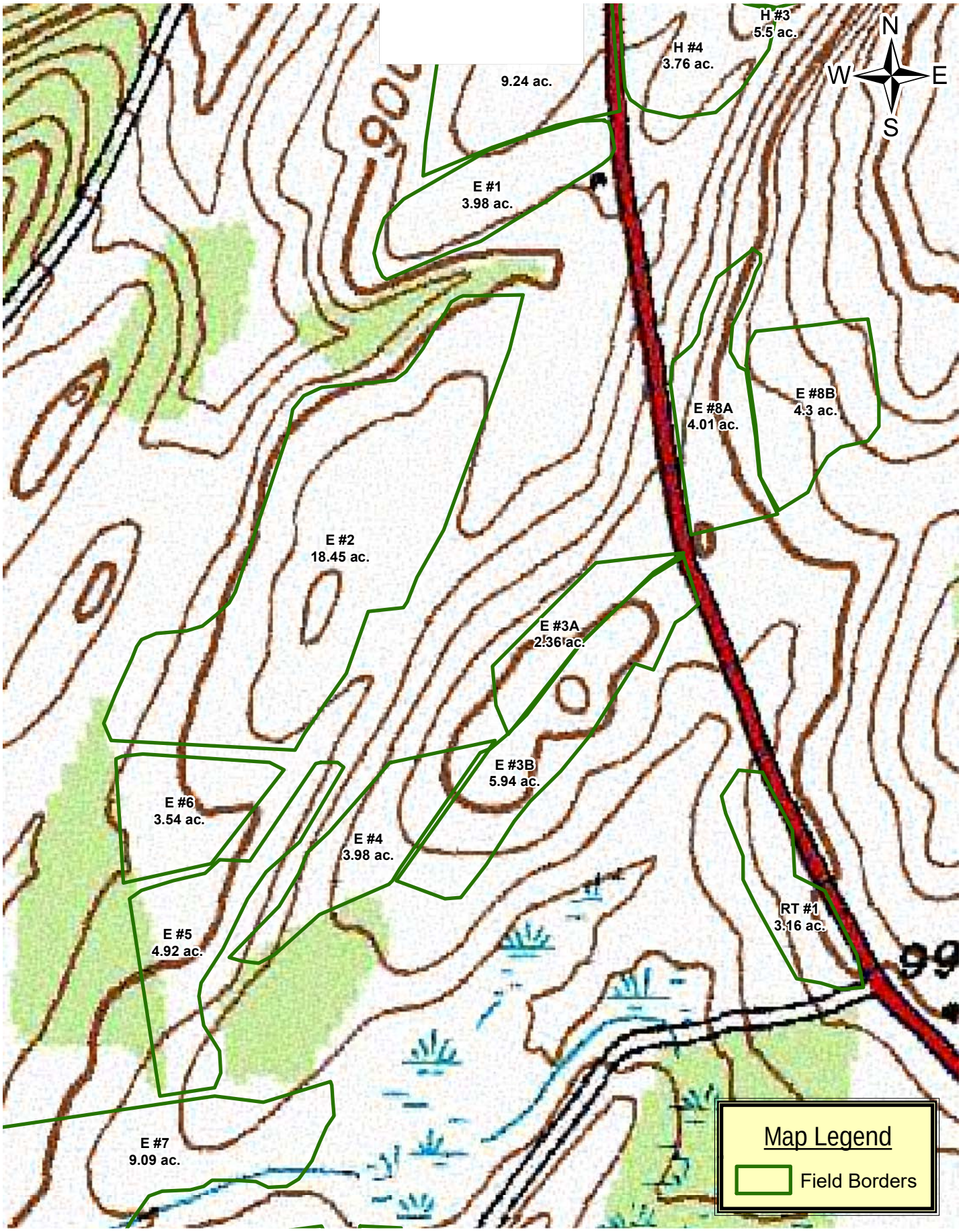
Plan Map: B



Champlain Valley AGRONOMICS

0 170 340 680 1,020 1,360 Feet

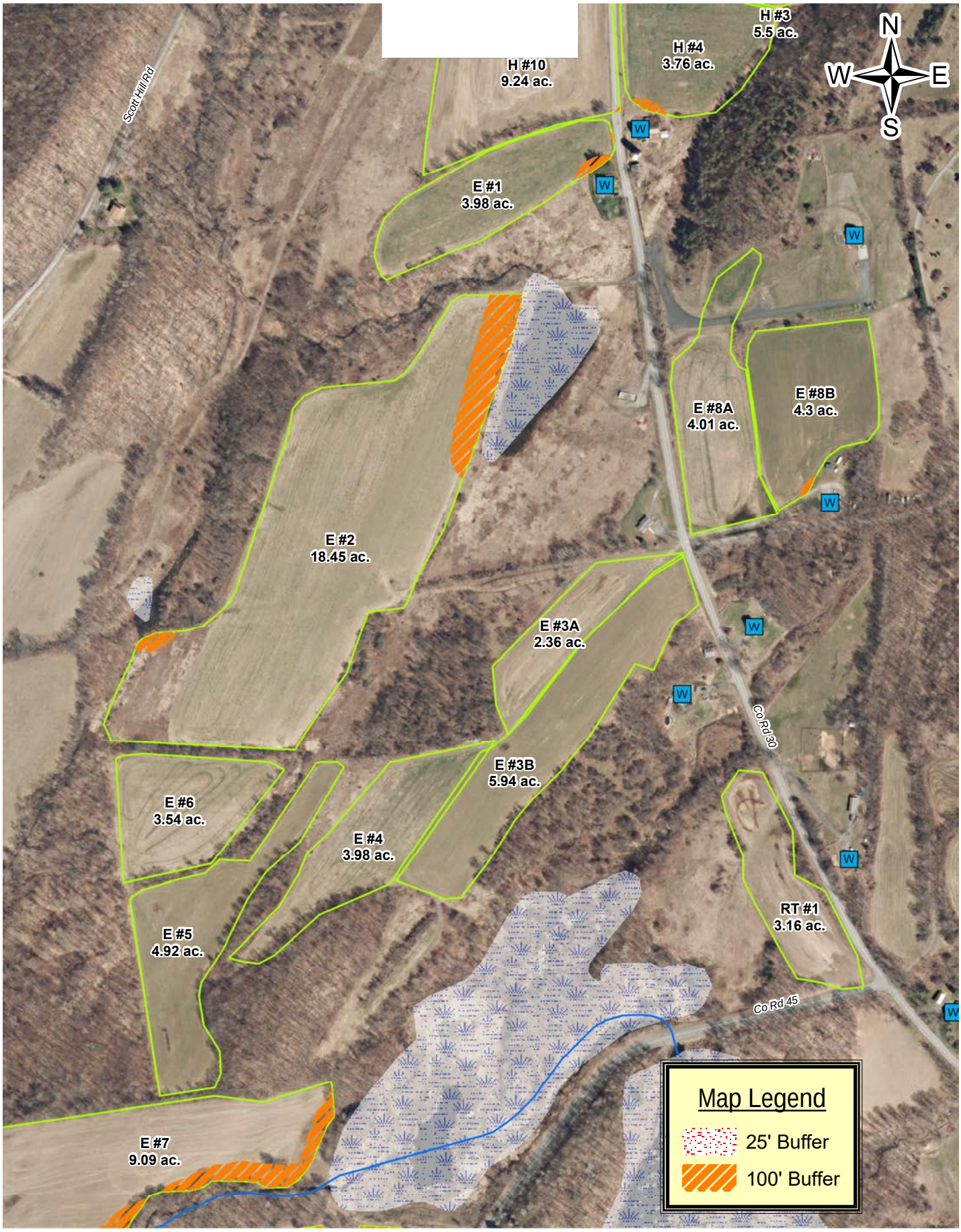
Soil Map: B



Champlain Valley AGRONOMICS

0 170 340 680 1,020 1,360 Feet

Topo Map: B



Champlain Valley AGRONOMICS

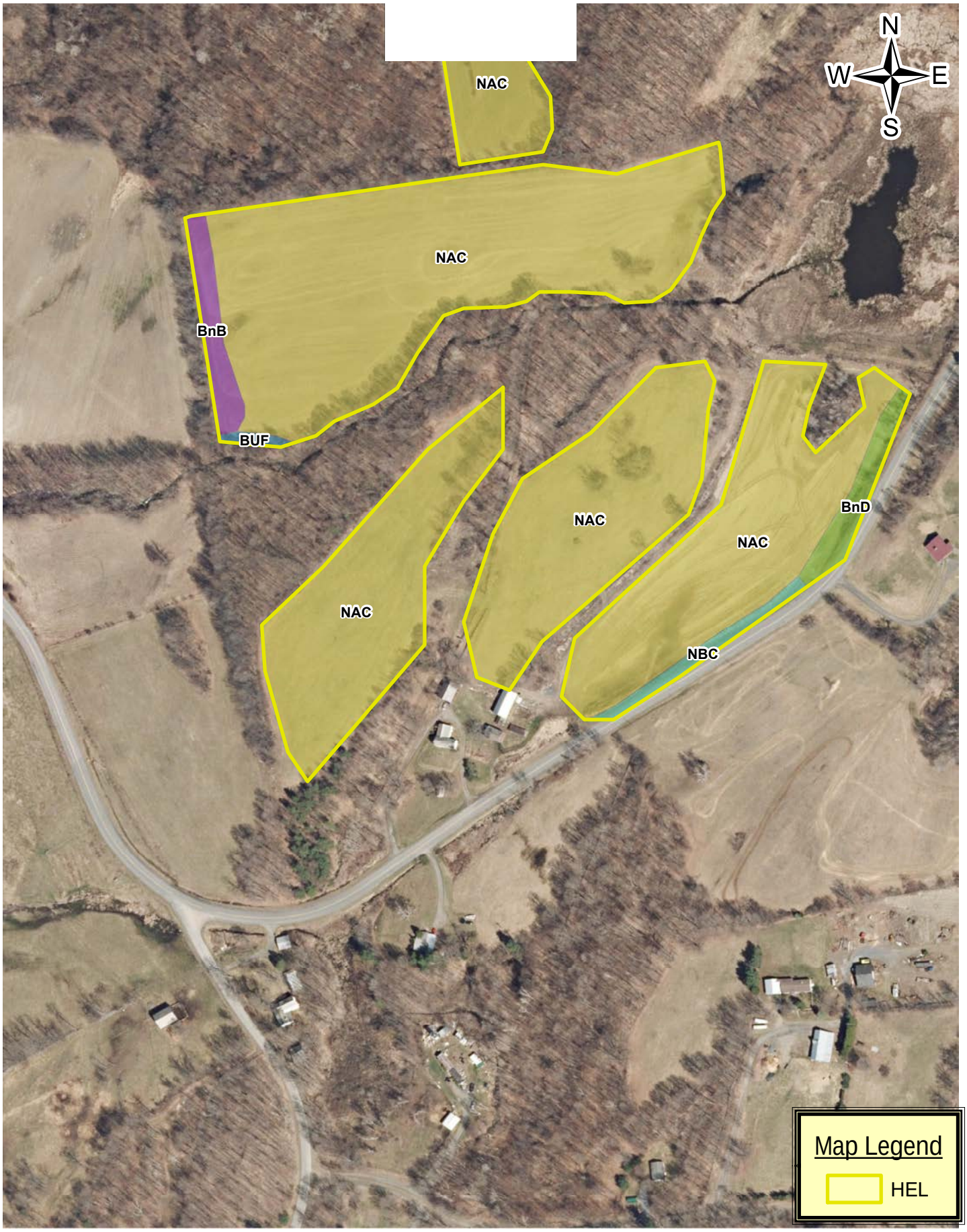
0 170 340 680 1,020 1,360 Feet

HSA Map: B

Champlain Valley AGRONOMICS

0 110 220 440 660 880 Feet

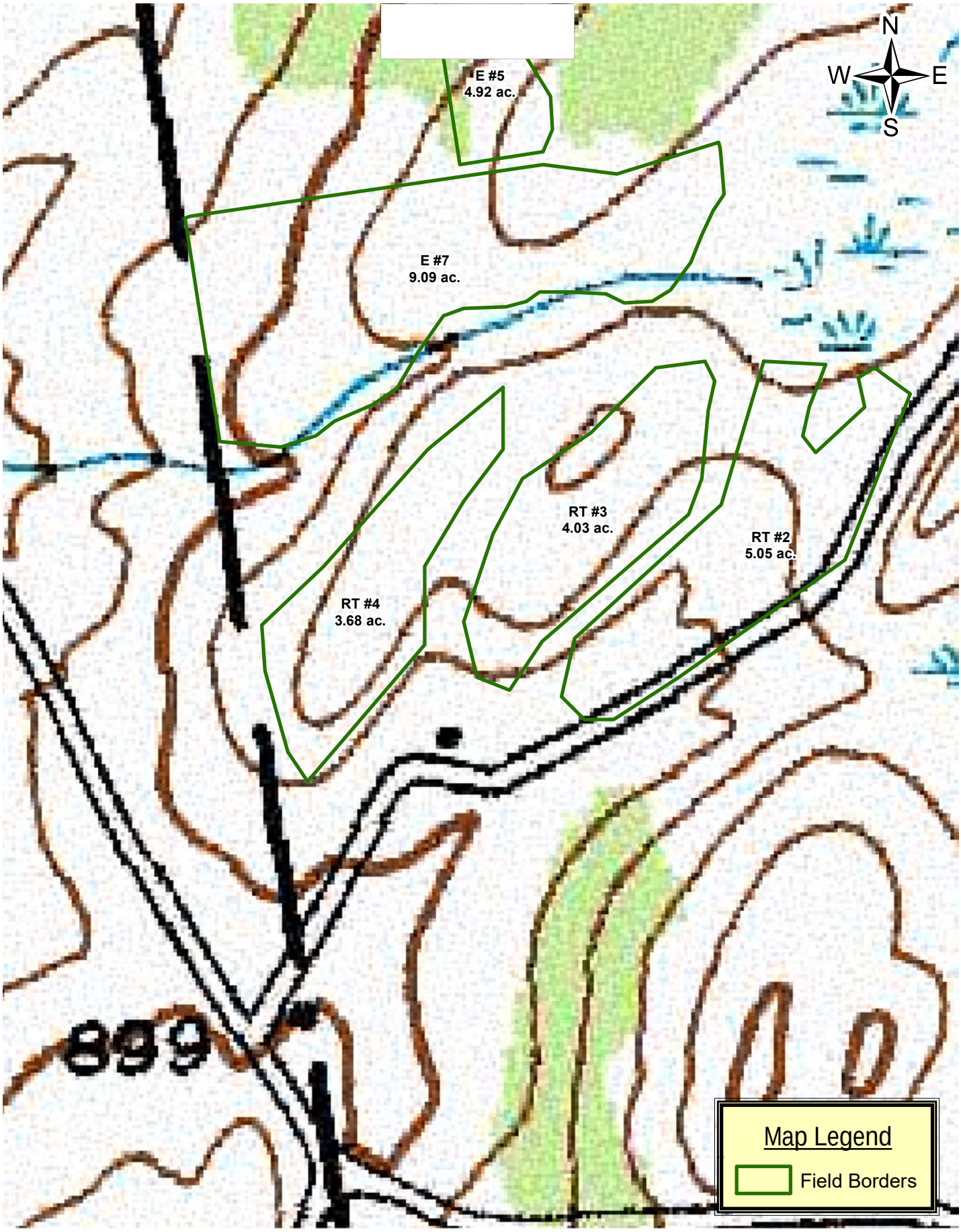
Plan Map: C



Champlain Valley AGRONOMICS

0 110 220 440 660 880 Feet

Soil Map: C



Champlain Valley AGRONOMICS

0 110 220 440 660 880 Feet

Topo Map: C

Champlain Valley AGRONOMICS

0 110 220 440 660 880 Feet

HSA Map: C

Champlain Valley AGRONOMICS

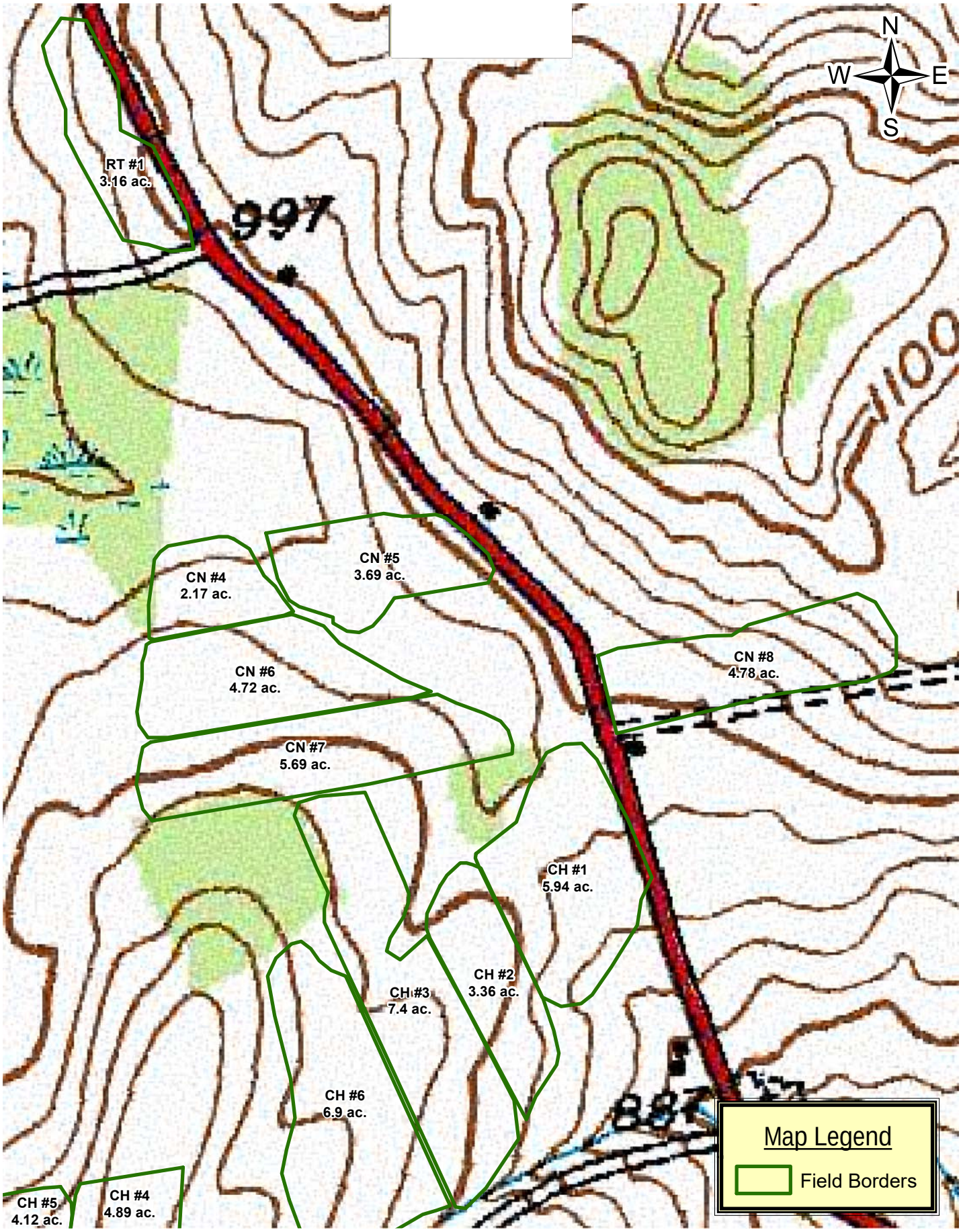
0 160 320 640 960 1,280 Feet

Plan Map: D

Champlain Valley AGRONOMICS

0 160 320 640 960 1,280 Feet

Soil Map: D



Champlain Valley AGRONOMICS

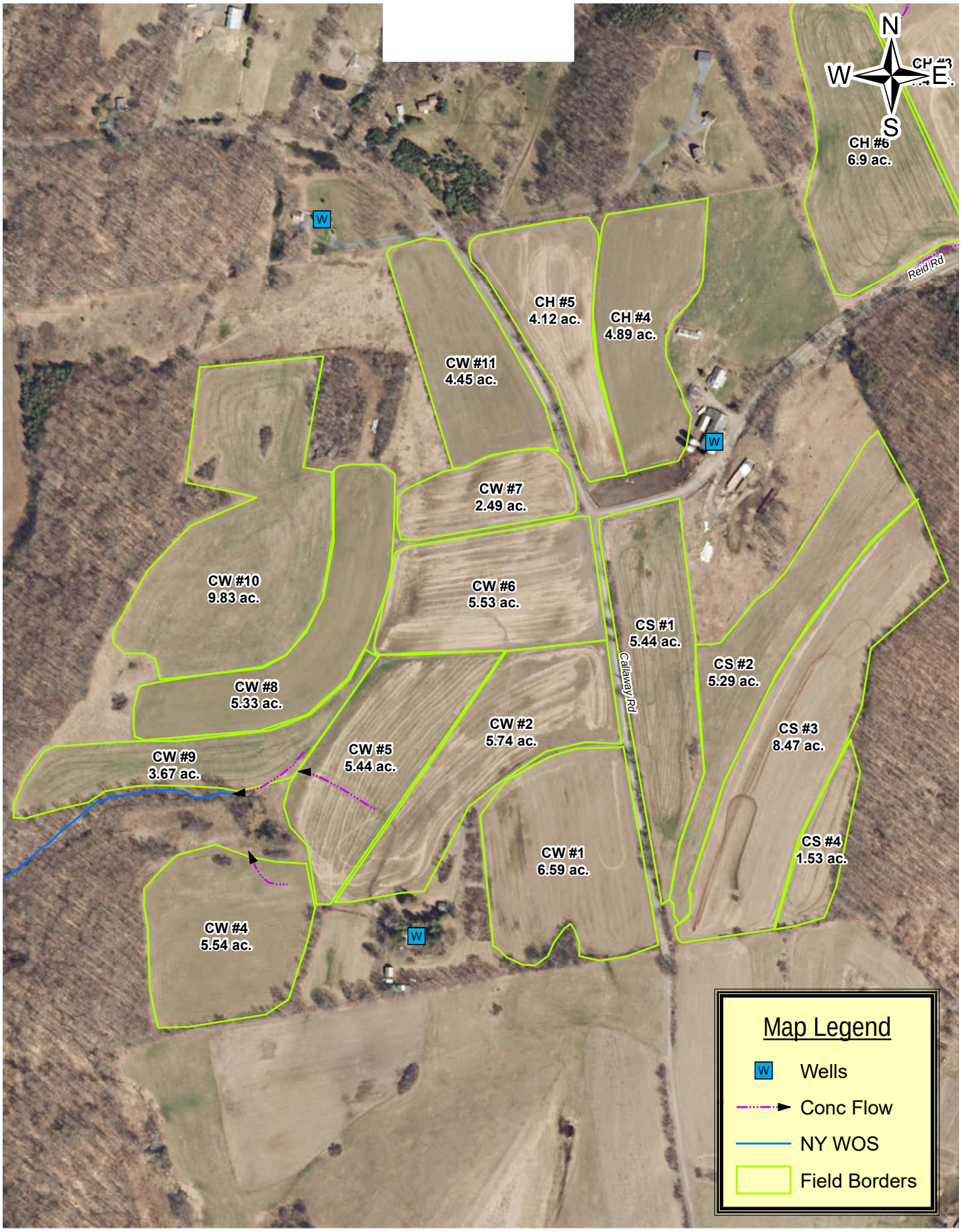
0 160 320 640 960 1,280 Feet

Topo Map: D

Champlain Valley AGRONOMICS

0 160 320 640 960 1,280 Feet

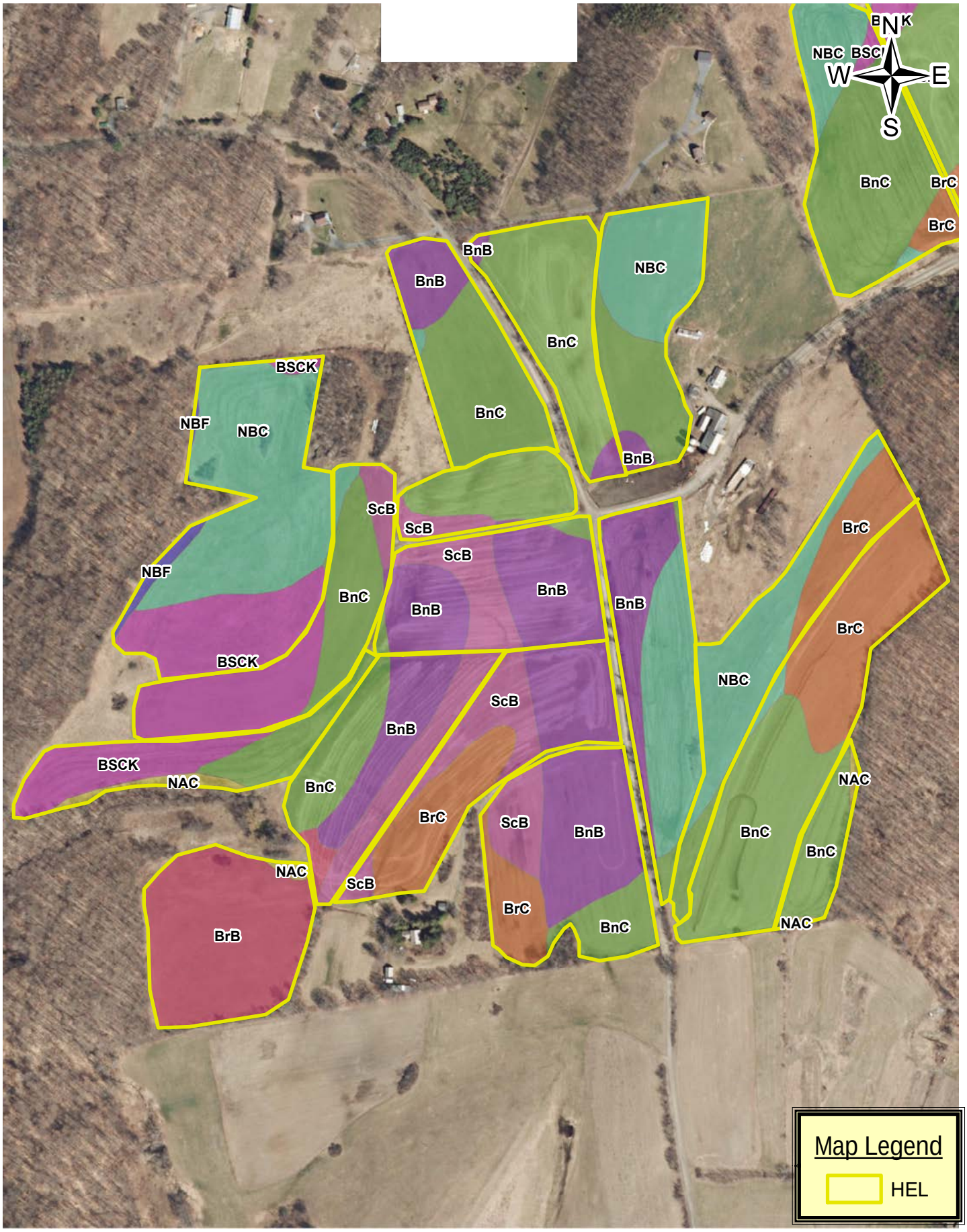
HSA Map: D



Champlain Valley AGRONOMICS

0 162.5 325 650 975 1,300 Feet

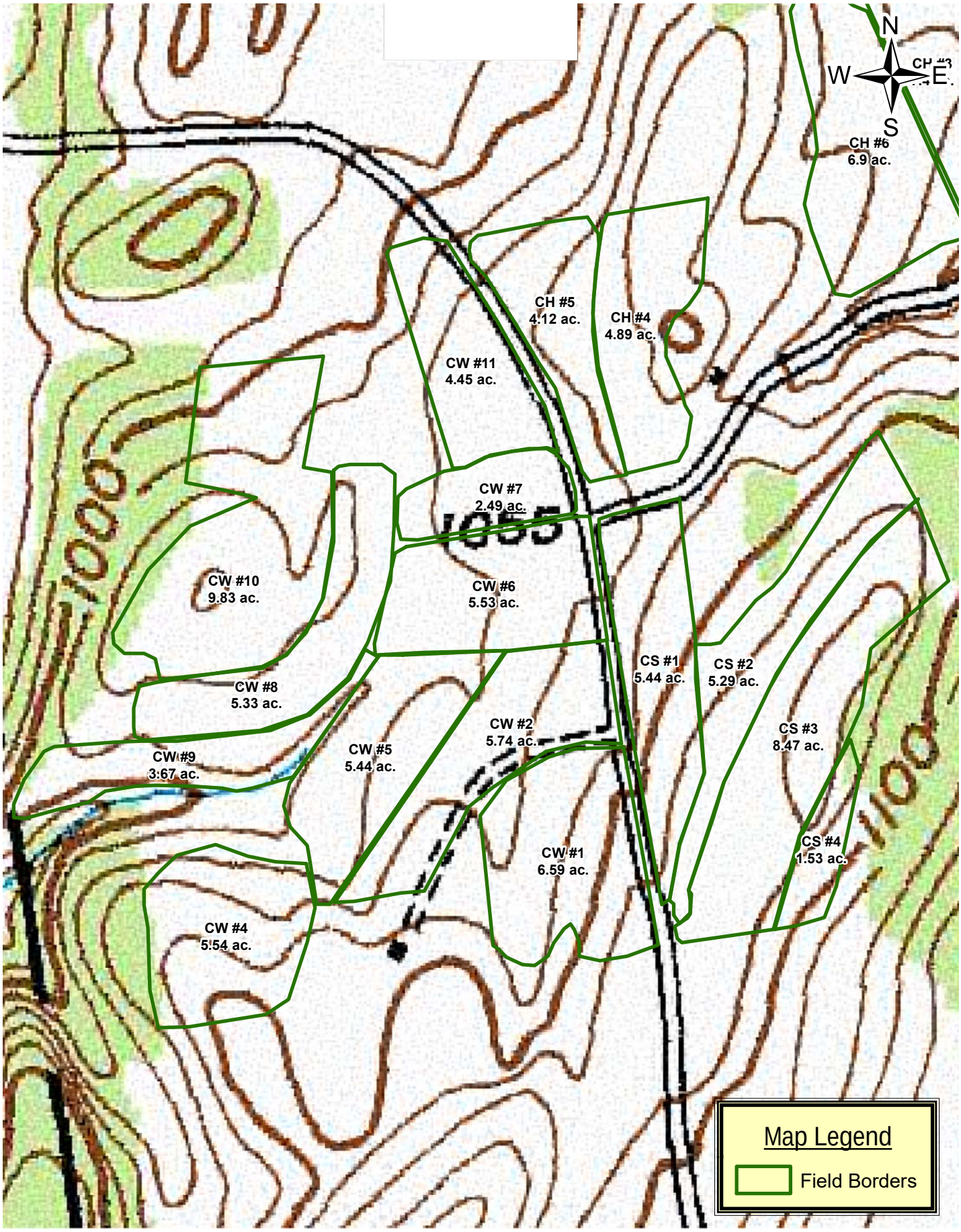
Plan Map: E



Champlain Valley AGRONOMICS

0 162.5 325 650 975 1,300 Feet

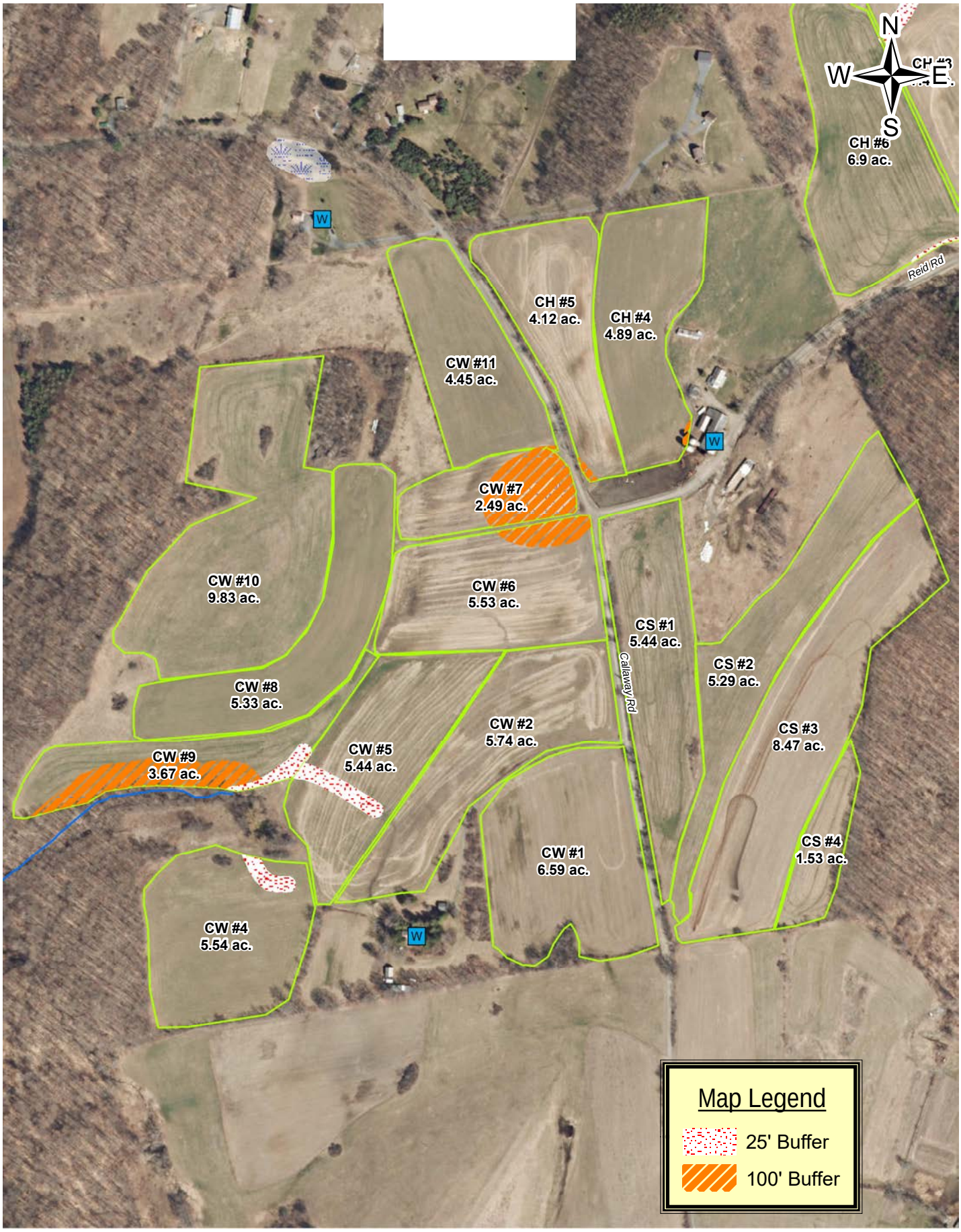
Soil Map: E



Champlain Valley AGRONOMICS

0 162.5 325 650 975 1,300 Feet

Topo Map: E



Champlain Valley AGRONOMICS

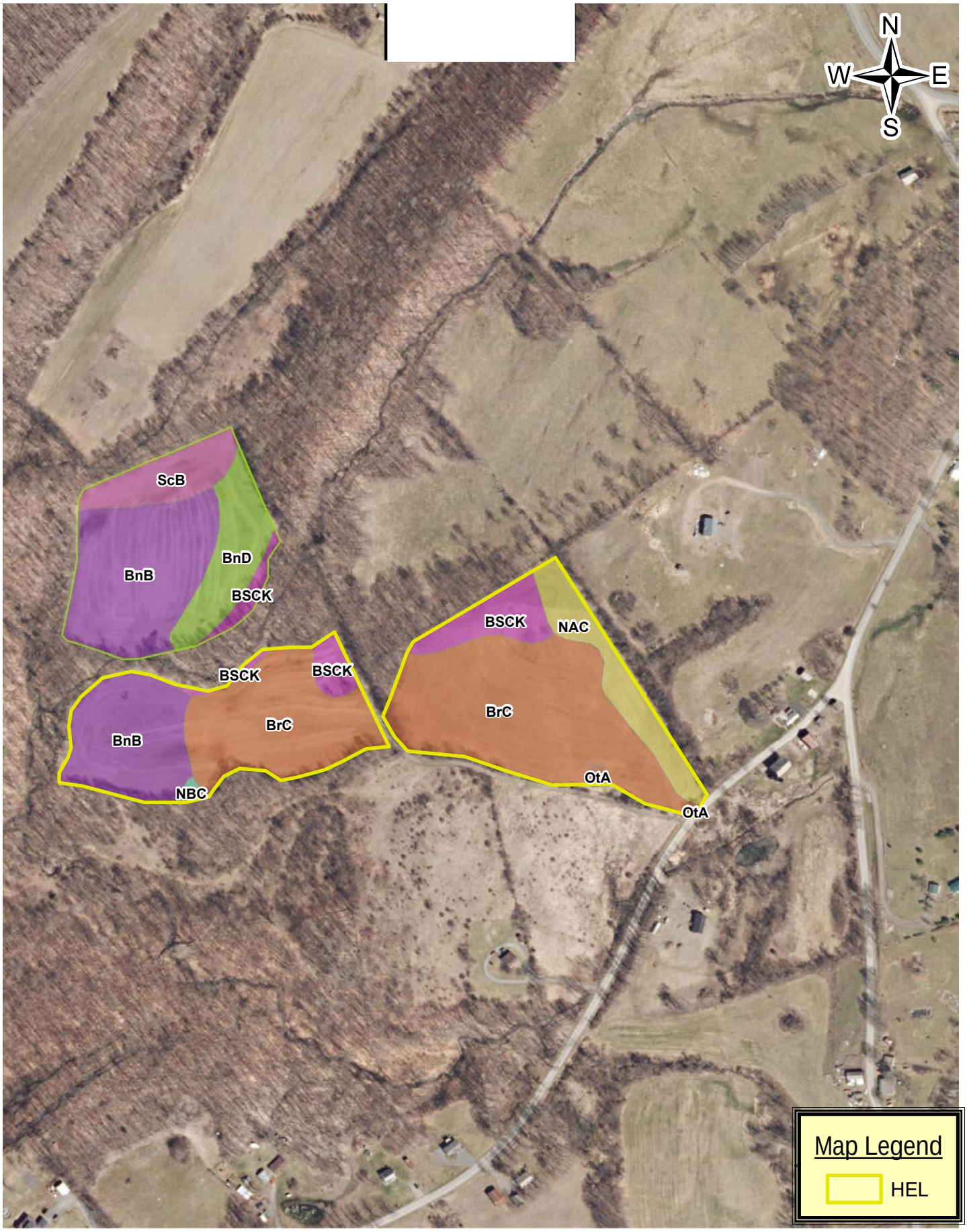
0 162.5 325 650 975 1,300 Feet

HSA Map: E

Champlain Valley AGRONOMICS

0 150 300 600 900 1,200 Feet

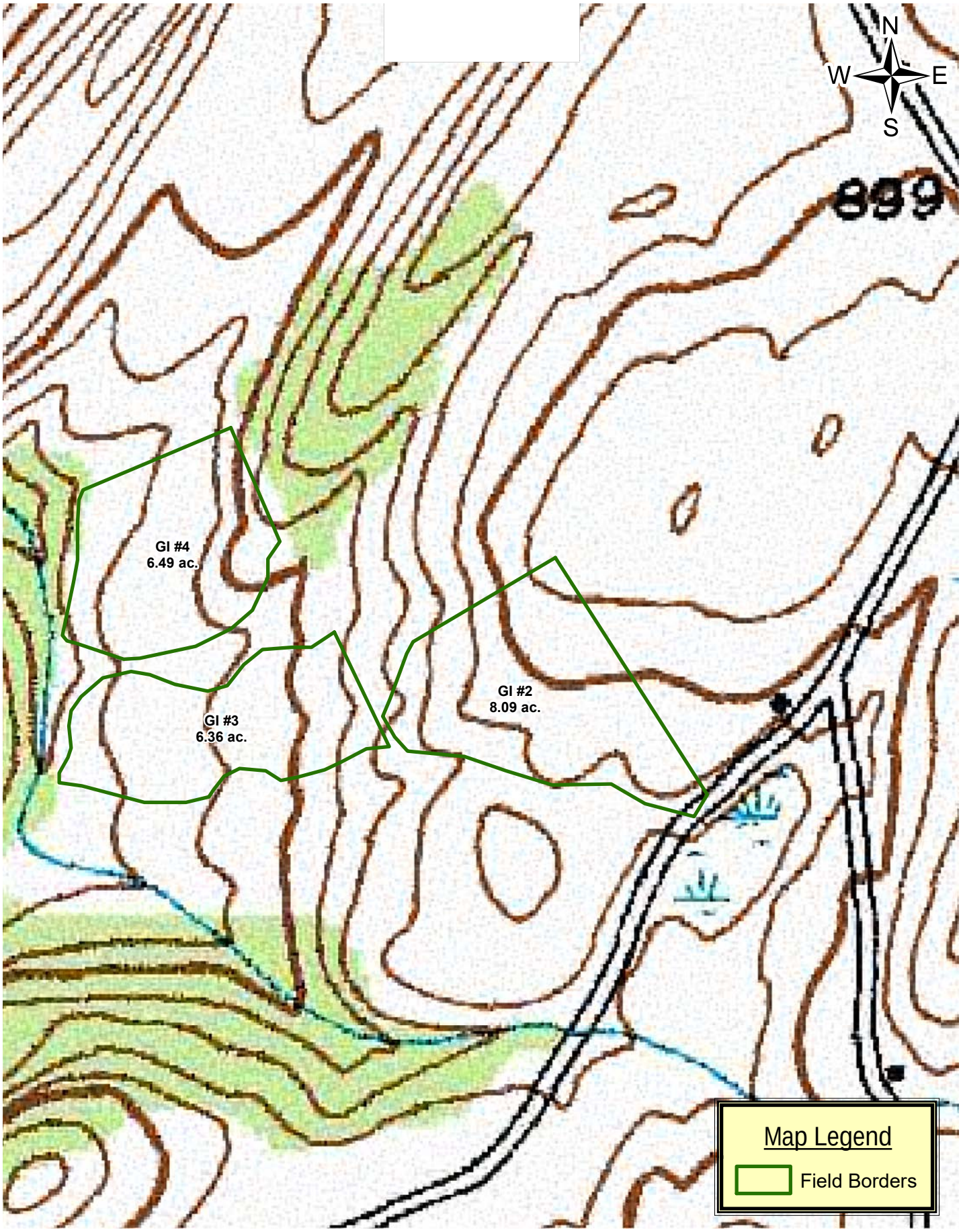
Plan Map: F



Champlain Valley AGRONOMICS

0 150 300 600 900 1,200 Feet

Soil Map: F



Champlain Valley AGRONOMICS

0 150 300 600 900 1,200 Feet

Topo Map: F

Champlain Valley AGRONOMICS

0 150 300 600 900 1,200 Feet

HSA Map: F

Champlain Valley AGRONOMICS

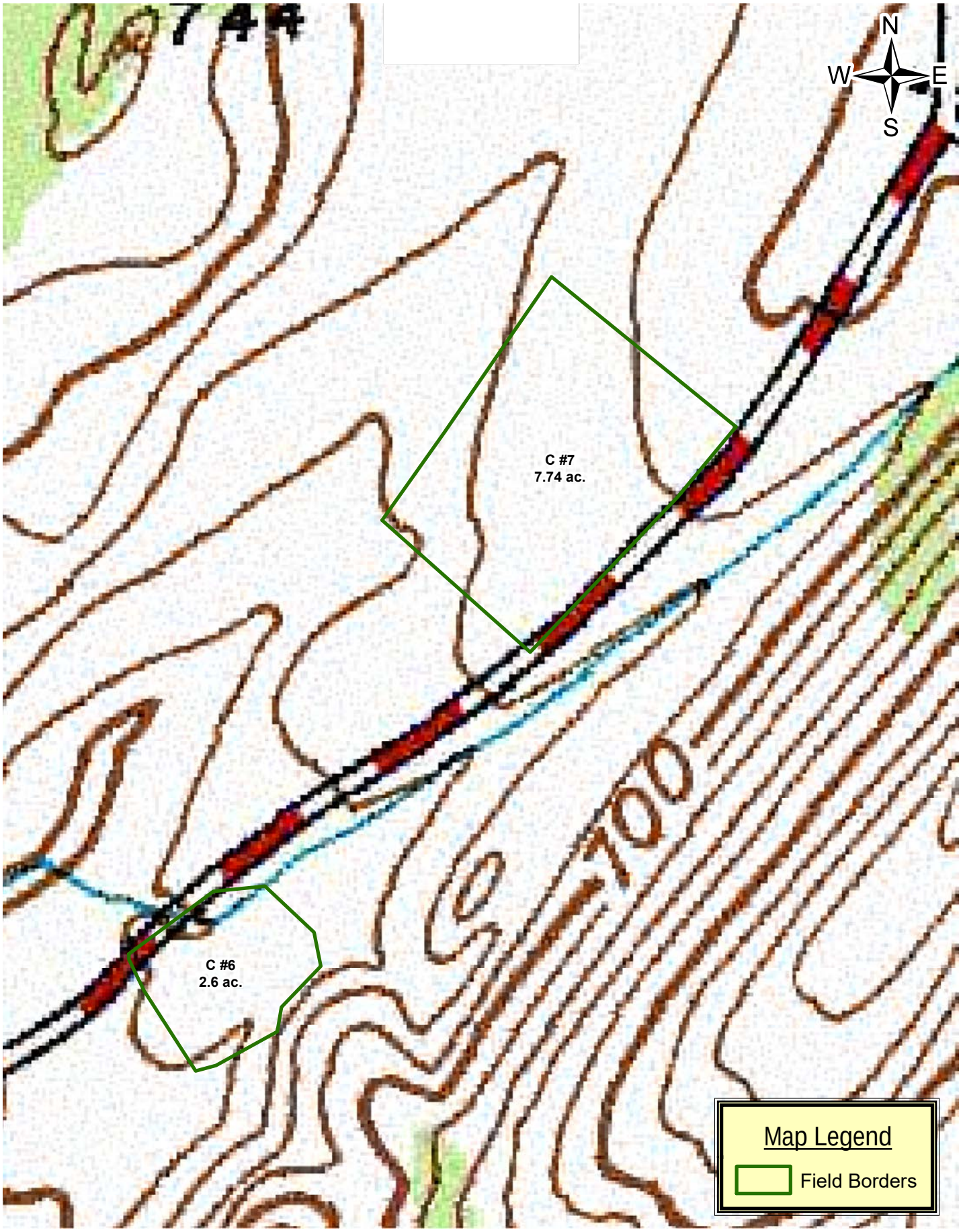
0 115 230 460 690 920 Feet

Plan Map: G

Champlain Valley AGRONOMICS

0 115 230 460 690 920 Feet

Soil Map: G



Champlain Valley AGRONOMICS

0 115 230 460 690 920 Feet

Topo Map: G

Champlain Valley AGRONOMICS

0 115 230 460 690 920 Feet

HSA Map: G

Champlain Valley AGRONOMICS

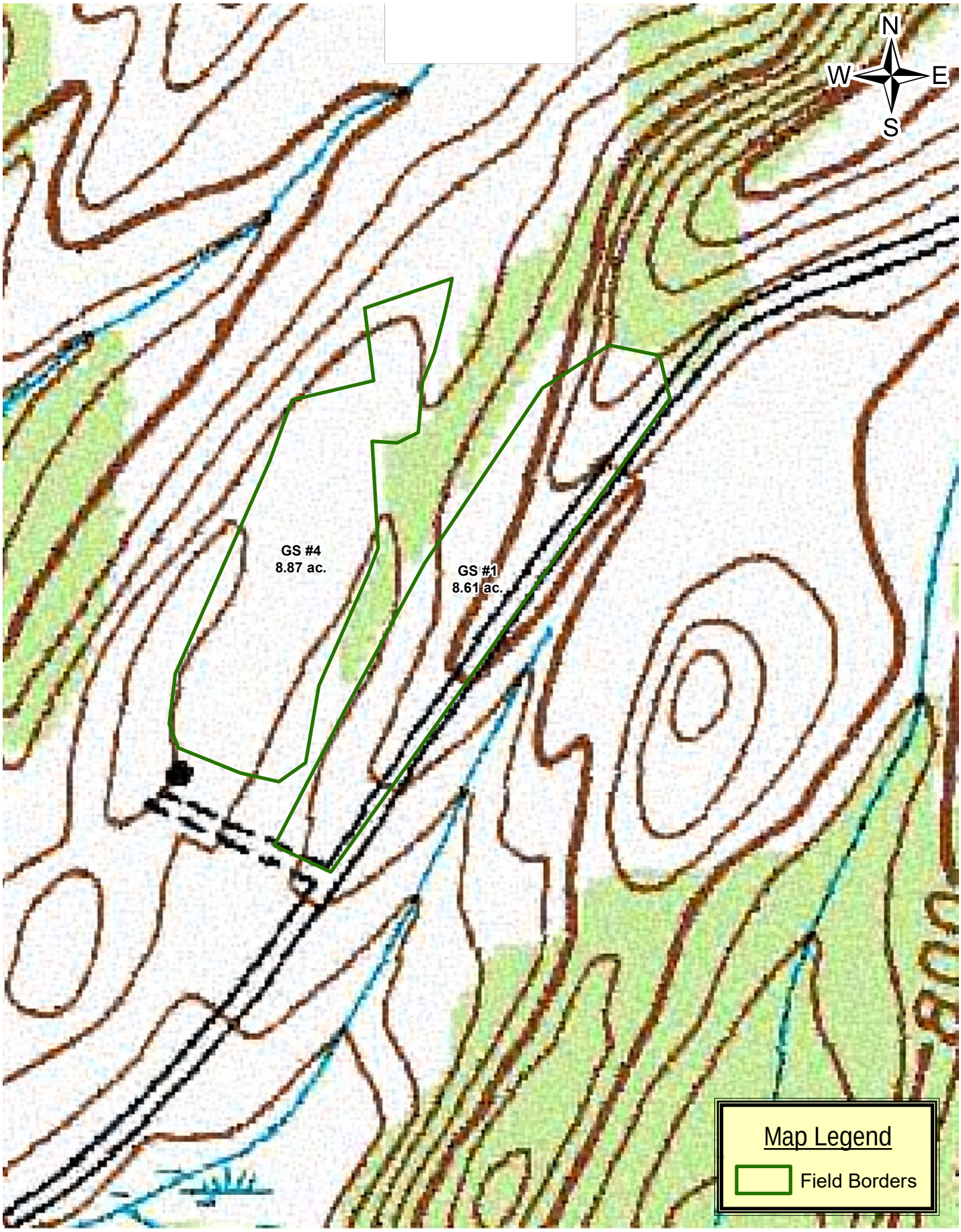
0 135 270 540 810 1,080 Feet

Plan Map: H

Champlain Valley AGRONOMICS

0 135 270 540 810 1,080 Feet

Soil Map: H



Champlain Valley AGRONOMICS

0 135 270 540 810 1,080 Feet

Topo Map: H

Champlain Valley AGRONOMICS

0 135 270 540 810 1,080 Feet

HSA Map: H

Champlain Valley AGRONOMICS

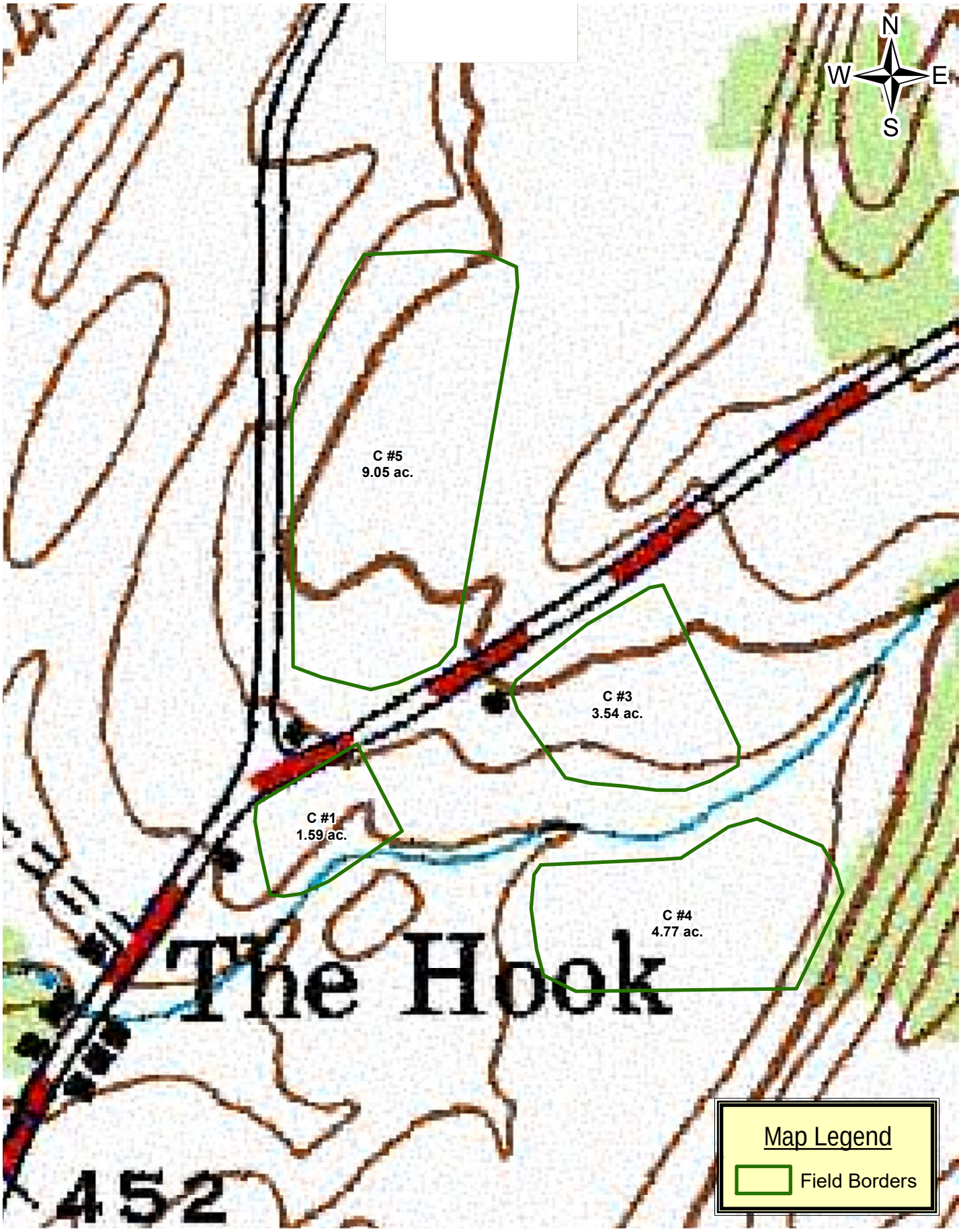
0 115 230 460 690 920 Feet

Plan Map: I

Champlain Valley AGRONOMICS

0 115 230 460 690 920 Feet

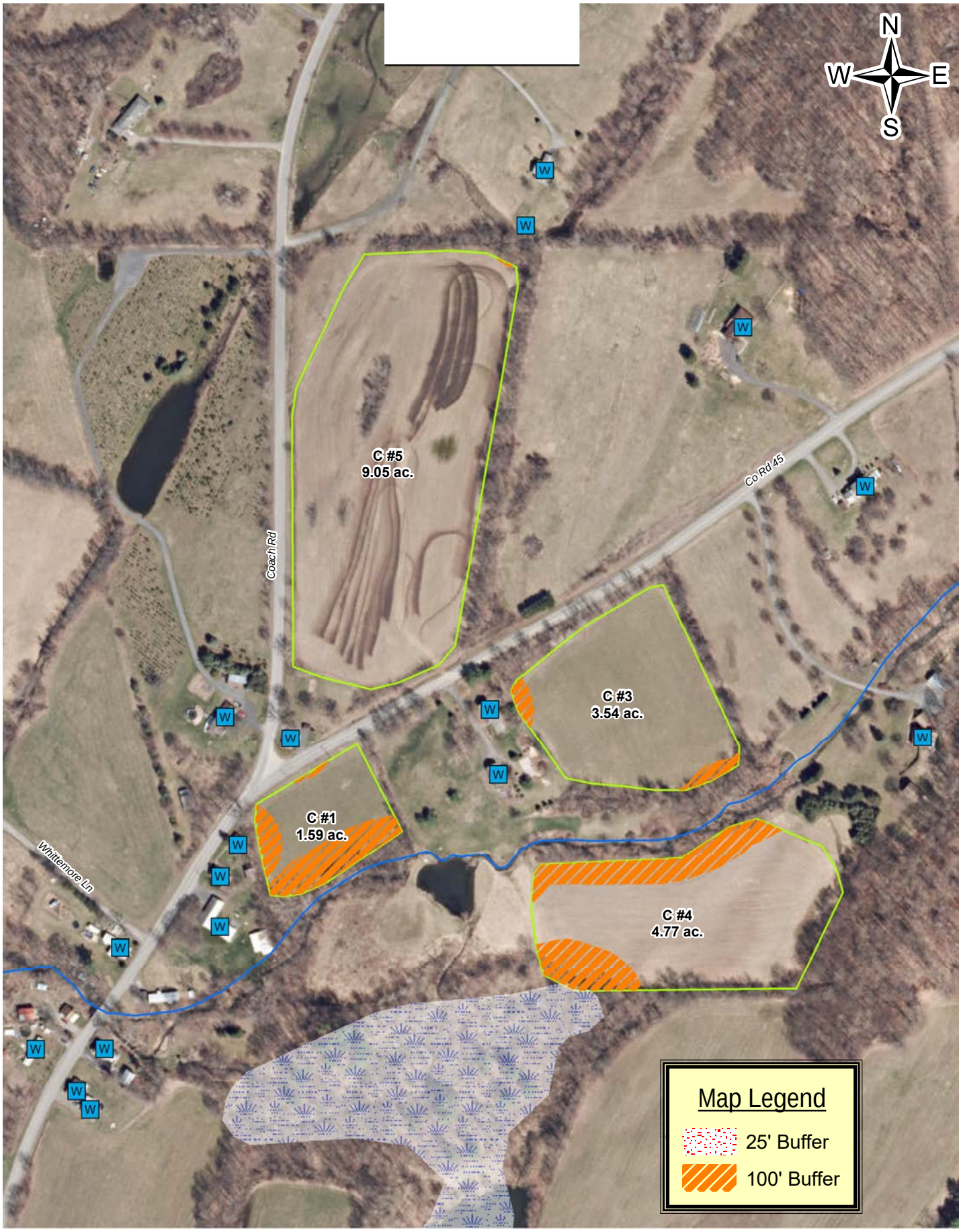
Soil Map: I



Champlain Valley AGRONOMICS

0 115 230 460 690 920 Feet

Topo Map: I



Champlain Valley AGRONOMICS

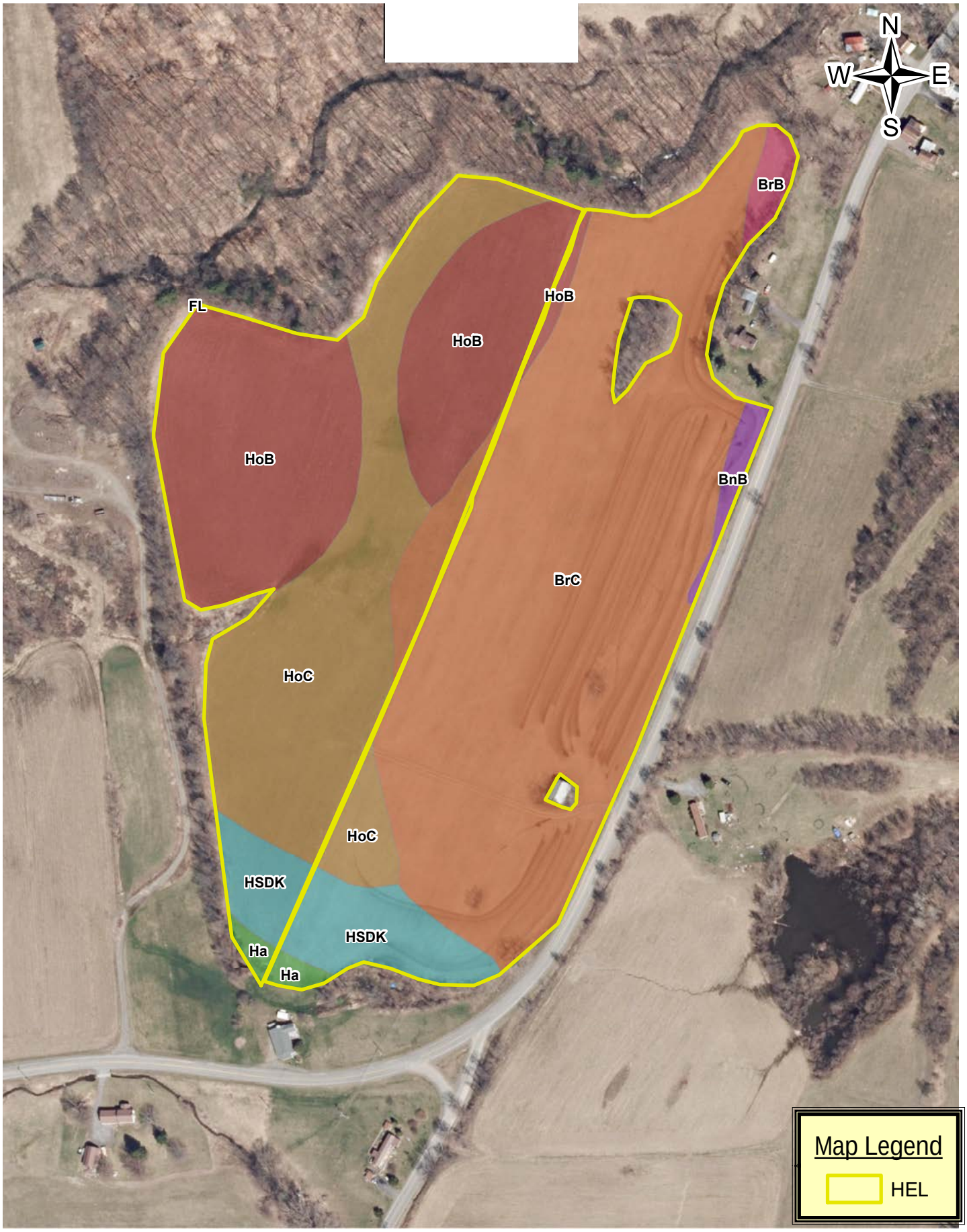
0 115 230 460 690 920 Feet

HSA Map: I

Champlain Valley AGRONOMICS

0 100 200 400 600 800 Feet

Plan Map: J



Champlain Valley AGRONOMICS

0 100 200 400 600 800 Feet

Soil Map: J

Champlain Valley AGRONOMICS

0 100 200 400 600 800 Feet

Topo Map: J

Champlain Valley AGRONOMICS

0 100 200 400 600 800 Feet

HSA Map: J

Champlain Valley AGRONOMICS

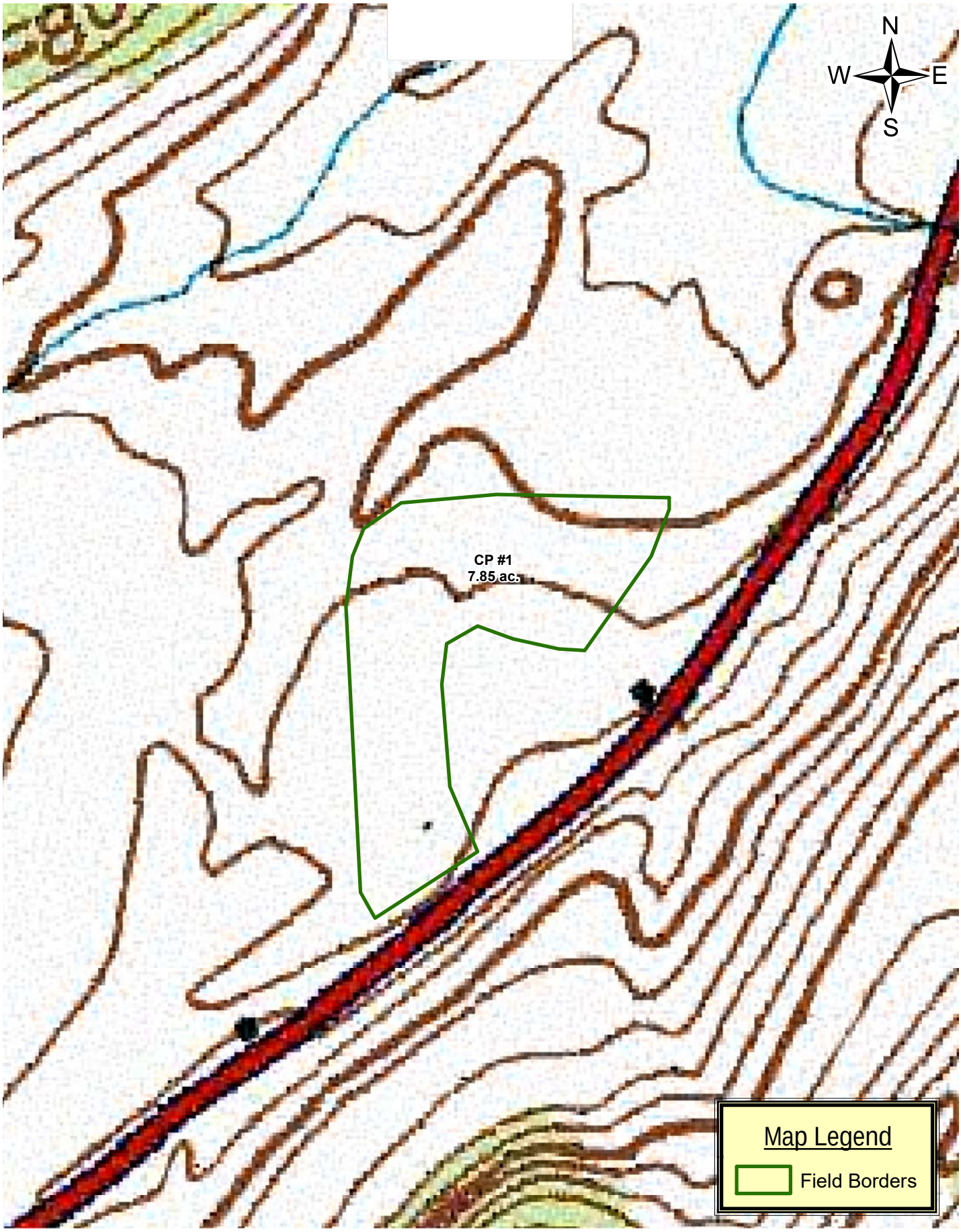
0 120 240 480 720 960 Feet

Plan Map: K

Champlain Valley AGRONOMICS

0 120 240 480 720 960 Feet

Soil Map: K



Champlain Valley AGRONOMICS

0 120 240 480 720 960 Feet

Topo Map: K

Champlain Valley AGRONOMICS

0 120 240 480 720 960 Feet

HSA Map: K

Section #3 Field Nutrient Management

Champlain Valley AGRONOMICS

Field Characteristics Report

Field Name	Leaching Index	Drainage Class	Flooding Frequency	Waterbody Type	Flow Distance	Highly Erodible?
C #1	14	Well Drained	Rare/None	Perennial	25	False
C #2	14	Well Drained	Rare/None	Perennial	50	False
C #3	14	Well Drained	Rare/None	Perennial	150	False
C #4	3	Well Drained	Rare/None	Perennial	100	False
C #5	5	Well Drained	Rare/None	Perennial	370	True
C #6	5	Well Drained	Rare/None	Perennial	25	False
C #7	5	Well Drained	Rare/None	Perennial	250	False
CH #1	5	Well Drained	Rare/None	Perennial	500	True
CH #2	5	Well Drained	Rare/None	Perennial	160	True
CH #3	5	Well Drained	Rare/None	Perennial	60	True
CH #4	3	Well Drained	Rare/None	Perennial	1200	True
CH #5	5	Well Drained	Rare/None	Perennial	1200	True
CH #6	5	Well Drained	Rare/None	Perennial	370	False
CN #1	5	Well Drained	Rare/None	Perennial	350	True
CN #2	5	Well Drained	Rare/None	Perennial	450	True
CN #3	5	Well Drained	Rare/None	Perennial	760	True
CN #4	5	Well Drained	Rare/None	Perennial	0	True
CN #5	5	Well Drained	Rare/None	Perennial	560	True
CN #6	5	Well Drained	Rare/None	Perennial	1500	True
CN #7	5	Well Drained	Rare/None	Perennial	600	True
CN #8	5	Well Drained	Rare/None	Perennial	150	True
CS #1	3	Well Drained	Rare/None	Perennial	1100	True
CS #2	3	Well Drained	Rare/None	Perennial	1200	True
CS #3	5	Well Drained	Rare/None	Perennial	2700	True
CS #4	5	Well Drained	Rare/None	Perennial	2360	True
CW #1	5	Well Drained	Rare/None	Perennial	770	True
CW #10	3	Well Drained	Rare/None	Perennial	1000	True
CW #11	5	Well Drained	Rare/None	Perennial	1500	True
CW #2	5	Well Drained	Rare/None	Perennial	720	True
CW #3	3	Well Drained	Rare/None	Perennial	660	True
CW #4	5	Well Drained	Rare/None	Perennial	205	True
CW #5	5	Well Drained	Rare/None	Perennial	30	True
CW #6	5	Well Drained	Rare/None	Perennial	360	True

Field Characteristics Report

Field Name	Leaching Index	Drainage Class	Flooding Frequency	Waterbody Type	Flow Distance	Highly Erodible?
CW #7	5	Well Drained	Rare/None	Perennial	900	True
CW #8	5	Well Drained	Rare/None	Perennial	260	True
CW #9	5	Well Drained	Rare/None	Perennial	60	True
E #1	5	Well Drained	Rare/None	Perennial	1300	True
E #2	5	Well Drained	Rare/None	Perennial	520	True
E #3A	5	Well Drained	Rare/None	Perennial	740	True
E #3B	5	Well Drained	Rare/None	Perennial	450	True
E #4	5	Well Drained	Rare/None	Perennial	2000	True
E #5	3	Well Drained	Rare/None	Perennial	2095	True
E #6	5	Well Drained	Rare/None	Perennial	2200	True
E #7	3	Well Drained	Rare/None	Perennial	100	True
E #8A	5	Well Drained	Rare/None	Perennial	1295	True
E #8B	5	Well Drained	Rare/None	Perennial	1310	True
GI #1	3	Well Drained	Rare/None	Perennial	395	False
GI #2	5	Well Drained	Rare/None	Perennial	1080	True
GI #3	5	Well Drained	Rare/None	Perennial	60	True
GI #4	5	Well Drained	Rare/None	Perennial	60	False
GS #1	5	Well Drained	Rare/None	Perennial	800	False
GS #2	5	Well Drained	Rare/None	Perennial	45	True
GS #3	5	Well Drained	Rare/None	Perennial	50	True
GS #4	5	Well Drained	Rare/None	Perennial	815	False
H #1	5	Well Drained	Rare/None	Perennial	1250	False
H #10	5	Well Drained	Rare/None	Perennial	2300	True
H #2	5	Well Drained	Rare/None	Perennial	1150	False
H #3	5	Well Drained	Rare/None	Perennial	1140	True
H #4	5	Well Drained	Rare/None	Perennial	750	True
H #5	5	Well Drained	Rare/None	Perennial	3200	True
H #6	5	Well Drained	Rare/None	Perennial	780	True
H #7	5	Well Drained	Rare/None	Perennial	2075	True
H #8	5	Well Drained	Rare/None	Perennial	2350	True
H #9	5	Well Drained	Rare/None	Perennial	1870	True
HK #1A	14	Well Drained	Rare/None	Perennial	300	True
HK #1B	5	Well Drained	Rare/None	Perennial	480	True

Field Characteristics Report

Field Name	Leaching Index	Drainage Class	Flooding Frequency	Waterbody Type	Flow Distance	Highly Erodible?
RT #1	3	Well Drained	Rare/None	Perennial	250	True
RT #2	3	Well Drained	Rare/None	Perennial	750	True
RT #3	3	Well Drained	Rare/None	Perennial	700	True
RT #4	3	Well Drained	Rare/None	Perennial	440	True
RT #5	5	Well Drained	Rare/None	Perennial	420	False

Required Recordkeeping Checklist

Production Area Records

- Weekly inspections of stormwater and runoff diversion devices and devices for channeling contaminated stormwater to wastewater containment structures.
- Weekly inspections of manure, litter, process wastewater impoundments.
- Weekly storage facility wastewater level, as indicated on a depth marker.
- Daily water line inspections (CWA permitted facilities only).
- Actions taken to correct deficiencies identified as a result of daily and weekly inspections.
- The date, time, and volume of any overflow.
- The annual capacity of the animal mortality disposal system and the number of mortalities treated by that system.
- On-site precipitation as measured by rain gauge at production area.
- Animal Inventory (Annual).
- Records of all non-farm generated waste imported to the farm (name, address of waste generator; date, amount of waste, was waste introduced into manure storage or directly land applied?).
- Anaerobic Digester records (material entering, use of digestate, records of application).
- Records documenting the current design of any manure or litter storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity (412.37(b)(5)).

Land Application Records

- Manure and wastewater sample results that will be used to calculate land application rates/
- Soil sample results used to calculate land application rates/
- Date(s) of manure application equipment inspection and calibration (annually at a minimum)/
- Scheduled checks of all valves/shut offs for Waste Transfer Systems (see Part III.B.4 of the Permits).
- Annual calculation of the maximum amount of manure or wastewater to be land applied, before application/
- Crop type and soil type yield potential or measured yield, by field– provide unit.
- For each land application event, the date, rate (tons of manure or gallons of wastewater/acre or pounds of N and P per acre), weather conditions during and for 24 hours before and after application, application method, and equipment used by field or CMU (daily during application).
- The total amount of chloride (only when food processing waste containing salt is directly applied or mixed with manure), nitrogen, and phosphorus applied to each field as represented by total application of manure and/or food processing waste.
- Contractor Certifications (if applicable) See Part III.A of the Permits.

Off-site Transfer of Manure and Wastewater Records

- Date of each transfer.
- The name and address of the recipient (for each transfer).
- Quantity transferred (for each transfer).
- Documentation that the most current nutrient analysis was provided to the recipient.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water
625 Broadway, Albany, New York 12233-3500
P: (518) 402-8233 | F: (518) 402-9029
www.dec.ny.gov

CONTRACTOR CERTIFICATION STATEMENT:

I hereby certify that I understand and agree to comply with the terms and conditions of the Comprehensive Nutrient Management Plan (CNMP) for the particular area of contracted work as communicated to me by the owner/operator. I also understand that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Name (please print or type)	Signature	Date

OWNER/OPERATOR CERTIFICATION STATEMENT:

I certify under penalty of law that conditions of the site-specific Comprehensive Nutrient Management Plan (CNMP) for application of manure and is compliant with NRCS NY590 including application methods, rates and timing based on manure and soil analyses, field specific risk assessments for nutrient and sediment transport potential, sheet and rill erosion control and application setbacks have been reviewed with the custom manure applicator under my direction or supervision. I understand that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Name (please print or type)	Signature	Date

Leachate Collection and Treatment System Inspection Sheet

Facility Name: _____
System: _____
Year: _____

By initialing and dating the following, the inspector is certifying that the following items (if applicable) have been evaluated and deficiencies have been noted:

Feed Storage Area

1. Inspect feed storage area to insure effluent is flowing unhindered to collection system. (Weekly)
2. Feed storage areas are kept clean of debris, tire piles are kept in an orderly fashion and used plastic is removed. (Weekly)
3. Inspect aprons and conveyance channels for cracks and signs of degradation. (Monthly)

Low Flow Collection System

1. Remove solid accumulation from screens and collection system. (Weekly)
2. Insure pipes are aligned according to engineer specifications, during storm events. (As Needed)
3. Remove contents of storage tank(s) and transfer/land apply according to engineer specifications. (As Needed)
4. Inspect concrete/asphalt components of collection system for cracks and signs of degradation. (Monthly)

High Flow Transfer Systems:

1. Inspect transfer piping, blowouts, and exposed piping for failure. During component inspection remove any solids from detention basins. (Once in Spring/Fall)

Vegetative Treatment Areas:

1. Inspect level lip spreaders for proper functioning, and accumulation of solids. (Monthly, and after significant storm events)
2. Inspect treatment area for concentrated flows, ponding, and kill zones. (Monthly)
3. Mow vegetation within the treatment area and remove clippings (Minimum of twice during growing season)
4. Mow vegetation along earthen berms. (Minimum of twice during growing season)
5. Collect soil sample for lower third of treatment area, and submit for analysis. (Every three years)

****WARNING****

Low flow leachate is extremely caustic and will have adverse effects upon vegetation. It is recommended that this material never be land applied directly. Material can be transferred to waste storage structures or comingled with manure prior to application.

****WARNING****

Champlain Valley AGRONOMICS

Leachate Collection and Treatment System Inspection Sheet

Week	Date	Initials	Depth	Notes/Maintenance	Date Corrected
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

Leachate Collection and Treatment System Inspection Sheet

Week	Date	Initials	Depth	Notes/Maintenance	Date Corrected
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					

Leachate Collection and Treatment System Inspection Sheet

Week	Date	Initials	Depth	Notes/Maintenance	Date Corrected
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					

Leachate Collection and Treatment System Inspection Sheet

Week	Date	Initials	Depth	Notes/Maintenance	Date Corrected
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					

Notes:_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Waste Storage, Transfer, and Containment Structure Inspection Sheet

Facility Name: _____
Storage/Containment Structure: _____
Year: _____

By initialing and dating the following, the inspector is certifying that the following items have been evaluated and deficiencies have been noted:

Weekly Inspection Items

1. Waste containment structure is below freeboard level (1' + 24 hour/25 year storm event).
2. Level of contents visible on structure's depth marker.
3. All transfer systems are in good working order. (Pumps, piping, push off ramps, etc.)

Additional Items

1. Inspect all earthen berms for signs of rodent damage. (Monthly)
2. Inspect water flowing from foundation drainage outlet(s) for signs of contamination. (Monthly)
3. Mow vegetation along earthen berms to stimulate plant growth. (Minimum of 3 times annually)
4. Inspect warning signs to insure they are still in place and visible. (Minimum of 2 times annually)
5. Inspect safety fencing to insure it is still functional. (Minimum of 2 times annually)
6. Inspect interior of waste storage for signs of stress when storages are emptied. (Annually)
7. Inspect access roads and loading areas for signs of degradation. (Annually)

****WARNING****

Storages experience some biological activity and can generate extremely toxic gases. Extreme care should be exercised when working around a storage that contains animal wastes. Adequate ventilation is mandatory, particularly when the facility is being agitated and/or emptied. Also, when agitating wind direction should be considered.

****WARNING****

Common Freeboard Levels (County):

Albany – 1'4.9"
Clinton – 1'4"
Essex – 1'4.2"
Franklin – 1'4"
Montgomery – 1'4.1"
Rensselaer – 1'4.9"
St. Lawrence – 1'4.7"
Saratoga – 1'4.8"
Washington – 1'4.6"

A statewide list is attached to this document.

Waste Storage, Transfer, and Containment Structure Inspection Sheet

Week	Date	Initials	Depth	Notes/Maintenance	Date Corrected
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

Waste Storage, Transfer, and Containment Structure Inspection Sheet

Week	Date	Initials	Depth	Notes/Maintenance	Date Corrected
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					

Waste Storage, Transfer, and Containment Structure Inspection Sheet

Week	Date	Initials	Depth	Notes/Maintenance	Date Corrected
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					

Waste Storage, Transfer, and Containment Structure Inspection Sheet

Week	Date	Initials	Depth	Notes/Maintenance	Date Corrected
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					

Notes:_____
_____
_____
_____
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Section #4 Soil Management

Champlain Valley AGRONOMICS

Section 4 Soils Management

The soils management section contains information about erosion control and tillage practices on your farm. The RUSLE II soil loss program was used to calculate erosion in tons per acre. The program takes factors such as annual rainfall, crop rotation, field slope and length, and soils information to computate soil loss. Every individual soil type has a tolerable soil loss or T- Value. All your fields were planned using the farms current tillage operations and timing. The accompanying (RUSLE Rotation Legend) outlines the rotations used in the erosion calculations. The rotations are displayed on the accompanying (RUSLE2 Erosion Calculation Record) in the description column. The columns highlighted in Yellow represent the (T) value of the predominate soil type identified for that field. The Red and Green highlighted values are the results of the calculation. Green means the rotation can be used on that field, Red means it can't.

This plan has identified rotations that are under T, but over years may not fit forage inventory requirements. During annual updating special attention should be taken to tailor rotations to your animals forage needs.

Planned Rotations to meet (T)

Rotation #1 =Cos 4- Hay 5= No till 1st year corn, spring chisel for remaining corn rotation, spring chisel and disk prior to seeding.

Rotation #2 = Cos 4- Hay 5= Spring chisel every year of corn in rotation, spring chisel and disk prior to seeding.

Rotation #3 = Cos 4- Hay 5 = No tillage for all years of corn in rotation, spring chisel and disk prior to seeding.

Rotation #4 = Cos 4- Hay 5= No till 1st and 3rd year corn, spring chisel and disk 2nd and 4th, spring chisel and disk prior to seeding.

Rotation #5 = Continuous Grass

Erosion Control

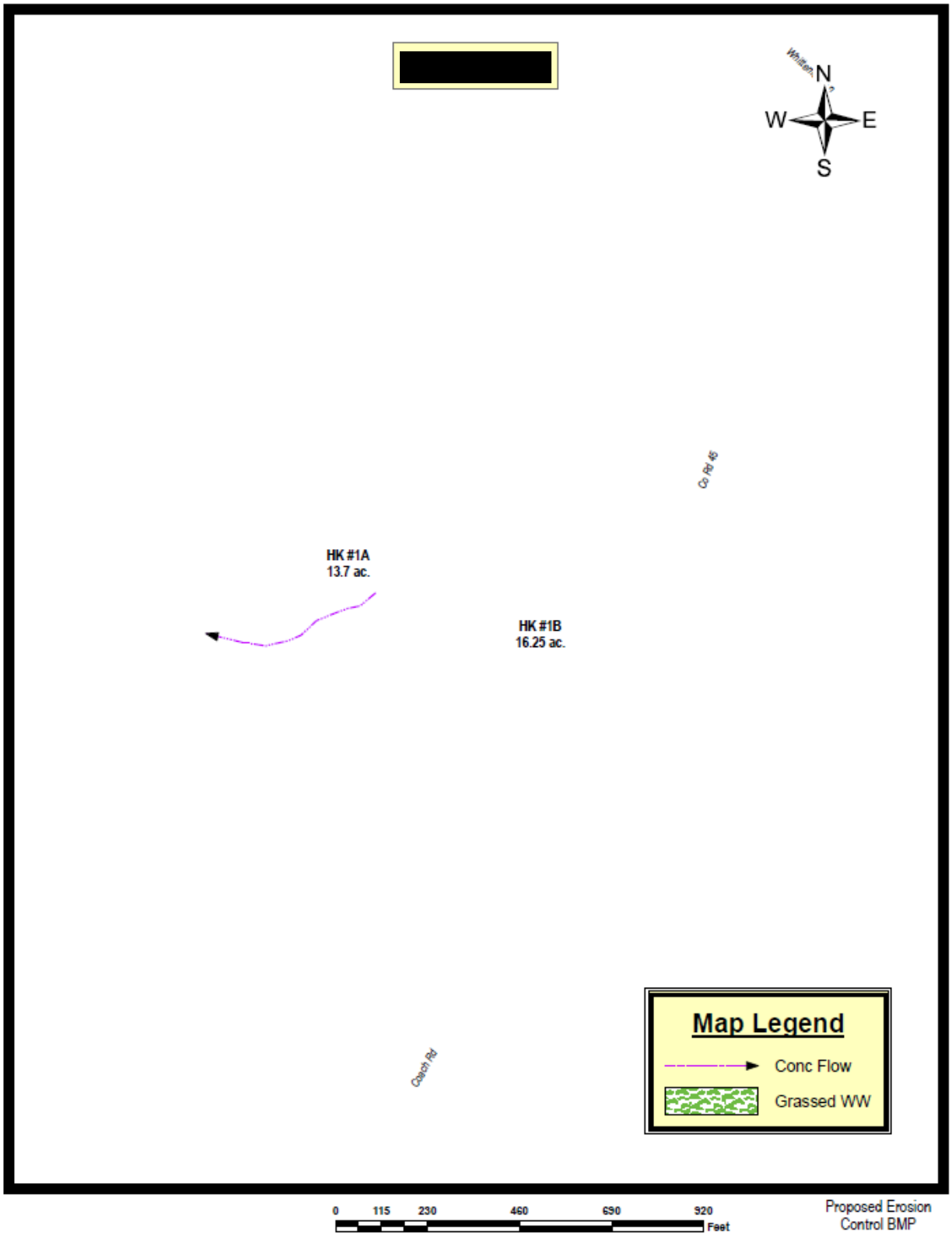
Several alternative rotations were developed for difficult to plan for fields. The added calculations are provided later in this section.

To reduce erosion from preferential flow paths grassed waterways are recommended for the following fields: HK #1A, CH #3, CW #4, CW #5, CW #9 (± 1.4 acres in total)

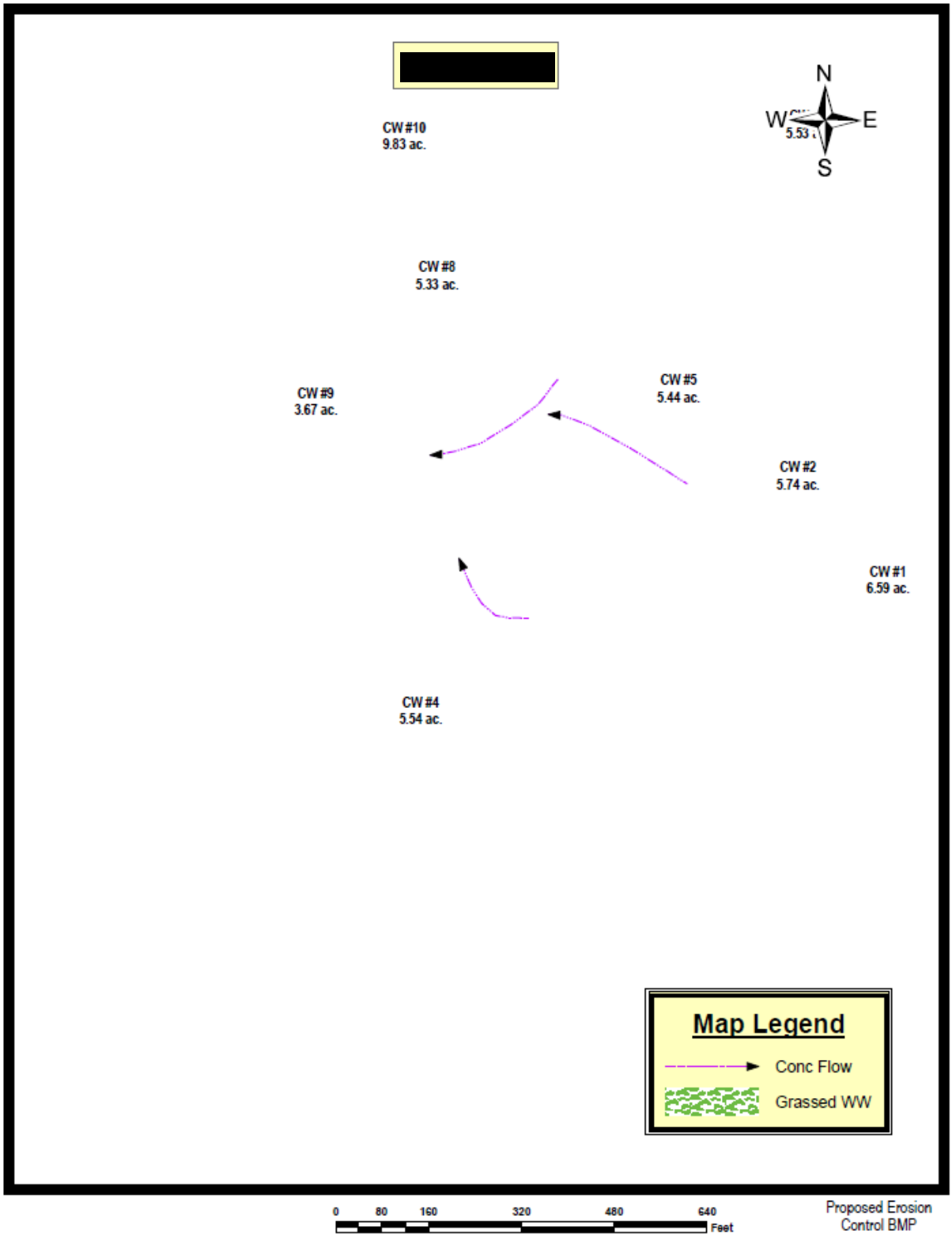
Planned Rotations 2019:

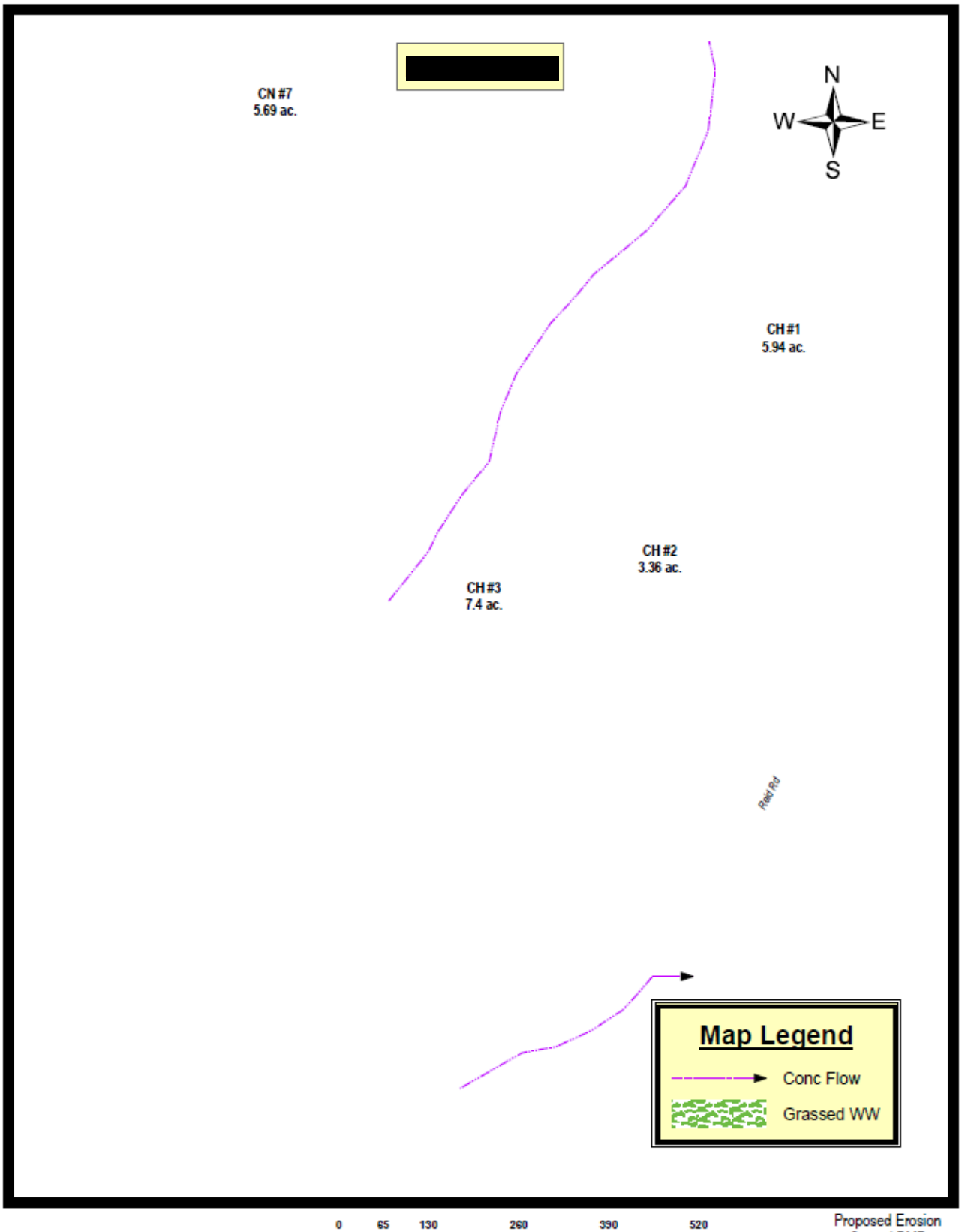
New Seeding: C #4, E #7, GI #3, GI #4, GS #4

COS1: C #6, CH #2, H #5



Proposed Erosion Control BMP


[redacted]
N
W
E
S
CW #10
9.83 ac.
CW #8
5.33 ac.
CW #9
3.67 ac.
CW #5
5.44 ac.
CW #2
5.74 ac.
CW #1
6.59 ac.
CW #4
5.54 ac.
Map Legend
Conc Flow
Grassed WW
0
80
160
320
480
640
Feet
Proposed Erosion
Control BMP


[redacted]
CN #7
5.69 ac.
N
W
E
S
CH #1
5.94 ac.
CH #2
3.36 ac.
CH #3
7.4 ac.
Red Rd
Map Legend
Conc Flow
Grassed WW
0
65
130
260
390
520
Feet
Proposed Erosion
Control BMP

RUSLE2 Characteristics

Field Name	Rotation	T Value	A Value	SCI	STIR
H3, H4, C7, RT5, CH1, GI4, CH6, CW1, CW6, CW5, GS1, GS4	Rotation 1	4	3.4	0.17	51
H3, H4, C7, RT5, CH1, GI4, CH6, CW1, CW6, CW5, GS1, GS4	Rotation 2	4	3.9	0.07	64
H3, H4, C7, RT5, CH1, GI4, CH6, CW1, CW6, CW5, GS1, GS4	Rotation 3	4	1.4	0.48	15
H3, H4, C7, RT5, CH1, GI4, CH6, CW1, CW6, CW5, GS1, GS4	Rotation 4	4	3	0.25	39
H3, H4, C7, RT5, CH1, GI4, CH6, CW1, CW6, CW5, GS1, GS4	Continuous Grass	4	0.57	0.66	22
H7, H1, H2, H5, E2, E6, E3A, E3B, CN4, CN6, CN7, CH5, CW7, CW11, CH2, CH3, CS3, CS4, GS2, GS3	Rotation 1	4	7.2	-0.13	51
H7, H1, H2, H5, E2, E6, E3A, E3B, CN4, CN6, CN7, CH5, CW7, CW11, CH2, CH3, CS3, CS4, GS2, GS3	Rotation 2	4	8.3	-0.28	64
H7, H1, H2, H5, E2, E6, E3A, E3B, CN4, CN6, CN7, CH5, CW7, CW11, CH2, CH3, CS3, CS4, GS2, GS3	Rotation 3	4	3	0.35	15
H7, H1, H2, H5, E2, E6, E3A, E3B, CN4, CN6, CN7, CH5, CW7, CW11, CH2, CH3, CS3, CS4, GS2, GS3	Rotation 4	4	6.4	-0.019	39
H7, H1, H2, H5, E2, E6, E3A, E3B, CN4, CN6, CN7, CH5, CW7, CW11, CH2, CH3, CS3, CS4, GS2, GS3	Continuous Grass	4	1.2	0.61	22
H9, E4	Rotation 1	4	11	-0.43	51
H9, E4	Rotation 2	4	13	-0.63	64
H9, E4	Rotation 3	4	4.8	0.21	15
H9, E4	Rotation 4	4	10	-0.3	39
H9, E4	Continuous Grass	4	2	0.55	22
H10, CW4	Rotation 1	4	3.4	0.17	51
H10, CW4	Rotation 2	4	3.9	0.07	64
H10, CW4	Rotation 3	4	1.4	0.48	15
H10, CW4	Rotation 4	4	3	0.25	39
H10, CW4	Continuous Grass	4	0.57	0.66	22
E1, CN1, CN2, CN3, CN5, CN8, GI2, GI3, CW2, HK1B	Rotation 1	4	7.2	-0.13	51
E1, CN1, CN2, CN3, CN5, CN8, GI2, GI3, CW2, HK1B	Rotation 2	4	8.3	-0.28	64
E1, CN1, CN2, CN3, CN5, CN8, GI2, GI3, CW2, HK1B	Rotation 3	4	3	0.35	15
E1, CN1, CN2, CN3, CN5, CN8, GI2, GI3, CW2, HK1B	Rotation 4	4	6.4	-0.019	39

E1, CN1, CN2, CN3, CN5, CN8, GI2, GI3, CW2, HK1B	Continuous Grass	4	1.2	0.61	22
E8A, E8B, C5, CW8, CW9	Rotation 1	4	9.1	-0.28	51
E8A, E8B, C5, CW8, CW9	Rotation 2	4	11	-0.46	64
E8A, E8B, C5, CW8, CW9	Rotation 3	4	4	0.27	15
E8A, E8B, C5, CW8, CW9	Rotation 4	4	8.2	-0.16	39
E8A, E8B, C5, CW8, CW9	Continuous Grass	4	1.7	0.57	22
H8, H6	Rotation 1	4	21	-1.2	51
H8, H6	Rotation 2	4	24	-1.5	64
H8, H6	Rotation 3	4	9.2	-0.14	15
H8, H6	Rotation 4	4	19	-1	39
H8, H6	Continuous Grass	4	3.7	0.41	22
C6	Rotation 1	5	0.99	0.36	51
C6	Rotation 2	5	1.1	0.29	64
C6	Rotation 3	5	0.44	0.55	15
C6	Rotation 4	5	0.89	0.41	39
C6	Continuous Grass	5	0.19	0.69	22
C2	Rotation 1	5	0.82	0.37	51
C2	Rotation 2	5	0.95	0.3	64
C2	Rotation 3	5	0.35	0.56	15
C2	Rotation 4	5	0.73	0.43	39
C2	Continuous Grass	5	0.15	0.69	22
C1, C3	Rotation 1	5	2.2	0.26	51
C1, C3	Rotation 2	5	2.5	0.18	64
C1, C3	Rotation 3	5	1	0.51	15
C1, C3	Rotation 4	5	2	0.33	39
C1, C3	Continuous Grass	5	0.43	0.67	22
RT1, GI1, RT2, RT3, RT4, E5, E7, C4	Rotation 1	1	4.6	0.071	51
RT1, GI1, RT2, RT3, RT4, E5, E7, C4	Rotation 2	1	5.4	-0.045	64
RT1, GI1, RT2, RT3, RT4, E5, E7, C4	Rotation 3	1	1.9	0.43	15
RT1, GI1, RT2, RT3, RT4, E5, E7, C4	Rotation 4	1	4.1	0.16	39
RT1, GI1, RT2, RT3, RT4, E5, E7, C4	Continuous Grass	1	0.81	0.64	22
CW10, CH4, CS1, CS2	Rotation 1	4	5.2	0.023	51
CW10, CH4, CS1, CS2	Rotation 2	4	6.1	-0.1	64
CW10, CH4, CS1, CS2	Rotation 3	4	2.1	0.42	15
CW10, CH4, CS1, CS2	Rotation 4	4	4.7	0.12	39
CW10, CH4, CS1, CS2	Continuous Grass	4	0.87	0.64	22
CW3	Rotation 1	4	3.4	0.17	51
CW3	Rotation 2	4	3.9	0.07	64
CW3	Rotation 3	4	1.4	0.48	15
CW3	Rotation 4	4	3	0.25	39
CW3	Continuous Grass	4	0.57	0.66	22
HK 1A	Rotation 1	1	1.6	0.31	51
HK 1A	Rotation 2	1	1.9	0.23	64

RUSLE2 Characteristics

HK 1A	Rotation 3	1	0.71	0.53	15
HK 1A	Rotation 4	1	1.5	0.37	39
HK 1A	Continuous Grass	1	0.3	0.68	22
HI, H2, CN6, CN7	Continuous Corn	4	16	-1	59
CW1	Continuous Corn	4	7.3	-0.39	59
RT1	Continuous Corn	1	6.5	-0.33	59

Champlain Valley AGRONOMICS

RUSLE2 Management Description Record

Rotation 1

Date	*Operation*	*Rotation 1*	*Yield (harv. units)*	*Type of cover material*	*Cover matl add/remove, lb/ac*	*Cover from addition, %*	*Standing res. added by op. desc., lb/ac*
5/5/1	Sprayer, kill crop				133.69	7.2	2540
5/15/1	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/1	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/1	Fert applic. side-dress, liquid						
9/15/1	Harvest, silage				764.75	25	805
4/25/2	Chisel, twisted shovel						
5/5/2	Disk, tandem secondary op.						
5/10/2	Disk, tandem secondary op.						
5/15/2	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/2	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/2	Fert applic. side-dress, liquid						
9/15/2	Harvest, silage				764.75	25	805
4/25/3	Chisel, twisted shovel						
5/5/3	Disk, tandem secondary op.						
5/10/3	Disk, tandem secondary op.						
5/15/3	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/3	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/3	Fert applic. side-dress, liquid						
9/15/3	Harvest, silage				764.75	25	805
4/25/4	Chisel, twisted shovel						
5/5/4	Disk, tandem secondary op.						
5/10/4	Disk, tandem secondary op.						
5/15/4	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/4	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/4	Fert applic. side-dress, liquid						
9/15/4	Harvest, silage				764.75	25	805
4/10/5	Chisel, st. pt.						
4/15/5	Disk, tandem secondary op.						
4/20/5	Disk, tandem secondary op.						
4/25/5	Drill or air seeder single disk openers 7-10 in spac.	Alfalfa brome, spring seed	1.00				

6/25/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		285.78	15	
8/4/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
9/13/5	Harvest, hay, legume	Alfalfa brome, spring seed senes to y2 regrowth	2.00		405.00	20	
5/30/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		381.78	19	
7/9/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/18/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/19/6	Fert applic. surface broadcast						
9/27/6	Harvest, hay, legume	Alfalfa brome, yr2 senes to yr3 regrowth	2.00		405.00	20	
5/30/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		519.42	25	
7/9/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/7	Fert applic. surface broadcast						
9/27/7	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/8	Fert applic. surface broadcast						
9/27/8	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
9/27/9	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	

Champlain Valley AGRONOMICS

RUSLE2 Management Description Record

Rotation 2

Date	Operation	Rotation 2	Yield (harv. units)	Type of cover material	Cover matl add/remove, lb/ac	Cover from addition, %	Standing res. added by op. desc., lb/ac
4/25/1	Chisel, twisted shovel				2039.4	68	360
5/5/1	Disk, tandem secondary op.						
5/10/1	Disk, tandem secondary op.						
5/15/1	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/1	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/1	Fert applic. side-dress, liquid						
9/15/1	Harvest, silage				764.75	25	805
4/25/2	Chisel, twisted shovel						
5/5/2	Disk, tandem secondary op.						
5/10/2	Disk, tandem secondary op.						
5/15/2	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/2	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/2	Fert applic. side-dress, liquid						
9/15/2	Harvest, silage				764.75	25	805
4/25/3	Chisel, twisted shovel						
5/5/3	Disk, tandem secondary op.						
5/10/3	Disk, tandem secondary op.						
5/15/3	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/3	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/3	Fert applic. side-dress, liquid						
9/15/3	Harvest, silage				764.75	25	805
4/25/4	Chisel, twisted shovel						
5/5/4	Disk, tandem secondary op.						
5/10/4	Disk, tandem secondary op.						
5/15/4	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/4	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/4	Fert applic. side-dress, liquid						
9/15/4	Harvest, silage				764.75	25	805
4/10/5	Chisel, st. pt.						
4/15/5	Disk, tandem secondary op.						
4/20/5	Disk, tandem secondary op.						

4/25/5	Drill or air seeder single disk openers 7-10 in spac.	Alfalfa brome, spring seed	1.00				
6/25/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		285.78	15	
8/4/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
9/13/5	Harvest, hay, legume	Alfalfa brome, spring seed senes to y2 regrowth	2.00		405.00	20	
5/30/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		381.78	19	
7/9/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/18/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/19/6	Fert applic. surface broadcast						
9/27/6	Harvest, hay, legume	Alfalfa brome, yr2 senes to yr3 regrowth	2.00		405.00	20	
5/30/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		519.42	25	
7/9/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/7	Fert applic. surface broadcast						
9/27/7	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/8	Fert applic. surface broadcast						
9/27/8	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
9/27/9	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	

Champlain Valley AGRONOMICS

RUSLE2 Management Description Record

Rotation 3

Date	*Operation*	*Rotation 3*	*Yield (harv. units)*	*Type of cover material*	*Cover matl add/remove, lb/ac*	*Cover from addition, %*	*Standing res. added by op. desc., lb/ac*
5/5/1	Sprayer, kill crop				133.69	7.2	2540
5/15/1	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/1	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/1	Fert applic. side-dress, liquid						
9/15/1	Harvest, silage				764.75	25	805
5/5/2	Sprayer, kill crop						
5/15/2	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/2	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/2	Fert applic. side-dress, liquid						
9/15/2	Harvest, silage				764.75	25	805
5/5/3	Sprayer, kill crop						
5/15/3	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/3	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/3	Fert applic. side-dress, liquid						
9/15/3	Harvest, silage				764.75	25	805
5/5/4	Sprayer, kill crop						
5/15/4	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/4	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/4	Fert applic. side-dress, liquid						
9/15/4	Harvest, silage				764.75	25	805
4/10/5	Chisel, st. pt.						
4/15/5	Disk, tandem secondary op.						
4/20/5	Disk, tandem secondary op.						
4/25/5	Drill or air seeder single disk openers 7-10 in spac.	Alfalfa brome, spring seed	1.00				
6/25/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		285.78	15	
8/4/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
9/13/5	Harvest, hay, legume	Alfalfa brome, spring seed senes to y2 regrowth	2.00		405.00	20	

5/30/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		381.78	19	
7/9/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/18/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/19/6	Fert applic. surface broadcast						
9/27/6	Harvest, hay, legume	Alfalfa brome, yr2 senes to yr3 regrowth	2.00		405.00	20	
5/30/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		519.42	25	
7/9/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/7	Fert applic. surface broadcast						
9/27/7	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/8	Fert applic. surface broadcast						
9/27/8	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
9/27/9	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	

Champlain Valley AGRONOMICS

RUSLE2 Management Description Record

Rotation 4

Date	*Operation*	*Rotation 4*	*Yield (harv. units)*	*Type of cover material*	*Cover matl add/remove, lb/ac*	*Cover from addition, %*	*Standing res. added by op. desc., lb/ac*
5/5/1	Sprayer, kill crop				133.69	7.2	2540
5/15/1	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/1	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/1	Fert applic. side-dress, liquid						
9/15/1	Harvest, silage				764.75	25	805
4/25/2	Chisel, twisted shovel						
5/5/2	Disk, tandem secondary op.						
5/10/2	Disk, tandem secondary op.						
5/15/2	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/2	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/2	Fert applic. side-dress, liquid						
9/15/2	Harvest, silage				764.75	25	805
5/5/3	Sprayer, kill crop						
5/15/3	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/3	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/3	Fert applic. side-dress, liquid						
9/15/3	Harvest, silage				764.75	25	805
4/25/4	Chisel, twisted shovel						
5/5/4	Disk, tandem secondary op.						
5/10/4	Disk, tandem secondary op.						
5/15/4	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/4	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/4	Fert applic. side-dress, liquid						
9/15/4	Harvest, silage				764.75	25	805
4/10/5	Chisel, st. pt.						
4/15/5	Disk, tandem secondary op.						
4/20/5	Disk, tandem secondary op.						
4/25/5	Drill or air seeder single disk openers 7-10 in spac.	Alfalfa brome, spring seed	1.00				
6/25/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		285.78	15	

8/4/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
9/13/5	Harvest, hay, legume	Alfalfa brome, spring seed senes to y2 regrowth	2.00		405.00	20	
5/30/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		381.78	19	
7/9/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/18/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/19/6	Fert applic. surface broadcast						
9/27/6	Harvest, hay, legume	Alfalfa brome, yr2 senes to yr3 regrowth	2.00		405.00	20	
5/30/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		519.42	25	
7/9/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/7	Fert applic. surface broadcast						
9/27/7	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/8	Fert applic. surface broadcast						
9/27/8	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
9/27/9	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	

Champlain Valley AGRONOMICS

RUSLE2 Management Description Record

Rotation 5

Date	*Operation*	*Rotation 5 (Continuous Grass)*	*Yield (harv. units)*	*Type of cover material*	*Cover matl add/remove, lb/ac*	*Cover from addition, %*	*Standing res. added by op. desc., lb/ac*
4/10/1	Plow, moldboard				567.29	27	0
4/15/1	Disk, tandem secondary op.						
4/20/1	Disk, tandem secondary op.						
4/25/1	Harrow, coiled tine						
4/25/1	Drill or airseeder, double disk	Bromegrass, spring seed 1st yr	1.50				
6/25/1	Harvest, hay, grass	Bromegrass, hay, yr2 regrowth after cut	1.50		354.67	18	
8/4/1	Harvest, hay, grass	Bromegrass, hay, yr2 regrowth after cut	1.50		362.55	18	
9/13/1	Harvest, hay, grass	Bromegrass, hay, yr2 senes to yr3 regrowth	1.00		362.55	18	
5/30/2	Harvest, hay, grass	Bromegrass, hay, yr2 regrowth after cut	1.50		176.27	9.4	
7/9/2	Harvest, hay, grass	Bromegrass, hay, yr2 regrowth after cut	1.50		362.55	18	
8/18/2	Harvest, hay, grass	Bromegrass, hay, yr2 regrowth after cut	1.50		362.55	18	
9/27/2	Harvest, hay, grass	Bromegrass, hay, yr2 senes to yr3 regrowth	1.00		362.55	18	
5/30/3	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		145.39	7.8	
7/9/3	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		362.55	18	
8/18/3	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		362.55	18	
9/27/3	Harvest, hay, grass	Bromegrass, hay, yr3 senes to yr4 regrowth	1.50		362.55	18	
5/30/4	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		218.08	11	
7/9/4	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		362.55	18	
8/18/4	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		362.55	18	

9/27/4	Harvest, hay, grass	Bromegrass, hay, yr3 senes to yr4 regrowth	1.50		362.55	18	
5/30/5	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		218.08	11	
7/9/5	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		362.55	18	
8/18/5	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		362.55	18	
9/27/5	Harvest, hay, grass	Bromegrass, hay, yr3 senes to yr4 regrowth	1.50		362.55	18	
5/30/6	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		218.08	11	
7/9/6	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		362.55	18	
8/18/6	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		362.55	18	
9/27/6	Harvest, hay, grass	Bromegrass, hay, yr3 senes to yr4 regrowth	1.50		362.55	18	
5/30/7	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		218.08	11	
7/9/7	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		362.55	18	
8/18/7	Harvest, hay, grass	Bromegrass, hay, yr3 regrowth after cut	1.50		362.55	18	
9/27/7	Harvest, hay, grass	Bromegrass, hay, yr3 senes to yr4 regrowth	1.50		362.55	18	

Difficult to Meet (T) Rotations:

Rotation #6: Cos 3-Hay 4= Not till 1st year corn, spring chisel for remaining corn rotation, spring chisel and disk prior to seeding.

Rotation #7: Cos 2-Hay 5= Not till 1st year corn, spring chisel for remaining corn rotation, spring chisel and disk prior to seeding.

Rotation #8: Cos 1-Hay 5= Not till 1st year corn. Spring chisel and disk prior to seeding.

Rotation #9: Cos Cover Crop 4 – Hay 5= Not till 1st year corn. Spring chisel and disk prior to seeding.

RUSLE2 Calculations

Field Name	Rotation	T Value	A Value	SCI	STIR
H7, H1, H2, H5, E2, E6, E3A, E3B, CN4, CN6, CN7, CH5, CW7, CW11, CH2, CH3, CS3, CS4, GS2, GS3	Rotation 6	4	6.6	-0.067	50
H7, H1, H2, H5, E2, E6, E3A, E3B, CN4, CN6, CN7, CH5, CW7, CW11, CH2, CH3, CS3, CS4, GS2, GS3	Rotation 7	4	3.9	0.26	33
H7, H1, H2, H5, E2, E6, E3A, E3B, CN4, CN6, CN7, CH5, CW7, CW11, CH2, CH3, CS3, CS4, GS2, GS3	Rotation 8	4	1.9	0.53	20
H7, H1, H2, H5, E2, E6, E3A, E3B, CN4, CN6, CN7, CH5, CW7, CW11, CH2, CH3, CS3, CS4, GS2, GS3	Cover Crop	4	3.8	0.26	43
H9, E4	Rotation 6	4	10	-0.35	50
H9, E4	Rotation 7	4	6.2	0.086	33
H9, E4	Rotation 8	4	3	0.44	20
H9, E4	Cover Crop	4	6.1	0.079	43
E1, CN1, CN2, CN3, CN5, CN8, GI2, GI3, CW2, HK1B	Rotation 6	4	6.6	-0.066	50
E1, CN1, CN2, CN3, CN5, CN8, GI2, GI3, CW2, HK1B	Rotation 7	4	3.9	0.26	33
E1, CN1, CN2, CN3, CN5, CN8, GI2, GI3, CW2, HK1B	Rotation 8	4	1.9	0.53	20
E1, CN1, CN2, CN3, CN5, CN8, GI2, GI3, CW2, HK1B	Cover Crop	4	3.8	0.26	43
E8A, E8B, C5, CW8, CW9	Rotation 6	4	8.5	-0.22	50
E8A, E8B, C5, CW8, CW9	Rotation 7	4	5.1	0.17	33
E8A, E8B, C5, CW8, CW9	Rotation 8	4	2.5	0.48	20
E8A, E8B, C5, CW8, CW9	Cover Crop	4	5.1	0.16	43
H8, H6	Rotation 6	4	20	-1.1	50
H8, H6	Rotation 7	4	12	-0.35	33
H8, H6	Rotation 8	4	5.7	0.23	20
H8, H6	Cover Crop	4	12	-0.36	43
HK 1A	Rotation 6	5	1.5	0.34	50
HK 1A	Rotation 7	5	0.91	0.5	33
HK 1A	Rotation 8	5	0.46	0.64	20
HK 1A	Cover Crop	5	0.9	0.49	43

Champlain Valley AGRONOMICS

RUSLE2 Management Description Record

Rotation 6

Date	*Operation*	*Rotation 6*	*Yield (harv. units)*	*Type of cover material*	*Cover matl add/remove, lb/ac*	*Cover from addition, %*	*Standing res. added by op. desc., lb/ac*
5/5/1	Sprayer, kill crop				133.69	7.2	2540
5/15/1	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/1	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/1	Fert applic. side-dress, liquid						
9/15/1	Harvest, silage				764.75	25	805
4/25/2	Chisel, twisted shovel						
5/5/2	Disk, tandem secondary op.						
5/10/2	Disk, tandem secondary op.						
5/15/2	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/2	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/2	Fert applic. side-dress, liquid						
9/15/2	Harvest, silage				764.75	25	805
4/25/3	Chisel, twisted shovel						
5/5/3	Disk, tandem secondary op.						
5/10/3	Disk, tandem secondary op.						
5/15/3	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/3	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/3	Fert applic. side-dress, liquid						
9/15/3	Harvest, silage				764.75	25	805
4/10/4	Chisel, st. pt.						
4/15/4	Disk, tandem secondary op.						
4/20/4	Disk, tandem secondary op.						
4/25/4	Drill or air seeder single disk openers 7-10 in spac.	Alfalfa brome, spring seed	1.00				
6/25/4	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		285.78	15	
8/4/4	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
9/13/4	Harvest, hay, legume	Alfalfa brome, spring seed senes to y2 regrowth	2.00		405.00	20	
5/30/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		381.78	19	

7/9/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/18/5	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/19/5	Fert applic. surface broadcast						
9/27/5	Harvest, hay, legume	Alfalfa brome, yr2 senes to yr3 regrowth	2.00		405.00	20	
5/30/6	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		519.42	25	
7/9/6	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/6	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/6	Fert applic. surface broadcast						
9/27/6	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
9/27/7	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	

Champlain Valley AGRONOMICS

RUSLE2 Management Description Record

Rotation 7

Date	*Operation*	*Rotation 7*	*Yield (harv. units)*	*Type of cover material*	*Cover matl add/remove, lb/ac*	*Cover from addition, %*	*Standing res. added by op. desc., lb/ac*
5/5/1	Sprayer, kill crop				133.69	7.2	2540
5/15/1	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/1	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/1	Fert applic. side-dress, liquid						
9/15/1	Harvest, silage				764.75	25	805
4/25/2	Chisel, twisted shovel						
5/5/2	Disk, tandem secondary op.						
5/10/2	Disk, tandem secondary op.						
5/15/2	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/2	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/2	Fert applic. side-dress, liquid						
9/15/2	Harvest, silage				764.75	25	805
4/10/3	Chisel, st. pt.						
4/15/3	Disk, tandem secondary op.						
4/20/3	Disk, tandem secondary op.						
4/25/3	Drill or air seeder single disk openers 7-10 in spac.	Alfalfa brome, spring seed	1.00				
6/25/3	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		190.52	10	
8/4/3	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		270.00	14	
9/13/3	Harvest, hay, legume	Alfalfa brome, spring seed senes to y2 regrowth	2.00		270.00	14	
5/30/4	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		509.04	25	
7/9/4	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		270.00	14	
8/18/4	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		270.00	14	
8/19/4	Fert applic. surface broadcast						
9/27/4	Harvest, hay, legume	Alfalfa brome, yr2 senes to yr3 regrowth	2.00		270.00	14	

5/30/5	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		461.71	23	
7/9/5	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		270.00	14	
8/18/5	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		270.00	14	
8/19/5	Fert applic. surface broadcast						
9/27/5	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		270.00	14	
5/30/6	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/6	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/6	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/6	Fert applic. surface broadcast						
9/27/6	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/7	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
9/27/7	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	

Champlain Valley AGRONOMICS

RUSLE2 Management Description Record

Rotation 8

Date	*Operation*	*Rotation 8*	*Yield (harv. units)*	*Type of cover material*	*Cover matl add/remove, lb/ac*	*Cover from addition, %*	*Standing res. added by op. desc., lb/ac*
5/5/1	Sprayer, kill crop				133.69	7.2	2540
5/15/1	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/1	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/1	Fert applic. side-dress, liquid						
9/15/1	Harvest, silage				764.75	25	805
4/10/2	Chisel, st. pt.						
4/15/2	Disk, tandem secondary op.						
4/20/2	Disk, tandem secondary op.						
4/25/2	Drill or air seeder single disk openers 7-10 in spac.	Alfalfa brome, spring seed	1.00				
6/25/2	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		190.52	10	
8/4/2	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		270.00	14	
9/13/2	Harvest, hay, legume	Alfalfa brome, spring seed senes to y2 regrowth	2.00		270.00	14	
5/30/3	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		509.04	25	
7/9/3	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		270.00	14	
8/18/3	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		270.00	14	
8/19/3	Fert applic. surface broadcast						
9/27/3	Harvest, hay, legume	Alfalfa brome, yr2 senes to yr3 regrowth	2.00		270.00	14	
5/30/4	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		519.42	25	
7/9/4	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/4	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/4	Fert applic. surface broadcast						
9/27/4	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	

5/30/5	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/5	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/5	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/5	Fert applic. surface broadcast						
9/27/5	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/6	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/6	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/6	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
9/27/6	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	

Champlain Valley AGRONOMICS

RUSLE2 Management Description Record

Rotation 9 (Cover Crop)

Date	*Operation*	*Rotation 9 (Cover Crop)*	*Yield (harv. units)*	*Type of cover material*	*Cover matl add/remove, lb/ac*	*Cover from addition, %*	*Standing res. added by op. desc., lb/ac*
9/20/1	Drill or air seeder single disk openers 7-10 in spac.	Rye, winter cover	2240				
5/5/2	Sprayer, kill crop				112.00	6.4	2130
5/15/2	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/2	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/2	Fert applic. side-dress, liquid						
9/15/2	Harvest, silage				764.75	25	805
9/20/2	Drill or air seeder single disk openers 7-10 in spac.	Rye, winter cover	2240				
5/1/3	Sprayer, kill crop				106.16	6.1	2020
5/5/3	Chisel, st. pt.						
5/10/3	Disk, tandem secondary op.						
5/12/3	Disk, tandem light finishing						
5/15/3	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/3	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/3	Fert applic. side-dress, liquid						
9/15/3	Harvest, silage				764.75	25	805
9/20/3	Drill or air seeder single disk openers 7-10 in spac.	Rye, winter cover	2240				
5/1/4	Sprayer, kill crop				106.16	6.1	2020
5/5/4	Chisel, st. pt.						
5/10/4	Disk, tandem secondary op.						
5/12/4	Disk, tandem light finishing						
5/15/4	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/4	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/4	Fert applic. side-dress, liquid						
9/15/4	Harvest, silage				764.75	25	805
9/20/4	Drill or air seeder single disk openers 7-10 in spac.	Rye, winter cover	2240				
5/1/5	Sprayer, kill crop				106.16	6.1	2020
5/5/5	Chisel, st. pt.						
5/10/5	Disk, tandem secondary op.						

5/12/5	Disk, tandem light finishing						
5/15/5	Planter, double disk opnr w/fluted coulter with starter fertilizer	Corn, silage	23.0				
6/15/5	Sprayer, post emergence			weeds; 0-3 mo	250.00	14	
6/20/5	Fert applic. side-dress, liquid						
9/15/5	Harvest, silage				764.75	25	805
4/10/6	Chisel, st. pt.						
4/15/6	Disk, tandem secondary op.						
4/20/6	Disk, tandem secondary op.						
4/25/6	Drill or air seeder single disk openers 7-10 in spac.	Alfalfa brome, spring seed	1.00				
6/25/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		285.78	15	
8/4/6	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
9/13/6	Harvest, hay, legume	Alfalfa brome, spring seed senes to y2 regrowth	2.00		405.00	20	
5/30/7	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		381.78	19	
7/9/7	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/18/7	Harvest, hay, legume	Alfalfa brome, yr2 regrowth after cut	1.00		405.00	20	
8/19/7	Fert applic. surface broadcast						
9/27/7	Harvest, hay, legume	Alfalfa brome, yr2 senes to yr3 regrowth	2.00		405.00	20	
5/30/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		519.42	25	
7/9/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/8	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/8	Fert applic. surface broadcast						
9/27/8	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	
5/30/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/9	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/19/9	Fert applic. surface broadcast						
9/27/9	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	

5/30/10	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		601.41	29	
7/9/10	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
8/18/10	Harvest, hay, legume	Alfalfa brome, yr3 regrowth after cut	1.00		459.00	23	
9/27/10	Harvest, hay, legume	Alfalfa brome, yr3 senes to yr4 regrowth	2.00		459.00	23	

Map Unit Description

Washington County, New York

[Minor map unit components are excluded from this report]

Map unit: BnB - Bernardston gravelly silt loam, 3 to 8 percent slopes

Component: Bernardston (80%)

The Bernardston component makes up 80 percent of the map unit. Slopes are 3 to 8 percent. This component is on drumlinoid ridges, till plains, hills. The parent material consists of loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist. Depth to a root restrictive layer, fragipan, is 18 to 30 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during February, March, April. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: BnC - Bernardston gravelly silt loam, 8 to 15 percent slopes

Component: Bernardston (80%)

The Bernardston component makes up 80 percent of the map unit. Slopes are 8 to 15 percent. This component is on hills, till plains, drumlinoid ridges. The parent material consists of loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist. Depth to a root restrictive layer, fragipan, is 18 to 30 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during February, March, April. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Map unit: BnD - Bernardston gravelly silt loam, 15 to 25 percent slopes

Component: Bernardston (85%)

The Bernardston component makes up 85 percent of the map unit. Slopes are 15 to 25 percent. This component is on drumlinoid ridges, till plains, hills. The parent material consists of loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist. Depth to a root restrictive layer, fragipan, is 18 to 30 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during February, March, April. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map unit: BrB - Bernardston-Nassau shaly silt loams, 3 to 8 percent slopes

Component: Bernardston (55%)

The Bernardston component makes up 55 percent of the map unit. Slopes are 3 to 8 percent. This component is on hills, till plains, drumlinoid ridges. The parent material consists of loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist. Depth to a root restrictive layer, fragipan, is 18 to 30 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during February, March, April. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Nassau (35%)

The Nassau component makes up 35 percent of the map unit. Slopes are 3 to 8 percent. This component is on benches, till plains, ridges. The parent material consists of channery loamy till derived mainly from local slate or shale. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Map unit: BrC - Bernardston-Nassau shaly silt loams, 8 to 15 percent slopes

Component: Bernardston (55%)

The Bernardston component makes up 55 percent of the map unit. Slopes are 8 to 15 percent. This component is on drumlinoid ridges, till plains, hills. The parent material consists of loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist. Depth to a root restrictive layer, fragipan, is 18 to 30 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during February, March, April. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Component: Nassau (35%)

The Nassau component makes up 35 percent of the map unit. Slopes are 8 to 15 percent. This component is on benches, ridges, till plains. The parent material consists of channery loamy till derived mainly from local slate or shale. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map unit: BSCK - Bernardston-Nassau shaly silt loams, rolling and hilly

Component: Bernardston (50%)

The Bernardston component makes up 50 percent of the map unit. Slopes are 8 to 25 percent. This component is on drumlinoid ridges, hills, till plains. The parent material consists of loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist. Depth to a root restrictive layer, fragipan, is 18 to 30 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during February, March, April. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Nassau (30%)

The Nassau component makes up 30 percent of the map unit. Slopes are 8 to 25 percent. This component is on benches, ridges, till plains. The parent material consists of channery loamy till derived mainly from local slate or shale. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria.

Map unit: BUF - Bernardston soils, steep and very steep

Component: Bernardston (85%)

The Bernardston component makes up 85 percent of the map unit. Slopes are 25 to 50 percent. This component is on drumlinoid ridges, hills, till plains. The parent material consists of loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist. Depth to a root restrictive layer, fragipan, is 18 to 30 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during February, March, April. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria.

Map unit: Ca - Carlisle muck

Component: Carlisle (80%)

The Carlisle component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on marshes, swamps. The parent material consists of deep organic material. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches

Map unit: Ca - Carlisle muck

Component: Carlisle (80%)

during January, February, March, April, May, June, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Map unit: FL - Fluvaquents

Component: Fluvaquents (75%)

The Fluvaquents component makes up 75 percent of the map unit. Slopes are 0 to 3 percent. This component is on flood plains. The parent material consists of alluvium with highly variable texture. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, November, December. Organic matter content in the surface horizon is about 12 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Map unit: Ha - Halsey mucky silt loam

Component: Halsey (80%)

The Halsey component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions. The parent material consists of loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April, May, June, September, October, November, December. Organic matter content in the surface horizon is about 16 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Map unit: HeA - Herkimer gravelly silt loam, 0 to 3 percent slopes

Component: Herkimer (75%)

The Herkimer component makes up 75 percent of the map unit. Slopes are 0 to 3 percent. This component is on alluvial fans. The parent material consists of loamy old alluvium derived from dark, calcareous shale and varying amounts of sandstone and limestone. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February, March, April. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 1 percent.

Map unit: HoB - Hoosic gravelly sandy loam, 3 to 8 percent slopes

Component: Hoosic (75%)

The Hoosic component makes up 75 percent of the map unit. Slopes are 3 to 8 percent. This component is on outwash plains, deltas, terraces. The parent material consists of sandy and gravelly glaciofluvial deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria.

Map unit: HoC - Hoosic gravelly sandy loam, 8 to 15 percent slopes

Component: Hoosic (80%)

The Hoosic component makes up 80 percent of the map unit. Slopes are 8 to 15 percent. This component is on terraces, deltas, outwash plains. The parent material consists of sandy and gravelly glaciofluvial deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available

Map unit: HoC - Hoosic gravelly sandy loam, 8 to 15 percent slopes

Component: Hoosic (80%)

water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Map unit: HSDK - Hoosic gravelly sandy loam, rolling and hilly

Component: Hoosic (80%)

The Hoosic component makes up 80 percent of the map unit. Slopes are 8 to 25 percent. This component is on deltas, outwash plains, terraces. The parent material consists of sandy and gravelly glaciofluvial deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map unit: NAC - Nassau shaly silt loam, undulating through hilly

Component: Nassau (75%)

The Nassau component makes up 75 percent of the map unit. Slopes are 3 to 15 percent. This component is on benches, ridges, till plains. The parent material consists of channery loamy till derived mainly from local slate or shale. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map unit: NBC - Nassau-Rock outcrop association, undulating through hilly

Component: Nassau (40%)

The Nassau component makes up 40 percent of the map unit. Slopes are 3 to 15 percent. This component is on till plains, ridges, benches. The parent material consists of channery loamy till derived mainly from local slate or shale. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Rock outcrop (20%)

Generated brief soil descriptions are created for major soil components. The Rock outcrop is a miscellaneous area.

Map unit: NBF - Nassau-Rock outcrop association, steep and very steep

Component: Nassau (50%)

The Nassau component makes up 50 percent of the map unit. Slopes are 25 to 50 percent. This component is on benches, ridges, till plains. The parent material consists of channery loamy till derived mainly from local slate or shale. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria.

Component: Rock outcrop (30%)

Generated brief soil descriptions are created for major soil components. The Rock outcrop is a miscellaneous area.

Map Unit Description

Washington County, New York

Map unit: OtA - Otisville gravelly sandy loam, 0 to 3 percent slopes

Component: Otisville (75%)

The Otisville component makes up 75 percent of the map unit. Slopes are 0 to 3 percent. This component is on deltas, terraces, outwash plains. The parent material consists of sandy and gravelly glaciofluvial deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria.

Map unit: ScA - Scriba gravelly silt loam, 0 to 3 percent slopes

Component: Scriba (75%)

The Scriba component makes up 75 percent of the map unit. Slopes are 0 to 3 percent. This component is on till plains, drumlins. The parent material consists of loamy till dominated by sandstone, with lesser amounts of limestone and shale. Depth to a root restrictive layer, fragipan, is 12 to 18 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 8 inches during February, March, April, May. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria.

Map unit: ScB - Scriba gravelly silt loam, 3 to 8 percent slopes

Component: Scriba (75%)

The Scriba component makes up 75 percent of the map unit. Slopes are 3 to 8 percent. This component is on drumlins, till plains. The parent material consists of loamy till dominated by sandstone, with lesser amounts of limestone and shale. Depth to a root restrictive layer, fragipan, is 12 to 18 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 8 inches during February, March, April, May. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria.

Map unit: Su - Sun loam

Component: Sun (80%)

The Sun component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions. The parent material consists of loamy till derived primarily from limestone and sandstone, with a component of schist, shale, or granitic rocks in some areas. Depth to a root restrictive layer, densic material, is 20 to 40 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 9 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 1 percent.

Map unit: SV - Sun very stony soils

Component: Sun, very stony (80%)

The Sun, very stony component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions. The parent material consists of loamy till derived primarily from limestone and sandstone, with a component of schist, shale, or granitic rocks in some areas. Depth to a root restrictive layer, densic material, is 20 to 40 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 9 percent. Nonirrigated land capability classification is 6s. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 1 percent.

Yields of Non-Irrigated Crops (Component)

Crop (Yield Units): Alfalfa hay (Tons)
Aggregation Method: Weighted Average
Tie-break Rule: Higher
Interpret Nulls as Zero: Yes

Washington County, New York
Survey Area Version and Date: 13 - 12/15/2013

Map symbol	Map unit name	Rating	Map unit percent
BnB	Bernardston gravelly silt loam, 3 to 8 percent slopes	3.60	100
BnC	Bernardston gravelly silt loam, 8 to 15 percent slopes	3.20	100
BnD	Bernardston gravelly silt loam, 15 to 25 percent slopes	2.98	100
BrB	Bernardston-Nassau shaly silt loams, 3 to 8 percent slopes	2.48	100
BrC	Bernardston-Nassau shaly silt loams, 8 to 15 percent slopes	2.20	100
BSCK	Bernardston-Nassau shaly silt loams, rolling and hilly	1.75	100
BUF	Bernardston soils, steep and very steep		
Ca	Carlisle muck		
FL	Fluvaquents		
Ha	Halsey mucky silt loam		
HeA	Herkimer gravelly silt loam, 0 to 3 percent slopes	3.75	100
HoB	Hoosic gravelly sandy loam, 3 to 8 percent slopes	3.00	100
HoC	Hoosic gravelly sandy loam, 8 to 15 percent slopes	3.20	100
HSDK	Hoosic gravelly sandy loam, rolling and hilly	2.80	100
NAC	Nassau shaly silt loam, undulating through hilly		
NBC	Nassau-Rock outcrop association, undulating through hilly		
NBF	Nassau-Rock outcrop association, steep and very steep		
OtA	Otisville gravelly sandy loam, 0 to 3 percent slopes		
ScA	Scriba gravelly silt loam, 0 to 3 percent slopes	2.25	100
ScB	Scriba gravelly silt loam, 3 to 8 percent slopes	2.25	100
Su	Sun loam		
SV	Sun very stony soils		

Yields of Non-Irrigated Crops (Component)

Crop (Yield Units): Corn silage (Tons)
Aggregation Method: Weighted Average
Tie-break Rule: Higher
Interpret Nulls as Zero: Yes

Washington County, New York
Survey Area Version and Date: 13 - 12/15/2013

Map symbol	Map unit name	Rating	Map unit percent
BnB	Bernardston gravelly silt loam, 3 to 8 percent slopes	17.60	100
BnC	Bernardston gravelly silt loam, 8 to 15 percent slopes	16.00	100
BnD	Bernardston gravelly silt loam, 15 to 25 percent slopes	15.30	100
BrB	Bernardston-Nassau shaly silt loams, 3 to 8 percent slopes	15.60	100
BrC	Bernardston-Nassau shaly silt loams, 8 to 15 percent slopes	11.00	100
BSCK	Bernardston-Nassau shaly silt loams, rolling and hilly	9.00	100
BUF	Bernardston soils, steep and very steep		
Ca	Carlisle muck		
FL	Fluvaquents		
Ha	Halsey mucky silt loam		
HeA	Herkimer gravelly silt loam, 0 to 3 percent slopes	16.50	100
HoB	Hoosic gravelly sandy loam, 3 to 8 percent slopes	13.50	100
HoC	Hoosic gravelly sandy loam, 8 to 15 percent slopes	12.00	100
HSDK	Hoosic gravelly sandy loam, rolling and hilly		
NAC	Nassau shaly silt loam, undulating through hilly		
NBC	Nassau-Rock outcrop association, undulating through hilly		
NBF	Nassau-Rock outcrop association, steep and very steep		
OtA	Otisville gravelly sandy loam, 0 to 3 percent slopes	9.00	100
ScA	Scriba gravelly silt loam, 0 to 3 percent slopes	12.00	100
ScB	Scriba gravelly silt loam, 3 to 8 percent slopes	12.00	100
Su	Sun loam	14.40	100
SV	Sun very stony soils		

Yields of Non-Irrigated Crops (Component)

Crop (Yield Units): Grass-legume hay (Tons)
Aggregation Method: Weighted Average
Tie-break Rule: Higher
Interpret Nulls as Zero: Yes

Washington County, New York
Survey Area Version and Date: 13 - 12/15/2013

Map symbol	Map unit name	Rating	Map unit percent
BnB	Bernardston gravelly silt loam, 3 to 8 percent slopes	3.20	100
BnC	Bernardston gravelly silt loam, 8 to 15 percent slopes	2.80	100
BnD	Bernardston gravelly silt loam, 15 to 25 percent slopes	2.55	100
BrB	Bernardston-Nassau shaly silt loams, 3 to 8 percent slopes	3.25	100
BrC	Bernardston-Nassau shaly silt loams, 8 to 15 percent slopes	2.80	100
BSCK	Bernardston-Nassau shaly silt loams, rolling and hilly	1.50	100
BUF	Bernardston soils, steep and very steep		
Ca	Carlisle muck		
FL	Fluvaquents		
Ha	Halsey mucky silt loam		
HeA	Herkimer gravelly silt loam, 0 to 3 percent slopes	3.38	100
HoB	Hoosic gravelly sandy loam, 3 to 8 percent slopes	2.25	100
HoC	Hoosic gravelly sandy loam, 8 to 15 percent slopes	2.40	100
HSDK	Hoosic gravelly sandy loam, rolling and hilly	2.00	100
NAC	Nassau shaly silt loam, undulating through hilly	1.88	100
NBC	Nassau-Rock outcrop association, undulating through hilly	1.00	100
NBF	Nassau-Rock outcrop association, steep and very steep		
OtA	Otisville gravelly sandy loam, 0 to 3 percent slopes	1.88	100
ScA	Scriba gravelly silt loam, 0 to 3 percent slopes	2.25	100
ScB	Scriba gravelly silt loam, 3 to 8 percent slopes	2.25	100
Su	Sun loam	2.00	100
SV	Sun very stony soils		

RUSLE2 Related Attributes

Washington County, New York

[This report shows only the major soils in each map unit]

Map symbol and soil name	Pct. of map unit	Hydrologic group	Kf	T factor	Representative value		
					% Sand	% Silt	% Clay
BnB:							
Bernardston	80	C	.32	3	32.1	55.9	12.0
BnC:							
Bernardston	80	C	.32	3	32.1	55.9	12.0
BnD:							
Bernardston	85	C	.32	3	32.1	55.9	12.0
BrB:							
Bernardston	55	C	.32	3	32.1	55.9	12.0
Nassau	35	D	.32	2	30.4	55.6	14.0
BrC:							
Bernardston	55	C	.32	3	32.1	55.9	12.0
Nassau	35	D	.32	2	30.4	55.6	14.0
BSCK:							
Bernardston	50	C	.32	3	32.1	55.9	12.0
Nassau	30	D	.32	2	30.4	55.6	14.0
BUF:							
Bernardston	85	C	.32	3	32.1	55.9	12.0
Ca:							
Carlisle	80	A/D	---	3	60.0	30.0	10.0
Ha:							
Halsey	80	B/D	.28	3	32.1	55.9	12.0
HeA:							
Herkimer	75	C	.32	4	32.1	55.9	12.0
HoB:							
Hoosic	75	A	.24	4	66.9	23.1	10.0
HoC:							
Hoosic	80	A	.24	4	66.9	23.1	10.0
HSDK:							
Hoosic	80	A	.24	4	66.9	23.1	10.0
NAC:							
Nassau	75	D	.32	2	30.4	55.6	14.0

RUSLE2 Related Attributes

Washington County, New York

Map symbol and soil name	Pct. of map unit	Hydrologic group	Kf	T factor	Representative value		
					% Sand	% Silt	% Clay
NBC:							
Nassau	40	D	.32	2	30.4	55.6	14.0
Rock outcrop	20	---	---	---	---	---	---
NBF:							
Nassau	50	D	.32	2	30.4	55.6	14.0
Rock outcrop	30	---	---	---	---	---	---
OtA:							
Otisville	75	A	.20	4	66.9	23.1	10.0
ScA:							
Scriba	75	D	.32	2	32.1	55.9	12.0
ScB:							
Scriba	75	D	.32	2	32.1	55.9	12.0
Su:							
Sun	80	D	.28	3	45.0	43.0	12.0
SV:							
Sun, very stony	80	D	.28	3	45.0	43.0	12.0

Section #5 Farmstead Management

Champlain Valley AGRONOMICS

Best Management Practice Summary

BMP Id	Location	NRCS Id	Units	Risk Level (1-4)	Comments	Implementation
Planned Practices: Waste Storage and Transfer						
1.1	Evaporation Pond	Waste Facility Closure (360)	1	4	Land apply contents of evaporation pond. Then conduct closure of the uncertified structure.	12/31/2021
1.2	Home Farm	Waste Storage Facility (313)	± 409,536 ft^3	3	Installation of 180' x 16' (± 2,952,313 gals) concrete waste storage facility.	12/31/2021
1.3	Home Farm	Waste Transfer (360)	1	1	Installation of Flume system to service existing and proposed structures.	12/31/2021
1.4	Home Farm	Waste Separation Facility (632)	1	1	Installation of sand separation system, to remove bedding prior to being sent to manure storage.	12/31/2021
Planned Practices: Barnyard Management						
2.1	Concrete Barnyard	Access Control (472)	+/- 3,552 ft^2	4	Permanently exclude livestock from portions of the barnyard and lean-to.	12/31/2021
Planned Practices: Feed Storage						
3.1	Feed Bunk	Heavy Use Area Protection (561)	+/- 45,000 ft^2	4	Installation of impervious base layer to serve as new feed storage location.	12/31/2021
3.2	Feed Bunk	Vegetative Treatment Area (635)	+/- 15,000 ft^2	4	Installation of +/- 50' x 300' vegetative treatment area to receive diluted high flow effluent from feed storage area.	12/31/2021
3.3	Feed Bunk	Waste Separation Facility (632)	1.	4	Installation of low flow effluent collection and separation facility.	12/31/2021
Planned Practices: Pasture Management						
4.1	Home Pastures	Fence (382)	+/- 333 ft.	2	Installation of fence to ensure animals do not have physical access to pond.	12/31/2021
4.2	Home Pastures	Watering Facility (614)	2-3	1	Installation of 2-3 watering facilities in existing pasture system to draw water from pond.	12/31/2021

Champlain Valley AGRONOMICS

Best Management Practice Summary

Planned Practices: Livestock Mortalities						
BMP Id	Location	NRCS Id	Units	Risk Level (1-4)	Comments	Implementation
5.1	Home Farm	Animal Mortality Facility (316)	1	1	If rendering services are not available begin composting mortalities according to NRCs standards.	12/31/2021
Planned Practices: Nutrient Management						
6.1	Cropland	Nutirent Management (590)	353.33 ac	1	Adhere to nutrient management plan requirements found in Section 3	Annual
6.2	Cropland	Conservation Crop Rotation (328)	353.33 ac	1	Adhere to planned crop rotations found in Section 4	Annual
6.3*	Cropland	Cover Crop (340)	329.71 ac	2	Cover crops are recommended on all highly erodible crop production fields.	Annual

** Denotes enhancement practice not required for CAFO compliance at this time.*

0 65 130 260 390 520 Feet

Champlain Valley AGRONOMICS
10 Train Road
Peru, NY 12972

BMP Overview Map

- Low Flow Collector
- Flume Tank
- Leachate Pipe
- Access Road
- Flume Lines
- Access Control
- Spreader
- VTA
- Bunks
- CWSF
- Sand Separation
- New Structures

Drawn By: Kevin Compeau

Date: 9/3/2019

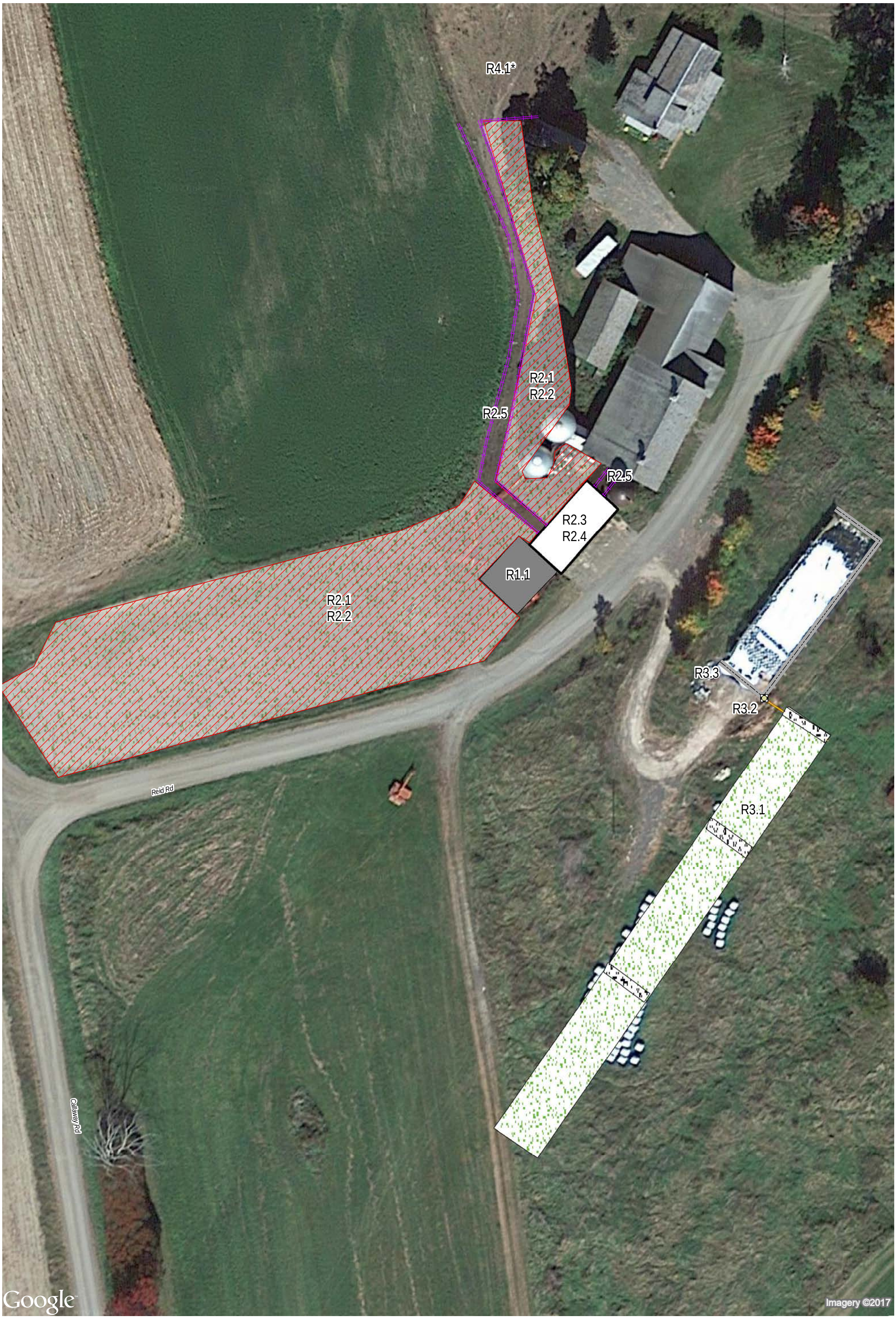
Purpose: Identify Farmstead features and points of interest.

_____(Reid Road)
Best Management Practice Summary

Planned Practices: Waste Storage and Transfer						
BMP Id	Location	NRCS Id	Units	Risk Level (1-4)	Comments	Implementation
R1.1	Reid Road	Waste Storage Facility (313)	1	3	Covered stack pad to hold 6 months of waste (+/- 5,731 ft^3). Proposed stack pad is +/- 30' x 34' with 6' walls.	12/31/2021
Planned Practices: Barnyard Management						
R2.1	Denuded Pasture	Access Control (472)	+/- 30,406 ft^2	3	Temporarily exclude livestock from denuded portions of pasture	12/31/2021
R2.2	Denuded Pasture	Critical Area Planting (342)	+/- 30,406 ft^2	3	Establish vegetation in denuded portions of pasture prior to allowing livestock access	12/31/2021
R2.3	Concrete Feeding Area	Heavy Use Area Protection (561)	+/- 1,256 ft^2	3	Construction of heavy use area protection sized for 45 heifers at 27 ft^2.	12/31/2021
R2.4	Concrete Feeding Area	Roofs and Covers (367)	+/- 1,256 ft^2	3	Erect roof/cover over heavy use area protection to exclude fresh water.	12/31/2021
R2.5	Denuded Pasture	Fence (382)	+/- 585'	3	Installation of fencing to control movement of livestock to pastures from confinement areas.	12/31/2021
Planned Practices: Feed Storage						
R3.1	Feed Bunk	Vegetative Treatment Area (635)	+/- 9,000 ft^2	2	Installation of +/- 30' x 300' vegetative treatment area to receive diluted high flow effluent from feed storage area.	12/31/2021
R3.2	Feed Bunk	Waste Separation Facility (632)	1.	2	Installation of low flow effluent collection and separation facility.	12/31/2021
R3.2	Feed Bunk	Heavy Use Area Protection (561)	+/- 175'	2	Installation of heavy use area protection to deliver silage effluent/runoff to collection/separation system.	12/31/2021
Planned Practices: Pasture Management						
R4.1*	Pasture	Prescribed Grazing (528)	12 acres	1	Develop a prescribed grazing system to reduce overgrazing and soil degradation.	12/31/2021

** Denotes enhancement practice not required for CAFO compliance at this time.*

Champlain Valley AGRONOMICS



Champlain Valley AGRONOMICS
10 Train Road
Peru, NY 12972

(Reid Road)

Farmstead BMP Map

0 20 40 80 120 160 Feet

I. Waste Storage & Transfer

A.Existing Waste Storage Structure: *Evaporation Pond*	
Coordinates:	
Construction Materials:	Earthen Waste Storage
Liner Present:	No Liner
Year Constructed:	N/A
Presiding Engineer:	N/A
Type:	Irregular
Dimensions:	+/- 3,525 ft^2 x +/- 3' (estimated)
24 hour/25 year Event:	N/A
Depth of Freeboard:	N/A
Total Capacity:	N/A
Working Capacity:	N/A
Storage Duration:	Daily Spread

Existing Condition:

The producers constructed the "Evaporation Pond" without consultation by a licensed engineer. The structure is used to store wash down water from the farm's parlor. In the parlor, water is collected in floor drains and flows by gravity through a 4" buried line to the Evaporation Pond. Current management does not involve the land application of the contents of this structure. The level in the storage relies on the natural process of evaporation to avoid overtopping, which is ineffective. Currently, water flows out of the southeast corner and pools in the area northeast of the structure.

Existing open waste storage structures must be evaluated and certified by a qualified professional, to obtain coverage under the current CAFO permits. The certification process must adhere to the NRCS 313 standard *Waste Storage Facility* and follow the "AEM Tool for the Evaluation of Undesigned Waste Storage Facilities".

Planned Actions:

To continue using the "Evaporation Pond" in its current capacity, it will have to meet all the requirements described above. The pond is undersized and shows historic evidence of over-topping. It is not recommended that the farm pursue the certification and continued use of this structure. However, it is recommended that use of this structure cease and its contents be land applied. A temporary means of containing the grey water and land application schedule must be determined. This can be carried out by installing a tank with a portable pump system to deliver the contents to land application equipment. Once the temporary management of process wastewater is in place, the producer shall follow NRCS 360 standard *Waste Facility Closure*.

It is recommended that once closed, the structure be replaced with a long-term concrete waste storage facility, following NRCS 313 standard *Waste Storage Facility*. The installation of the structure will alleviate several environmental concerns at the facility. The first and most obvious concern is the management of process wastewater, which overflows from the existing structure and discharges from another location within the facility. If process wastewater is found to be reaching a water course it would violate the state Environmental Conservation Law. Secondly, recently adopted CAFO permits place strict limitations on land application during frozen and saturated field conditions. Since the farm's current management is to daily spread manure from all sources, compliance with these regulations will be impossible. The installation of a structure that will contain the sand laden manure produced at the facility and allow the farm to comply with the new regulations is required.

Planned Actions (Continued):

The producers are planning to construct new livestock confinement areas and milking facilities, and eventually, phase out the existing facilities. The proposed construction will include a new manure handling system. Red Barn Engineering has provided preliminary design plans for the system. A flume system will transfer manure and soiled bedding from the barns. Once in the flume system, the material will be transferred to a pair of sand settling lanes. While in lanes, the sand will passively settle out. Periodically a lane will be temporarily closed to allow the producers to remove and transfer the material to the drying pad. The estimated footprint of the lanes and pad is 120' x 200'. Red Barn Engineering estimates the efficiency of sand removal to be 80-85%. Following dry down, the bedding can be reused in the confinement areas.

Once material passes through the separation system, liquid manure will be transferred to a below grade concrete waste storage facility (CWSF). Initially, an earthen structure was preferred. However, test pits conducted in the project site were unfavorable for this type of storage. The storage considers increases in the herd, following the construction of the new confinement structures. The CWSF will provide the facility six months of storage capacity. The proposed dimensions are 180' in diameter by 16' deep. At these dimensions, the CWSF will hold ± 394,694 ft^3 or ± 2,952,313 gallons.

I. Waste Storage & Transfer

1.Existing Waste Transfer System: Main Freestall	
Coordinates:	
Housing Type:	Freestall
Cleaning Frequency:	Daily (Multiple Cleanings)
Cleaning Method:	Skid Steer Tractor
Conveyance Direction:	North
Preliminary Destination:	Un-Covered Loading Area
Transfer Type:	Manual Removal
Final Destination:	Daily Spread
Storage Identifier:	N/A

Existing Condition

The Main Freestall is cleaned twice daily with a skid steer tractor. All material is pushed north through the barn and loaded into farm equipment in the concrete barnyard. Once loaded, the material is land applied within 24 hours.

Planned Actions:

The producer's plan on converting the Main Freestall to a youngstock confinement area. They have also discussed eventually incorporating this structure into the flume manure transfer system. In the interim, material from this structure should be land applied while conditions allow and stockpiled in approved sites when conditions prohibited application.

2.Existing Waste Transfer System: Heifer Freestall	
Coordinates:	
Housing Type:	Freestall
Cleaning Frequency:	Bi-Weekly
Cleaning Method:	Skid Steer Tractor
Conveyance Direction:	East
Preliminary Destination:	Un-Covered Loading Area
Transfer Type:	Manual Removal
Final Destination:	Daily Spread
Storage Identifier:	N/A

Existing Condition

The Heifer Freestall Barn is cleaned twice weekly or at the rate of one and a half loads of semisolid waste material per week. Waste material is pushed east via skid steer tractor and directly loaded for daily spreading.

Planned Actions:

The producers have also discussed eventually incorporating this structure into the flume manure transfer system. In the interim, material from this structure should be land applied while conditions allow and stockpiled in approved sites when conditions prohibited application.

3.Existing Waste Transfer System: Steel Shed	
Coordinates:	
Housing Type:	Freestall
Cleaning Frequency:	Daily (Multiple Cleanings)
Cleaning Method:	Skid Steer Tractor
Conveyance Direction:	South
Preliminary Destination:	Un-Covered Loading Area
Transfer Type:	Manual Removal
Final Destination:	Daily Spread
Storage Identifier:	N/A

Existing Condition

The Steel Shed is cleaned twice daily using a skid steer tractor. All material is pushed south through the barn and loaded into farm equipment in the concrete barnyard. Once loaded, the material is land applied within 24 hours.

Planned Actions:

Livestock will no longer occupy this structure upon completion of the new confinement areas.

4.Existing Waste Transfer System: Old Barn	
Coordinates:	
Housing Type:	Bedded Pack
Cleaning Frequency:	As-Needed
Cleaning Method:	By Hand
Conveyance Direction:	North
Preliminary Destination:	Directly Loaded
Transfer Type:	Manual Removal
Final Destination:	Daily Spread
Storage Identifier:	N/A

Existing Condition

The Old Barn currently serves as a holding pen and treatment area for young calves. The type of bedding used is sawdust on an as needed basis. Waste and pack material is manually removed for land application.

Planned Actions:

Livestock will no longer occupy this structure upon completion of the new confinement areas.

5.Existing Waste Transfer System: Calf Barn	
Coordinates:	
Housing Type:	Bedded Pack
Cleaning Frequency:	Bi-Weekly
Cleaning Method:	By Hand
Conveyance Direction:	East
Preliminary Destination:	Directly Loaded
Transfer Type:	Manual Removal
Final Destination:	Daily Spread
Storage Identifier:	N/A

Existing Condition

The Calf Barn currently houses weaned calves. Waste material is manually removed twice weekly for land application.

Planned Actions:

Material from this structure should be land applied while conditions allow and stockpiled in approved sites when conditions prohibited application. Following the completion of the CWSF, the producer will have the ability to transfer this material to the sand drying pad. This will alleviate spreading during adverse weather conditions.

6.Existing Waste Transfer System: Calf Hutches	
Coordinates:	
Housing Type:	Calf Hutches
Cleaning Frequency:	As-Needed
Cleaning Method:	By Hand
Conveyance Direction:	South
Preliminary Destination:	Directly Loaded
Transfer Type:	Manual Removal
Final Destination:	Daily Spread
Storage Identifier:	N/A

Existing Condition

The Calf Hutches currently house a varied number of baby calves. The type of bedding used is a combination of sand and sawdust. The area is cleaned when the calves are moved and the pack material is daily spread.

Planned Actions:

Material from this structure should be land applied while conditions allow and stockpiled in approved sites when conditions prohibited application. Following the completion of the CWSF, the producer will have the ability to transfer this material to the sand drying pad. This will alleviate spreading during adverse weather conditions.

Champlain Valley AGRONOMICS

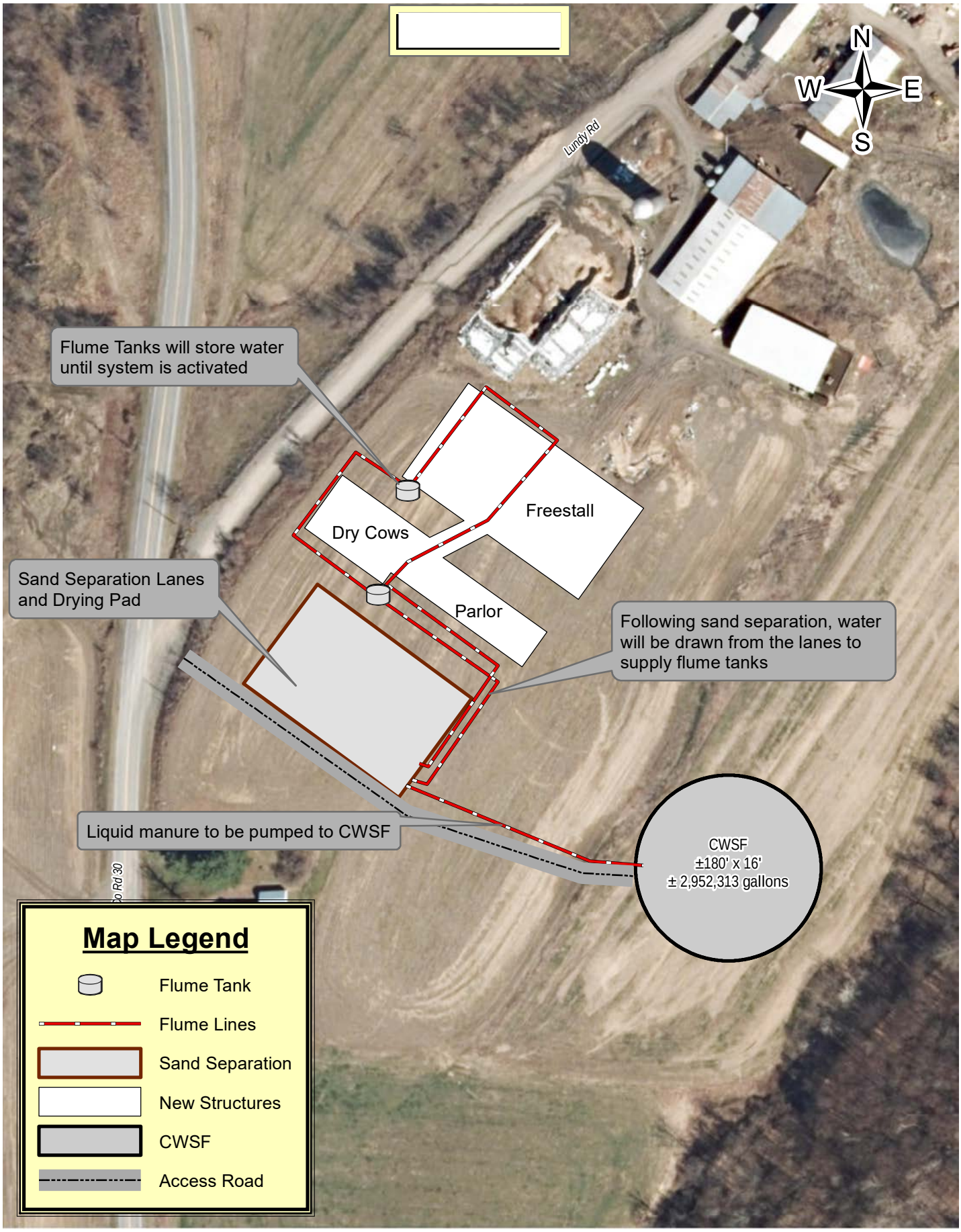
0 30 60 120 180 240 Feet

Existing Waste Storage & Transfer

Champlain Valley AGRONOMICS

0 20 40 80 120 160 Feet

Proposed Waste Storage and Transfer



Champlain Valley AGRONOMICS

0 50 100 200 300 400 Feet

Proposed Waste Storage and Transfer

ROUTE 30

100' WELL SETBACK
WELL LOCATION IS APPROXIMATE
AND SHOULD BE FIELD VERIFIED

EXISTING WATERWAY

16' x 160'
2.4 M ±
MANURE STORAGE

RECEPTION PIT
RECEPTION PIT
RAMP
SAND STACK PAD
2% SLOPE

MILK COWS
MILK COWS
MILK CENTER
MILK COWS
DRY COWS
ELITE & PF COWS

EXISTING FACILITY WASTE, LOW-FLOW LEACHATE COLLECTION, AND TRANSFER TO NEW SYSTEM TO BE DETERMINED

LUNDY ROAD

N/F
PARCEL ID: 158.-1-5
DEED REF: 719-23
166.7 ACRES

N/F
82.1 ACRES

NORTH

redbarn
3050 Yellow Goose Road
Lancaster, PA 17601
Phone: (717) 393-2176
Fax: (888) 850-6015
www.redbarnag.com

NO	BY	DATE	REVISION

CLIENT
PAT LUNDY
MAILING ADDRESS:
1040 LUNDY ROAD
GRANVILLE, NY 12832
518-632-5449

PROJECT TITLE
G T S PLAN

DAIRY OPERATION

TOWN OF HEBRON & HARTFORD, WASHINGTON COUNTY, NEW YORK

SHEET TITLE
PROPOSED
SITE PLAN

SCALE: 1" = 60'
0' 60' 120' 180'

SEAL

DRAWN BY:	CHECKED BY:
PKB	JAA

DATE: 5/21/2019

SHEET NO.: 1 OF 1

Waste Production Report

Annual Waste Production

Facility	Manure		Bedding		Wash Water	Other Water	Runoff and Extr Precip	Rainfall	Annual Throughput Volume w/o 25Yr Rainfall and Runoff	
	Tons	Gallons	Tons	Gallons	Gallons	Gallons	Gallons	Gallons	Tons	Gallons
Separated Solids	1744	NA	3740.5	NA	NA	NA	NA	NA	5484.5	NA
Proposed Storage	NA	3625373	NA	133243	960679	0	530406.8	230384	NA	5480085.8
Annual Total	1,744	3,625,373	3,741	133,243	960,679	0	530,407	230,384*	5,485	5,480,086

Animal Manure Input

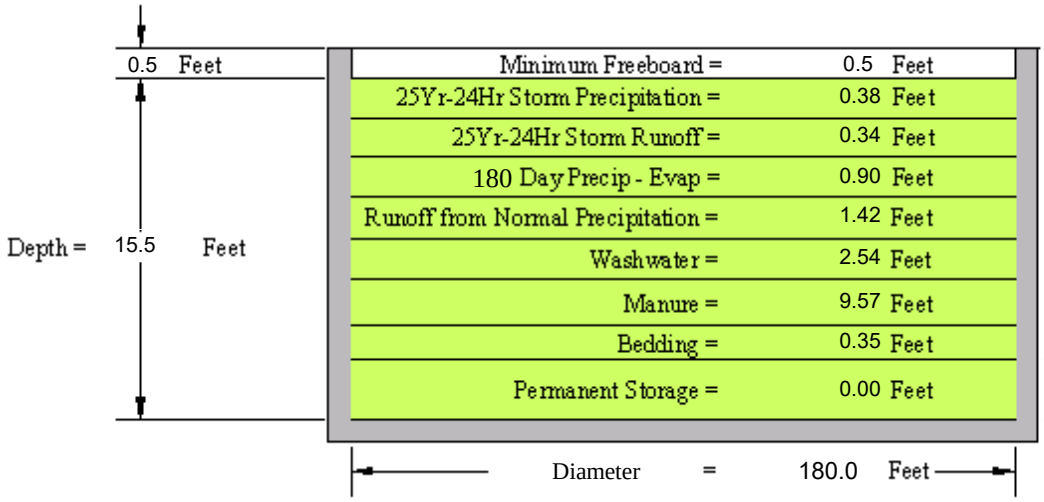
Animal	Type of Animal	Number	Weight in Lb	Manure Produced per Animal Unit in CF/Day	Total Manure Produced in CF/Day	Annual Manure Produced in CF	Annual Manure Produced in Gal
Dry Cow	Dairy	50	1350	0.84	56.70	20,752	155,226
Heifer 1	Dairy	130	900	0.90	105.30	38,540	288,278
Milker	Dairy	350	1450	1.90	964.25	352,916	2,639,808
Heifer 2	Dairy	200	1100	0.90	198.00	72,468	542,061
Totals		730	N/A	N/A	1324.25	484,676	3,625,373

6-month rainfall*

AWM
Tank Data for: _____

Designed by: CVA

Facility ..... Uncovered	Circular		Storage Tank #1	
Storage Period	6	***Months***		
WashWater	64,567	***Cubic Feet***	482,963	***Gallons***
Manure & Extr Precip.....	243,661	***Cubic Feet***	1,822,588	***Gallons***
Bedding	8,955	***Cubic Feet***	66,985	***Gallons***
FlushWater	0	***Cubic Feet***	0	***Gallons***
Normal Rain and 25Yr-24Hr Storm Runoff from Drainage Area	44,870	***Cubic Feet***	335,628	***Gallons***
Normal Rain less Evap plus 25Yr-24Hr Storm on tank surface area	32,640	***Cubic Feet***	244,149	***Gallons***
Total Volume to Store	394,694	***Cubic Feet***	2,952,313	***Gallons***
Ramp Volume (if present)...	0	***Cubic Feet***		
Structural Volume (includes ramp if present)	409,536	***Cubic Feet***		



II. Feed Storage

A.Existing Feed Storage: *Horizontal Feed Bunk*	
Coordinates:	
Storage Type:	Horizontal Bunker Silo
Base Layer:	Combination
Storage Footprint:	+/- 17,250 ft^2
Forages Stored:	Corn Silage
Collection/Treatment:	No
Presiding Engineer:	N/A
Collection Type:	N/A
Collection Capacity:	N/A
Treatment Type:	N/A.
Treatment Area Dimensions:	N/A
Detention Basin Dimensions:	N/A

Existing Condition:

The facility's main forage storage is a series of horizontal bunker silos situated on a concrete base. The storage encompasses an area of +/- 17,250 ft^2 and, based on producer estimates, can store 3,200 tons of feed. Currently, there are no means to collect or control runoff at his location. All runoff flows to the northwest corner of the storage, then enters a roadside ditch and flows south along the Lundy Road. Water travels +/- 540' down the ditch before entering a culvert and outlets into a wooded area north of field H #10.

If silage leachate enters surface waters, it can feed microorganisms which in turn consume oxygen dissolved in the water. As little as one gallon of leachate can lower the oxygen content of 10,000 gallons of water to levels that impair fish survival.

Under the new CAFO permits for New York State, leachate collection and control facilities must be implemented, unless an AEM planner believes the system to be unnecessary. The current situation of uncontrolled overflows from the production area, calls for the implementation of a system to manage both low and high flow leachate.

Planned Actions:

Due to difficulties with the existing site, the producers wish to install new feed storage at a more manageable location. The proposed site in field "H #3" provides more room for equipment and allows for the installation of a formal treatment system. This collection system would include the following components:

1. Installation of a surface inlet and low flow collector/separator.
2. +/- 2,000-gallon storage tank to capture low flow leachate runoff
3. Implementation of a +/- 15,000 ft^2 (50'W x 300'L) VTA to the south west of the bunks
4. Gravel level lip spreader to ensure sheet flow throughout the system.

The placement of the VTA requires the conversion of a part of the existing crop production field H #3. Soil samples in the proposed area will be needed to determine phosphorus levels. Current levels in the field are 60 lbs/acre, which are approaching the 80 lbs/acre threshold. If soil samples confirm that levels are over the accepted replacement material to the depth of 12" shall be required. The native soil is Bernardston gravelly silt loam, which is not at risk for nitrogen leaching.

B.Existing Feed Storage: *Round Bales*	
Coordinates:	
Storage Type:	Round Bales
Base Layer:	Soil Surface
Storage Footprint:	+/- 6,962 ft^2
Forages Stored:	Haylage
Collection/Treatment:	No
Presiding Engineer:	N/A
Collection Type:	N/A
Collection Capacity:	N/A
Treatment Type:	N/A
Treatment Area Dimensions:	N/A
Detention Basin Dimensions:	N/A

Existing Condition:

The farm currently utilizes a portion of crop field north of the Calf Barn to store round bales. Typically, plastic wrapped round bales are a low leaching concern.

Planned Actions:

At this time, there are no environmental concerns with this method of feed storage management. There would be no benefit to installing a collection or treatment system at this location. Due to the method of storage (individually wrapped bales), vehicle traffic is significantly less than typical ag-bag storages. Therefore, degradation of the storage area will be significantly less and not a concern at this time.

Champlain Valley AGRONOMICS

0 30 60 120 180 240 Feet

Existing Feed
Storage Management

Champlain Valley AGRONOMICS

0 30 60 120 180 240 Feet

Proposed Feed Storage

Champlain Valley AGRONOMICS

0 50 100 200 300 400 Feet

Proposed Feed Storage

Champlain Valley AGRONOMICS

0 50 100 200 300 400 Feet

Proposed Feed Storage

III. Barnyard Water Management

A.Existing Barnyard: *Concrete Barnyard*	
Coordinates:	
Barnyard Type:	Other
Base Material:	Concrete
Footprint of Barnyard:	+/- 7,433 ft^2
Is Barnyard Sized Appropriately?	Yes
Daily Use:	12 Hours
Seasonal Use:	All Year
Cleaning Frequency:	Daily
Walls or Curbs:	None
Stormwater Exclusion:	None
Contaminated Water:	No Control

Existing Condition Description:

_____ uses one centralized location for open air confinement of livestock. The concrete barnyard occupies +/- 7,433 ft^2, between the Freestall, Old Barn and milking parlor. This area serves multiple functions. Livestock use this area to transit from the Freestall to the parlor, to gain access to the farm's pastures, and for general exercise. Multiple roofs from adjacent buildings increase freshwater inputs to the barnyard.

Due to the lack of walls or curbing, water comingled with manure overflows from the barnyard in multiple locations. Most of the water flows to the western access point, where it flows to an existing roadside ditch. Once in the ditch, water travels under the road and enters the existing crop production field H #9. The barnyard also overflows at the south-east corner near the Evaporation Pond. This material travels along the perimeter of the pond and flows south following an existing concentrated flow path. Eventually, the water enters the existing crop production field H #4.

To comply with current CAFO permits, barnyard runoff must be managed to prevent overflows or discharge of solids. This is unless an AEM planner finds a system is not necessary. Due to the uncontrolled overflow from multiple locations and the added input of roof water into the barnyard, this location poses a significant risk and must be addressed.

Planned Actions:

Overflows from the barnyard must be addressed using both a change in management as well as the installation of formal best management practices. To prevent the comingling of nutrients with fresh water, it is recommended that a portion of the barnyard be covered. The first portion will consist of an 80' x 30' (2,400 ft^2) area which will serve as the loafing area for the milking cows. The area will provide 30 ft^2 for approximately 80 animals. Since the entire milking herd does not occupy the barnyard at one time, calculations were based on a reduced number. The area will have covered laneways to both the milking parlor and pasture access. Use of the remaining barnyard for housing livestock will cease. Drop inlets will be needed to collect and divert fresh water from the covered areas. In addition to the erection of roofs/covers, 4' buck walls will be required along the existing holding area to prevent overflows from this area.

(Update 2019) The producers will discontinue use of the barnyard following the construction of the new confinement areas and milking parlor. In the interim, the cleaning frequency of the barnyard should increase and use should be limited as much as possible to reduce runoff.

Champlain Valley AGRONOMICS

0 12.5 25 50 75 100 Feet

Existing Barnyard
Water Management

Champlain Valley AGRONOMICS

0 12.5 25 50 75 100 Feet

Existing Barnyard Water Management

Champlain Valley AGRONOMICS

0 25 50 100 150 200 Feet

Existing Barnyard
Water Management

IV. Pasture Management

A. Existing Pasture System: *Home Pastures*	
Coordinates:	[redacted]
Pasture Acres:	44.87
Seasonal Use:	Spring, Summer, & Fall
Daily Use:	24 Hours
Grazing Acres per Animal Unit:	5.9
Condition of Pasture:	Densely Vegetative, Except Traffic Areas
Walkways or Laneways:	Laneways are bare with runoff visible
Water Source:	Waterbody
Access to Water Courses:	Unlimited Access
Attractants:	Mobile Feeders
Access to Wood Lots:	No
Has a Prescribed Grazing Plan been developed:	No

Existing Condition:

The existing +/- 45-acre pasture system is relatively well vegetated with bare ground located only on heavily trafficked areas. Livestock from the Main Freestall and Steel Shed have access to the pasture system during the Spring, Summer, and Fall months. Attractants include mobile feeders and a small pond serves as the water source.

Planned Actions:

It is recommended, that a fence be installed around the perimeter of the pond to prohibit livestock from directly accessing the wetland. Two to three watering facilities should be installed, drawing from the existing pond to provide drinking water for the animals.

A prescribed grazing plan is recommended, as an enhancement practice. A well maintained grazing system, will not only provide nutritional benefits to the resident livestock, it will also promote water infiltration and filtration of runoff.

B. Existing Pasture System: *Reid Road Pastures*		
Coordinates:		
Pasture Acres:	12	
Seasonal Use:	All Year	
Daily Use:	24 Hours	
Grazing Acres per Animal Unit:	.25	
Condition of Pasture:	Over Grazed	
Walkways or Laneways:	No Laneways	
Water Source:	Barn	
Access to Water Courses:	Livestock are fenced out	
Attractants:	No Attractants Native Vegetation Only	
Access to Wood Lots:	No	
Has a Prescribed Grazing Plan been developed:		No

Existing Condition:

The existing +/- 12-acre pasture system is overgrazed with poor vegetation growth. Livestock from the Reid Road Barn have access to the pasture system throughout the calendar year. All the bred heifers (45) have free access to the system, returning to the barn for supplemental feed and water.

Planned Actions:

A prescribed grazing plan is recommended, as an enhancement practice. A well maintained grazing system, will not only provide nutritional benefits to the resident livestock, it will also promote water infiltration and filtration of runoff. Please note, additional grazing land may be required to implement a prescribed plan.

Please refer to the *Barnyard Water Management* section of this CNMP for additional BMP's to address heavily denuded areas.

Champlain Valley AGRONOMICS

0 175 350 700 1,050 1,400 Feet

Existing Pasture Management

Champlain Valley AGRONOMICS

0 165 330 660 990 1,320 Feet

Proposed Pasture Management

VII. Stormwater Management

Existing Practice	Identifier	Number or Length
N/A	N/A	N/A

Planned Actions:

Red Barn Engineering is currently developing a clean water exclusion system, that will be included within the final draft of the proposed facility and best management construction. The best management schedule will be updated accordingly upon receipt of the final draft.

Champlain Valley AGRONOMICS

0 37.5 75 150 225 300 Feet

Existing Stormwater Management

V. Process Wash Water

A. Existing Process Wash Water: Parlor	
Coordinates:	
Source of Processed Water:	MHWW
Organic Matter Levels:	Organic Matter is Removed
Animals Are Milked	2 times/24 hours
Water Used Daily:	+/- 500 gals
Water Used Annually:	+/- 182,500
Storage/Treatment Method:	Daylights to Soil Surface
Handling Method:	No Handling Procedures
Engineer Certification:	No
Presiding Engineer:	N/A

Existing Condition Description:

milks the herd twice a day in a Double 6 Herringbone Parlor. While cleaning the parlor and milking equipment, the farm uses +/- 500 gallons a day. Water used to clean the parlor and holding area collects in floor drains and flows by gravity through an underground pipe to the Evaporation Pond. Milk house waste water also collects in floor drains, which flow by gravity through an underground pipe across the Lundy Road. The pipe outlets in the grassy area above the existing crop production field H #9.

Under the current CAFO permit, MHWW is defined as a process wastewater, as it is generated in the production of intermediate or final products. Direct discharges of this material must be addressed by implementing a formal best management practice.

Planned Actions:

The use of the Evaporation Pond which receives grey water used in the cleaning of the parlor is discussed in the section "Waste Storage and Transfer".

Due to the location of the MHWW pipe, it drains away from the line used to carry wash water to the Evaporation Pond. Recommendations to alleviate the discharge of process waste water include installing a pump and sump to collect MHWW and transfer it to the existing wash water line. The water shall be directed to the temporary 2,000-gallon storage tank until the closure of the Evaporation Pond and the installation of the EWSF.

(Update 2019) Milking operations will cease at this location upon completion of the new parlor.

Champlain Valley AGRONOMICS

0 20 40 80 120 160 Feet

Existing Process Waste Water Management

VI.

A. Existing Mortality Handling: *Staging Area*	
Coordinates:	
Handling Method:	Staging Area
Composting Method:	N/A
Composting Materials:	N/A
Are Materials Land Applied:	N/A
Rendering Company:	Larry Burch

Existing Condition Description:

has enlisted the services of a local renderer for disposing of animal mortalities. Larry Burch now removes livestock mortalities from the farm. Mr. Burch may be contacted via telephone at 518-632-5344.

Current CAFO regulations require that mortalities be properly disposed of within three days. The disposal of animal mortalities in stormwater or any liquid manure or process wastewater treatment systems is prohibited.

Planned Actions:

If rendering services become unavailable, a composting facility shall be established and begin to receive mortalities. Composting of mortalities must be conducted in accordance with the 2014 Cornell Waste Management Institute recommendations "Composting Animal Mortalities" or the NRCS 316 standard *Animal Mortality Facility.*

Champlain Valley AGRONOMICS

0 25 50 100 150 200 Feet

Livestock Mortalities

VIII. Fuel and Petroleum Storage:

Facility:	
Registered with NYS Petroleum Bulk Storage:	No
Is Registration Required:	No
SPCC Plan Developed:	Not Required

Tank ID:	Tank #1
Type:	Above Ground Steel Tank
Contents:	Diesel Fuel
Capacity:	275 gallons
Secondary Containment:	No
Labeled:	No

Tank ID:	Tank #2
Type:	Above Ground Steel Tank
Contents:	Off Road Diesel
Capacity:	550 gallons
Secondary Containment:	No
Labeled:	No

Tank ID:	Tank #3
Type:	Above Ground Steel Tank
Contents:	Gasoline
Capacity:	275 gallons
Secondary Containment:	No
Labeled:	No

Champlain Valley AGRONOMICS

0 5 10 20 30 40 Feet

Fuel Storage Map

Section #6 Farm Emergency Plan

Champlain Valley AGRONOMICS

Environmental Incident Response Plan

Table of Contents

Environmental Incident Response Plan Summary

Farm Name: _____

Owner/Operators: _____

Farm Address:
_____, Granville NY 12832

Primary Farm Contacts	Telephone
_____	_____
_____	_____
_____	_____
_____	_____

Emergency Responder	Name	Telephone
Fire/Rescue	911	911
Police	Granville Police Department	(518)-642-1414
Veterinarian	Dr. Josh Boyden	(413)-475-0464
Emergency Manure Hauler	Ed Stewart	(518)-361-0190
_____	_____	_____
Excavation Contractor	Bob Liebey	(578)-361-2037
DEC Hazardous Spill Line	Spill Reporting Op-Tech	1-800-457-7362 (518)-561-8368
Poison Control	NYS Poison Control	1-800-222-1222
Local Highway Dept.	Town of Granville	(518)-642-2560
DEC Main Office		(518)-897-1200
Rendering Services	Larry Burch	(518)-232-5438

Incident Response Procedures

Personal Injury / Fire Emergency

Contacts:

Contacts	Title	Telephone #
Fire/Rescue	911	911
"Farm Operator"		

Emergency Information:

Equipment	Location
First aid equipment	Farm House
Fire suppression equipment	Parlor, Shop, Equipment
Hazardous/Flammable Materials on Farm	Shop, Fuel Tanks

Emergency Actions

1. Determine nature of emergency and type of assistance required.
2. Call 911.
3. Attempt to stabilize injured person without moving, unless necessary and safe to do so.
4. Start CPR.
5. Implement evacuation of people and livestock if appropriate.
6. Identify potential locations of hazardous or flammable materials and notify emergency personnel when they arrive.

Accidental Entry to Manure Storage or Transfer Facilities

Contacts:

Contacts	Title / Company	Telephone #
Fire/Rescue	911	911
Business Owner		

Emergency Information:

Equipment	Location
First aid equipment	Farm House
Rescue Equipment	N/A
Flotation Devices	N/A

Emergency Actions

1. Call for help.
2. Shut off manure transfer pump and agitator.
3. Locate emergency rescue equipment (grab pole, ladder, & flotation device) and attempt to reach victim. DO NOT enter a confined area where manure gases could accumulate without an appropriate respirator.
4. Initiate CPR if necessary.
5. Call 911.

Manure Storage Overflow

Contacts:

Contacts	Name /Title / Company	Telephone #
"Farm Operator"		
Emergency Manure Hauler		
On-Farm Equipment Operator		
Excavation Contractor		
DEC Spill Hotline		1-800-457-7362

Emergency Information

- Utilize the nearest soil source on the farm for fill.
- Construct temporary manure containment dikes as required to contain the spill

Emergency Actions

1. Contact Farm Emergency Coordinator
2. Stop the flow
3. Assess the situation and make appropriate calls.
4. Notify DEC spill hotline 1-800-457-7362
5. Begin clean-up.
6. If required, call manure hauler to bring agitation pump and tanker, call for front end loader and backhoe.
7. Construct a temporary dike below the manure storage from earth fill, corn silage or other available materials if manure is flowing toward a defined waterway or drainage outlet.
8. Use soil fill or corn silage to add temporary fill to the top of the manure storage facility berm to stop the manure overflow, if occurring from a defined location.
9. Place agitation pump in pit at designated pumping location and begin loading tankers.
10. Land apply manure on fields approved for manure application in the nutrient management plan. Apply at the established rates. Or transfer manure to neighbor for prearranged storage.
11. Collect manure and contaminated soil from overflow area and from behind temporary dike. Land apply materials on fields approved for manure application in the nutrient management plan. Apply at the established rates. Remove temporary dike from the field and temporary fill from the manure storage facility berm.

Manure Storage Leakage

Leakage from the base or sidewall of a manure storage structure is often seepage rather than flowing leaks.

Responses are as follows:

- Dig a small well or ditch to catch all seepage, put in a submersible pump, and pump back into lagoon.
- If holes are caused by burrowing animals, trap or remove animals, fill holes, and compact with a clay-type soil.
- Other holes may be likewise temporarily plugged with clay soil.

Contact engineer to develop a plan to repair the facility, and verify repairs are adequate.

Manure Storage Failure

Contacts:

Contacts	Name /Title / Company	Telephone #
"Farm Operator"		
Emergency Manure Hauler		
On-Farm Equipment Operator		
Excavation Contractor		
DEC Spill Hotline		1-800-457-7362

Emergency Information

- Front end loader is parked at the bunker silos
- Utilize the nearest soil source on the farm for emergency fill.
- Construct temporary manure containment dikes as required to contain the spill

Emergency Actions

1. Contact Farm Emergency Coordinator.
2. Stop all additional flow to the storage structure (waterers, flush system, etc). Prevent surface water from entering the system.
3. Assess the situation and make appropriate calls.
4. Notify DEC spill hotline 1-800-457-7362.
5. Begin clean-up. Call front end loader operator and excavator if needed.
6. Construct a temporary dike below the manure storage from earth fill, corn silage or other available materials if manure is flowing toward a defined waterway or drainage outlet.
7. Attempt to place temporary fill in the area of dike failure.
8. Call manure hauler to bring agitation pump and tanker.
9. Place an agitation pump in pit at designated pumping location as soon as possible and begin loading tankers.
10. Land apply manure on fields approved for manure application in the nutrient management plan. Apply at the established rates. Or transfer manure to neighbor for prearranged storage.
11. Collect manure and contaminated soil from overflow area and from behind temporary dike. Land apply materials on fields approved for manure application in the nutrient management plan. Apply at the established rates. Remove temporary dike from the field and temporary fill from the manure storage facility berm.
12. Conduct engineering analysis of manure storage facility and develop repair plan. Obtain necessary approval for repair plan.
13. Repair manure storage facility.
14. Document actions.

Manure Spill During Transport or Application

Contacts:

Contacts	Name /Title / Company	Telephone #
"Farm Operator"		
Emergency Manure Hauler		
On-Farm Equipment Operator		
Excavation Contractor		
DEC Spill Hotline		1-800-457-7362
Local Police Station	Granville Police Department	(518)-642-1414

Emergency Information

- Identify location of spill.
- Clean up equipment needed – skid loader/front end loader, corn silage/bedding or water tanker, manure spreader.

Emergency Actions

1. Eliminate the source.
    - Stop manure application or pumps.
    - Close valves. Separate pipes, creating an air gap and stopping flow.
    - Transfer manure/liquid to another basin or lagoon.
2. Contain the spill, if possible.
    - Create a containment dam in the field, ditch or stream.
    - In a field, use tillage equipment to slow the flow
    - Check for tile flows.
    - Construct a temporary holding basin down slope.
    - If possible, place soil over the point of seepage, ensuring that you do not drive over or compact the seepage point.
3. Assess the extent of the spill and note any obvious damages.
    - Did or could the spill reach any surface waters, well casings or other sensitive areas?
    - How much was released? What time?
4. Contact the appropriate agencies, including sheriff's department if traffic control is needed.
5. Clean up the spill and make repairs. Did any damage occur (employee injury, fish kills, or property damage)?
6. Land apply materials collected manure and contaminated soil on fields approved for manure application in the nutrient management plan. Apply at the established rates.
7. Document and review actions taken to contain or minimize the spill.

Movement of Manure During or After Application

Emergency Actions

1. Stop land applying manure. Assess needs and call for help. Review steps listed above.
2. If possible, incorporate manure with tillage or till ground down slope of applied manure to reduce runoff.
3. Construct a temporary berm to prevent runoff of manure, if necessary.
4. Evaluate the application rates for fields where runoff occurred. Recalibrate spreader if necessary.

Catastrophic Mortality Disposal

Contacts

Contacts	Name /Title / Company	Telephone #
"Farm Operator"		
Veterinarian		
Mortality Disposal Contractor		
Excavation Contractor		

Emergency Actions

1. Contact veterinarian if death is suspicious or animal displayed unusual symptoms.
2. Remove mortality from the livestock production area. Place in designated mortality storage area (secure from scavengers and having appropriate runoff controls).
3. Contact mortality disposal contractor to arrange pick up within 24 hours.
4. If directed by the State Veterinarian, implement disease outbreak procedures as required. This may include killing exposed animals, burning carcasses, and burial of ashes in the catastrophic mortality burial area.

Hazardous Material Spill

Contacts

Contacts	Name /Title / Company	Telephone #
Fire/Rescue	911	911
Hazardous Response Unit	Washington County Public Safety Dept	(518)-747-7520
"Farm Operator"		
DEC Hazardous Spill Line		1-800-457-7362

Spill Information

Contacts	On Farm Location
First Aid Equipment	Farm House
Fire Suppression Equipment	Parlor, Shop, Equipment
Personal Protection Equipment	Parlor, Office, Shop

Emergency Actions

1. Identify the hazardous material that has been spilled. Assess need for safety equipment.
2. Stop the flow. Turn off all pumps.
3. Assess the situation and make appropriate calls.
4. Flammable materials: Shut off power to area from a remote location. Eliminate sources of ignition.
5. Evacuate people and livestock as appropriate.
6. Contain the spill and begin cleanup.
7. Prevent hazardous materials from leaving spill site by construction temporary dikes if necessary.
8. Once the situation has been stabilized collect hazardous material using approved methods and dispose of contaminated soil according to regulations.
9. Document actions.

Emergency Accident Plan Incident Worksheet

Incident Date / Time:

Location:

People / Agencies Involved:

Type of Incident:

Worksheet Completed By:

Signature: _____

Date Completed: _____

Odor Management

Contact

Contacts	Name /Title / Company	Telephone #
Farm Operator		

Odor Monitoring Program Actions

1. After a complaint is placed fill out the Odor Monitoring Worksheet. Insert as much detail as possible.
2. Review activities to reduce odors:
    - Manure agitation.
    - Inject manure directly into soil.
    - Clean feed bunkers.
    - Arrange for timely mortality removal.
3. Steps to establish working relationship with neighbors and community members:
    - Provide notice to neighbors prior to land application of manure.
    - Avoid spreading manure during holidays and community events.
    - Clean roads if operations have deposited manure or mud is on it.
    - Participate in local activities such as 4-H, dairy days, or school events. Host a community picnic or open house.
4. Monitor effectiveness of odor control technologies and management.
    - Record the amount of odor present as determined by managers.
    - Number of complaints filed.

Odor Monitoring Worksheet

Date:		Time:		Form Completed By:	

Complaint Received
From:
Address:
Phone Number:

Description of Complaint:

Weather Conditions									
Sunny		Partly Cloudy		Mostly Cloudy		Overcast		Hazy	
Temperature:		Humidity:		Precipitation:					
Wind Direction:		Wind Speed:							

Odor Source:_____

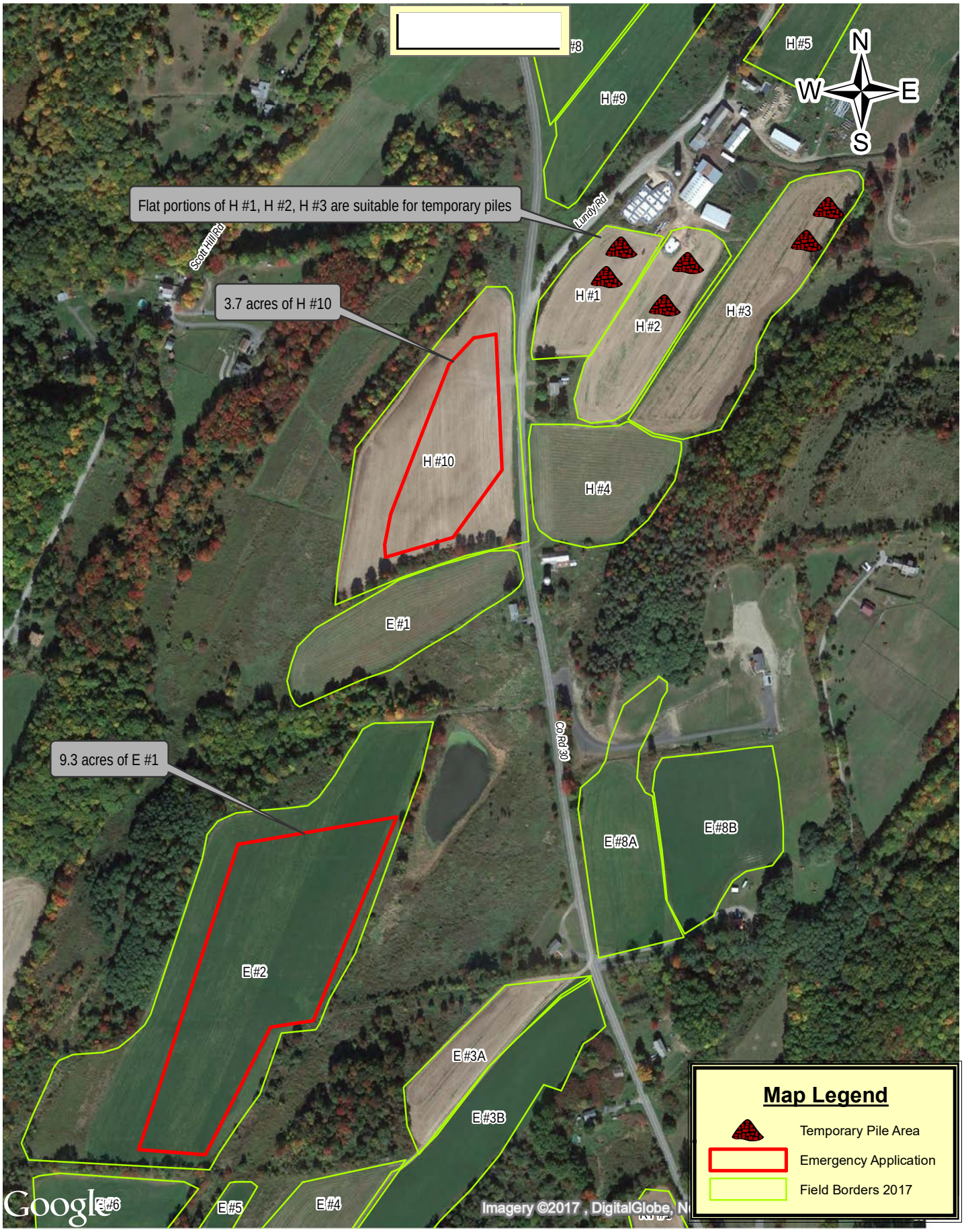
Nuisance Potential:_____

Actions taken to reduce conflict:

Champlain Valley AGRONOMICS

0 25 50 100 150 200 Feet

Emergency Supplies Location Map



Champlain Valley AGRONOMICS

0 170 340 680 1,020 1,360 Feet

Emergency Application Fields

Section #7 Analytical Testing Data

Champlain Valley AGRONOMICS

Soil Test Summary 2021

Field Name	Sample Date	pH	P	K	Mg	Ca	Mn	Zn	Fe	Al	OM
C #1	11/16/2020	6.7	12	278	226	1,688	0	0.0	0	0	3.0%
C #3	11/16/2020	5.6	14	22	122	946	0	0.0	0	0	3.1%
C #4	11/16/2020	6.1	14	160	182	1,626	0	0.0	0	0	3.6%
C #5	11/16/2020	6.6	22	276	178	1,298	0	0.0	0	0	2.6%
C #6	11/16/2020	6.3	30	378	176	1,356	0	0.0	0	0	2.5%
C #7	11/16/2020	7.0	98	534	320	2,436	0	0.0	0	0	3.3%
CH #1	11/16/2020	7.2	28	166	186	1,920	0	0.0	0	0	3.3%
CH #2	11/16/2020	6.7	22	210	200	1,248	0	0.0	0	0	3.6%
CH #3	1/4/2021	6.5	28	298	172	1,476	0	0.0	0	0	2.8%
CH #4	1/4/2021	6.3	30	400	170	1,428	0	0.0	0	0	3.3%
CH #5	1/4/2021	7.1	22	162	176	1,932	0	0.0	0	0	2.8%
CH #6	11/16/2020	6.3	26	276	296	1,714	0	0.0	0	0	3.9%
CN #4	11/16/2020	6.6	24	302	156	1,438	0	0.0	0	0	3.0%
CN #5	11/16/2020	7.0	22	162	176	1,932	0	0.0	0	0	2.8%
CN #6	11/16/2020	7.1	42	180	184	1,730	0	0.0	0	0	2.3%
CN #7	11/16/2020	7.0	42	214	204	1,950	0	0.0	0	0	2.5%
CN #8	11/16/2020	6.7	16	160	242	1,688	0	0.0	0	0	3.6%
CP #1	5/1/2020	5.9	62	582	434	2,653	16	4.3	3	34	3.9%
CS #1	11/16/2020	6.7	28	276	268	2,132	0	0.0	0	0	4.2%
CS #2	11/16/2020	7.5	38	240	232	1,910	0	0.0	0	0	3.8%
CS #3	11/16/2020	6.5	50	392	236	1,656	0	0.0	0	0	3.2%
CS #4	11/16/2020	6.5	22	140	136	1,302	0	0.0	0	0	2.8%
CW #1	11/16/2020	6.4	40	324	228	1,620	0	0.0	0	0	3.0%
CW #10	11/16/2020	6.6	44	426	372	1,976	0	0.0	0	0	4.3%
CW #11	11/16/2020	6.0	18	146	196	1,620	0	0.0	0	0	2.9%
CW #2	11/16/2020	7.0	26	164	214	2,296	0	0.0	0	0	2.8%
CW #4	11/16/2020	6.4	36	252	182	1,506	0	0.0	0	0	2.9%
CW #5	11/16/2020	6.3	18	110	142	1,520	0	0.0	0	0	2.2%
CW #6	11/16/2020	7.2	110	270	342	3,228	0	0.0	0	0	4.1%
CW #7	11/16/2020	7.2	166	414	534	3,834	0	0.0	0	0	4.9%

Created By: Kevin Compeau
Monday, March 1, 2021

Field Name	Sample Date	pH	P	K	Mg	Ca	Mn	Zn	Fe	Al	OM
CW #8	11/16/2020	6.8	56	454	194	1,774	0	0.0	0	0	2.5%
CW #9	11/16/2020	6.5	30	218	288	1,844	0	0.0	0	0	3.0%
E #1	11/16/2020	6.6	36	218	324	2,092	0	0.0	0	0	4.1%
E #2	11/16/2020	7.2	54	354	268	2,026	0	0.0	0	0	3.3%
E #3A	5/1/2020	7.1	131	342	401	4,977	15	5.7	3	14	3.2%
E #3B	5/1/2020	6.9	89	364	321	3,797	14	3.8	3	16	2.8%
E #4	11/16/2020	6.6	20	160	254	2,028	0	0.0	0	0	3.8%
E #5	11/16/2020	6.7	40	524	264	2,056	0	0.0	0	0	3.6%
E #6	11/16/2020	6.9	18	194	336	1,748	0	0.0	0	0	3.7%
E #7	9/30/2020	6.5	30	516	428	3,028	10	2.2	3	32	4.5%
E #8A	11/16/2020	7.0	36	148	336	2,838	0	0.0	0	0	3.7%
E #8B	11/16/2020	7.1	20	110	254	2,590	0	0.0	0	0	3.8%
GI #2	11/16/2020	6.8	28	244	298	1,642	0	0.0	0	0	3.6%
GI #3	11/16/2020	6.7	42	492	252	1,808	0	0.0	0	0	3.3%
GI #4	11/16/2020	6.6	40	572	246	2,002	0	0.0	0	0	1.9%
GS #1	11/16/2020	6.7	30	264	248	1,774	0	0.0	0	0	3.3%
GS #4	11/16/2020	5.6	30	348	160	998	0	0.0	0	0	2.5%
H #1	5/1/2020	7.2	138	329	479	5,072	15	5.1	4	16	3.6%
H #10	5/1/2020	7.1	118	354	463	5,124	13	37.0	34	16	4.3%
H #11	11/16/2020	6.7	16	276	224	1,802	0	0.0	0	0	4.1%
H #2	5/1/2020	7.2	120	534	532	4,495	16	3.6	3	15	4.0%
H #3	5/1/2020	7.0	82	347	400	3,941	10	2.4	3	20	3.8%
H #4	5/13/2020	6.9	66	318	467	3,780	11	2.2	6	20	3.9%
H #5	11/16/2020	7.1	72	254	264	2,566	0	0.0	0	0	2.9%
H #6	11/16/2020	7.6	80	246	262	2,878	0	0.0	0	0	3.1%
H #7	5/1/2020	7.0	47	346	404	3,359	16	1.8	3	16	3.8%
H #8	11/16/2020	7.0	80	246	262	2,878	0	0.0	0	0	3.1%
H #9	11/16/2020	6.9	44	280	340	2,260	0	0.0	0	0	4.1%
HK #1A	11/16/2020	5.8	14	200	114	1,030	0	0.0	0	0	2.6%
HK #1B	11/16/2020	6.6	28	404	0	1,934	0	0.0	0	0	2.2%
RT #1	11/16/2020	6.9	182	506	264	4,516	0	0.0	0	0	3.8%
RT #2	11/16/2020	7.1	74	490	264	1,992	0	0.0	0	0	3.0%
RT #3	11/16/2020	7.2	24	294	310	2,330	0	0.0	0	0	4.2%

Field Name	Sample Date	pH	P	K	Mg	Ca	Mn	Zn	Fe	Al	OM
RT #4	11/16/2020	6.9	30	304	314	2,064	0	0.0	0	0	3.8%

* Soil was analyzed by the Maine Soil Testing Service at the University of Maine.

* Test Methods: All soil samples were analyzed using the original Morgan extraction method. Phosphorus was determined colorimetrically, all other nutrients by ICP. All nutrient levels are reported as lbs/ac in dry soil. Organic Matter is reported as percent by weight. Soil pH was measured in water and in modified Mehlich lime buffer.

* Sample Dates highligeted yellow indicate that the sample is > 3 years old.

* Soil Test P values > 9lbs/ac are colored red.

Agro-One Agronomy Services

730 Warren Rd. Ithaca, NY 14850
Telephone: 800.344.2697 Fax: 607.257.1350

MANURE ANALYSIS REPORT

Sample Number: 25773960
Date Sampled:
Date Received: 5/28/2019
Date Mailed: 5/29/2019
Statement ID:
Kind: Manure, Semi-Solid (091)
Description: HEIFER BARN

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.328 %	6.6	29.1
Ammonium Nitrogen	.057 %	1.1	5.1
Organic Nitrogen	.271 %	5.4	24.0
Phosphorus (P)	.043 %	.9	3.8
Phosphate Equivalent (P205)	.098 %	2.0	8.7
Potassium (K)	.330 %	6.6	29.2
Potash Equivalent (K20)	.397 %	7.9	35.2
Total Solids	16.68 %		
Density	1.06 kg/l	66.38 Lbs/CuFt	8.87 Lbs/Gal

Agro-One Agronomy Services

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MANURE ANALYSIS REPORT

Sample Number: 25773980
Date Sampled:
Date Received: 5/28/2019
Date Mailed: 5/29/2019
Statement ID:
Kind: Manure, Semi-Solid (091)
Description: COW BARN

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.484 %	9.7	44.2
Ammonium Nitrogen	.205 %	4.1	18.7
Organic Nitrogen	.279 %	5.6	25.5
Phosphorus (P)	.053 %	1.1	4.8
Phosphate Equivalent (P205)	.121 %	2.4	11.1
Potassium (K)	.292 %	5.8	26.7
Potash Equivalent (K20)	.352 %	7.0	32.2
Total Solids	19.56 %		
Density	1.09 kg/l	68.35 Lbs/CuFt	9.14 Lbs/Gal

Agro-One Agronomy Services

730 Warren Rd. Ithaca, NY 14850
Telephone: 800.344.2697 Fax: 607.257.1350

MANURE ANALYSIS REPORT

Sample Number: 25773970
Date Sampled:
Date Received: 5/28/2019
Date Mailed: 5/29/2019
Statement ID:
Kind: Manure, Semi-Solid (091)
Description: CALVES

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.493 %	9.9	42.1
Ammonium Nitrogen	.174 %	3.5	14.9
Organic Nitrogen	.319 %	6.4	27.2
Phosphorus (P)	.104 %	2.1	8.9
Phosphate Equivalent (P205)	.239 %	4.8	20.4
Potassium (K)	.296 %	5.9	25.3
Potash Equivalent (K20)	.357 %	7.1	30.5
Total Solids	17.87 %		
Density	1.02 kg/l	63.91 Lbs/CuFt	8.54 Lbs/Gal

Section #8 Resource / Misc Information

Conservation Assistance Notes……..……..

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE`

CONSERVATION ASSISTANCE NOTES

NRCS-CPA-6
11/97

LAND USER:	ADDRESS:	ACREAGE:	LOCATION OF UNIT:
[redacted]	[redacted] **Granville, NY, 12832**	**329.72 Acres**	**Washington County**

CURRENT CONSERVATION OBJECTIVES: To have a CNMP developed to use as a platform for funding through USDA programs to address resource concerns on the farm.

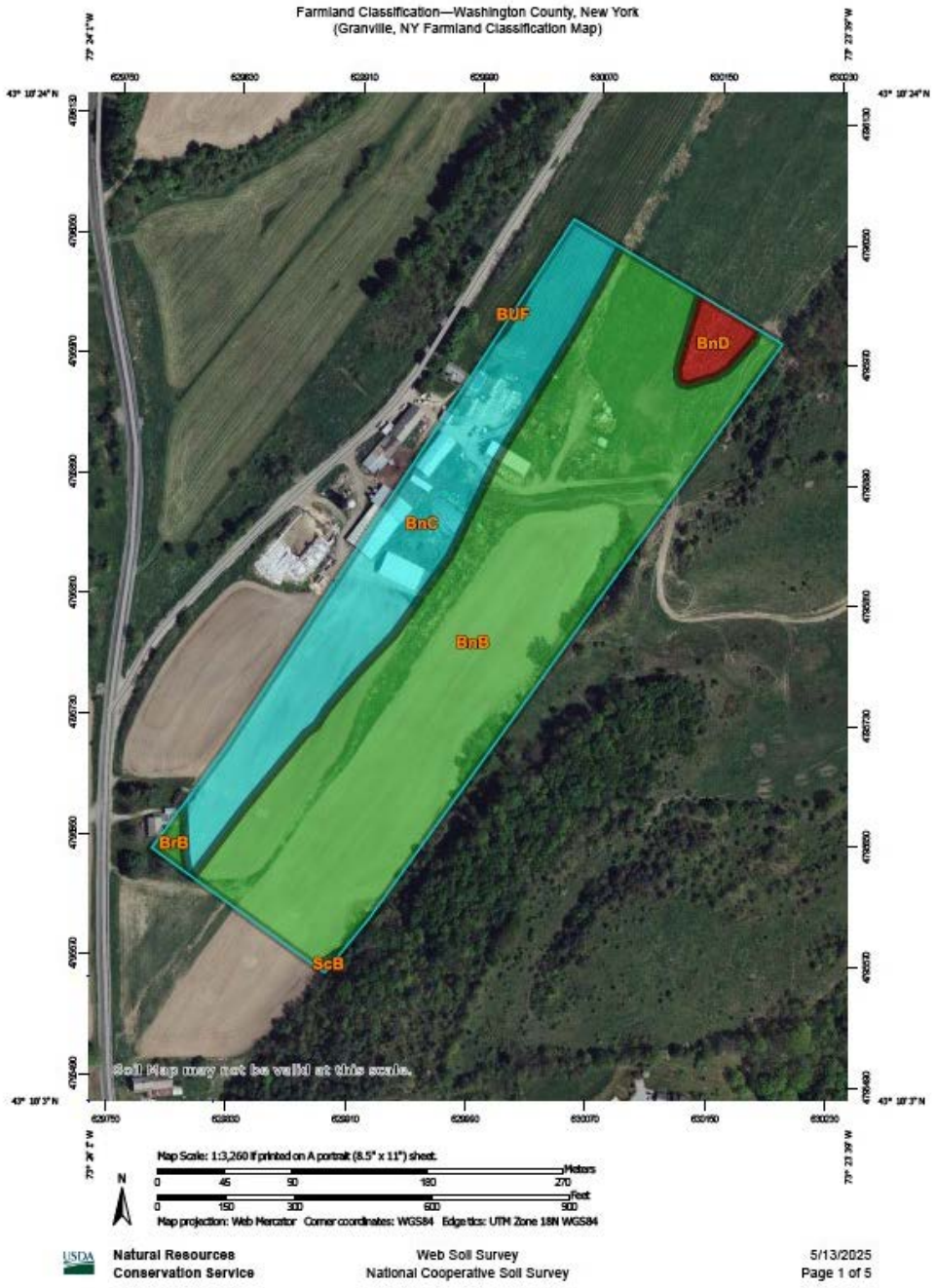
LIST POSSIBLE ALTERNATIVE RESOURCE MANAGEMENT SYSTEMS THE NRCS CONSERVATIONIST MIGHT CONSIDER WITH THE LAND USER (As objectives change, record them in the notes)

NOTES OF SIGNIFICANT ASSISTANCE PROVIDED, ALTERNATIVES CONSIDERED, DECISIONS REACHED, RESOURCE MANAGEMENT SYSTEMS OR COMPONENT PRACTICES INSTALLED, AND FOLLOW UP PROVIDED MAY BE RECORDED CHRONOLOGICALLY BELOW AND ON ADDITIONAL PAGES TO PROVIDE A HISTORY OF RESOURCE CONSERVATION PLANNING AND IMPLEMENTATION ACTIVITIES WITH THE LAND USER. INCLUDE ANY EVALUATION OF SIGNIFICANT RESOURCE, SOCIAL, CULTURAL, ECONOMIC, AND ENVIRONMENTAL RESOURCES. (These include consideration of wetlands, flood plains, endangered species, archeological values, prime lands, etc.)

DATE	ASSISTED BY (Initials)	NOTES
05/31/16	KC	Contacted [redacted] to schedule appointment to review dairy acceleration paper work.
06/06/16	KC	Initial meeting at [redacted]. Obtained field borders, conducted farmstead walk through, and discussed BMP's. Collected general information.
6/15/16	KC	Received award letter from Dairy Acceleration Program.
10/1/16	SW	Collected Soil Samples
7/1/17	KC	Farmstead visit discussed BMP's and obtained crop rotations for upcoming season.
8/15/17	KC	Delivered CNMP and reviewed with [redacted].
12/18/18	KC	Meet with [redacted] to review upcoming crop planner changes
5/30/19	KC	Received conceptual site plan from Red Barn.
6/18/19	KC	Meet with [redacted]), Washington SWCD, and [redacted] at farm. Discussed planned expansion and best management practices.

Q. Prime and Unique Farmland Map

Q-1 Prime and Unique Farmland



MAP LEGEND

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

Soils

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

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

Farmland Classification—Washington County, New York
(Granville, NY Farmland Classification Map)

- 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 1:20,000.

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: Washington County, New York
Survey Area Data: Version 24, Aug 29, 2024

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

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

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
BnB	Bernardston gravelly silt loam, 3 to 8 percent slopes	All areas are prime farmland	13.3	69.2%
BnC	Bernardston gravelly silt loam, 8 to 15 percent slopes	Farmland of statewide importance	5.3	27.6%
BnD	Bernardston gravelly silt loam, 15 to 25 percent slopes	Not prime farmland	0.5	2.4%
BrB	Bernardston-Nassau shaly silt loams, 3 to 8 percent slopes	All areas are prime farmland	0.1	0.7%
BUF	Bernardston soils, steep and very steep	Not prime farmland	0.0	0.1%
ScB	Scriba gravelly silt loam, 3 to 8 percent slopes	Farmland of statewide importance	0.0	0.1%
Totals for Area of Interest			19.2	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