FULL ENVIRONMENTAL ASSESSMENT FORM PART 1 - PROJECT AND SETTING

Instructions for Completing Part 1

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

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

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

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Oak Orchard Wastewater Treatment Plant (OOWWTP) Expansion & Transmission ROW Acquisition		
Project Location (describe, and attach a general location map): 4300 Oak Orchard Road, Town of Clay, Onondaga County, NY		
Brief Description of Proposed Action (include purpose or need): See attached.		
Name of Applicant/Sponsor: Onondaga County Department of Water Environment Protection,Odean Dyer, Commissioner	Telephone: 315-435-2260 E-Mail: odeandyer@ongov.net	
Address: 650 Hiawatha Blvd. West		
City/PO: Syracuse	State: NY	Zip Code: 13204
Project Contact (if not same as sponsor; give name and title/role): Carollo Engineers- Darcy Sachs	Telephone: 516-863-9057 E-Mail: dsachs@carollo.com	
Address: 530 Seventh Avenue, Suite 2402		
City/PO: New York	State: NY	Zip Code: 10018
Property Owner (if not same as sponsor): See Attached Figure 3	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☐Yes ☑No		
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Onondaga County Department of Water Environment Protection approval	November 2025
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYS Canal Corp. & NYSOGS-outfall, NYSDEC (Article 15 & 24, Part 361, SPDES, bulk storage & air), NYSEFC-funding, NYSDOH-reuse/recycled water	Attachment 1
h. Federal agencies ☑Yes ☐No	USACE Section 404	Attachment 1

i. Coastal Resources.

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

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

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

C. Planning and Zoning

C.1. Planning and zoning actions.

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

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

C.2. Adopted land use plans.

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

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

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

If Yes, identify the plan(s):

LWRP_____

_____

_____

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

If Yes, identify the plan(s):

_____

_____

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
OOWWTP Expansion- GOV- Government (Zoned RA-100), Transmission ROW- RA-100 Residential/Agricultural, GOV- Government (Zoned RA-100) and Industrial 2 (I-2)

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

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

C.4. Existing community services.

a. In what school district is the project site located? North Syracuse Central School District

b. What police or other public protection forces serve the project site?
Onondaga County Sheriff

c. Which fire protection and emergency medical services serve the project site?
5 volunteer fire departments (Brewerton, Caughdenoy, Clay, Moyers Corners and North Syracuse)

d. What parks serve the project site?
Clay North Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? expansion of an existing WWTP and outfall work and transmission ROW land acquisition

b. a. Total acreage of the site of the proposed action? 76 acres
b. Total acreage to be physically disturbed? ~20 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 76 acres
Transmission Line ROW Acquisition = 30-50 acres

c. Is the proposed action an expansion of an existing project or use? ☑ Yes ☐ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: 7 acres (OOWWTP exp.)

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

e. Will the proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 4
- Anticipated commencement date of phase 1 (including demolition) early month 2027 year
- Anticipated completion date of final phase late month 2033 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

The anticipated schedule is as follows: reuse facility- completed March 2028, OOWWTP Liquid Train -completed late 2031, outfall construction completed late 2027, OOWWTP biosolids completed late 2033.

f. Does the project include new residential uses? ☐Yes ☑No

If Yes, show numbers of units proposed.

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

g. Does the proposed action include new non-residential construction (including expansions)? ☑Yes ☐No

If Yes,

i. Total number of structures 15

ii. Dimensions (in feet) of largest proposed structure: 45 height; 219 width; and 158 length

iii. Approximate extent of building space to be heated or cooled: 74,000 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☑No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐Yes ☐No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☑Yes ☐No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Oneida River (899-1) impacts from outfall work, wetland north of the existing WWTP.

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
Outfall work is proposed within the Oneida River (impacts anticipated to be minimal) and wetland will be filled for the WWTP expansion (~2 acres).

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐ Yes ☑ No
If Yes, describe:

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

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

v. Describe any proposed reclamation/mitigation following disturbance:
n/a

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

i. Total anticipated water usage/demand per day: 823 gallons/day

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

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

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

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

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

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

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

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: n/a gallons/minute.

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

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

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

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

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

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

If Yes:

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

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

If Yes:

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

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

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

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

If Yes:

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

_____ Square feet or ~7.23 acres (impervious surface) 8.89 existing/ 16.12 proposed

_____ Square feet or 76 acres (parcel size)

ii. Describe types of new point sources. paved areas, new structures

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

bioretention filter system and/or above ground dry detention system

- If to surface waters, identify receiving water bodies or wetlands: _____

If directed to surface water, would go to Mud Creek

- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

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

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

If Yes, identify:

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

heavy equipment and fleet/delivery vehicles

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

generator

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

biosolids dryer, digesters flare, digesters, gravity belt thinckener, belt filter press

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

If Yes:

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

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

- 25 Tons/year (short tons) of Carbon Dioxide (CO_2) * IWWTP and OOWWTP will be permitted jointly
- 0 Tons/year (short tons) of Nitrous Oxide (N_2O)
- 0 Tons/year (short tons) of Perfluorocarbons (PFCs)
- 0 Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- 0 Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- 0.5 Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

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

If Yes:

i. Estimate methane generation in tons/year (metric): 1192 (digesters only)

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): It will be captured and used as boiler and dryer fuel , or flared.

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

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

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

If Yes:

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

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

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

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

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

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

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

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

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

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: See Attachment 2 for detailed electricity demand

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

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

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

i. During Construction:

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

ii. During Operations:

- Monday - Friday: 24 hours/day
- Saturday: 24 hours/day
- Sunday: 24 hours/day
- Holidays: 24 hours/day

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

If yes:

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

Temporary noise during construction, Monday thru Friday, 7am to 5pm. Operational noise is not expected to increase above existing noise levels.

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

Describe: _____

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

If yes:

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

Building/structure mounted light fixtures are proposed. Site lighting will be designed to minimize light pollution. Dark sky complaint light fixtures would be installed around the perimeter of the site and on the exterior of the buildings. There are no non WWTP occupied structures close to the expansion work.

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

Describe: _____

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

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

Odors will be managed at the facility as they are currently. No significant increases in odors are anticipated

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

If Yes:

i. Product(s) to be stored Sodium Hypochlorite 12.5% (6000 gallons); Citric Acid 50% (3 x 300 gallons); Ferric Chloride (6000 gallons)

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

iii. Generally, describe the proposed storage facilities:

Sodium hypochlorite and citric acid for membrane facility cleaning; ferric chloride for solids processes.

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

If Yes:

i. Describe proposed treatment(s):

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

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

If Yes:

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

- Construction: 80931 tons per project (unit of time)
- Operation : 0.16 tons per month (unit of time)

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

- Construction: An estimated 95% of materials will be recycled or reused. Soils will be reused on site, concrete will be recycled, and metals will be recovered.
- Operation: Scrap metal sent for recycling

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

- Construction: Approximately 5% of materials will be sent to landfill
- Operation: Landfill biosolids

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

If Yes:

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

ii. Anticipated rate of disposal/processing:

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

iii. If landfill, anticipated site life: _____ years

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

If Yes:

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

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

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

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

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

If Yes: provide name and location of facility: _____

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

E. Site and Setting of Proposed Action

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

a. Existing land uses.

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

☐ Urban ☐ Industrial ☐ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☑ Forest ☑ Agriculture ☑ Aquatic ☑ Other (specify): WWTP

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	~9.0	~16	+7.0
• Forested	~31.9	~29.2	-2.7
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	~2.8	~2.8	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.) lagoon & river	~8.8	~2.1	-6.7
• Wetlands (freshwater or tidal)	~7.5	~5.5	-2.0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: lawn, solar farm	~16	~20.4	+4.4

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

i. If Yes: explain: _____

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

If Yes,

i. Identify Facilities:

_____

_____

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

If Yes:

i. Dimensions of the dam and impoundment:

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

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

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

If Yes:

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

- If yes, cite sources/documentation: _____

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

_____

_____

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

_____

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

If Yes:

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

The facility is a small quantity generator of hazardous wastes for general site maintenance such as lacquer spray paint and small quantities of other chemicals.

_____

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

If Yes:

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

☑ Yes – Spills Incidents database — Provide DEC ID number(s): 2008650

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

☐ Neither database

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

n/a _____

_____

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

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

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

spill is closed _____

_____

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

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

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.7 feet

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

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

Niagara silt loam (NgA)	45 %
Dunkirk silt loam, rolling (DuC)	25 %
Collamer silt loam (ChB)	10 %

d. What is the average depth to the water table on the project site? Average: 0 to > 6.6 feet

e. Drainage status of project site soils:
☑ Well Drained: 70 % of site
☐ Moderately Well Drained: _____% of site
☑ Poorly Drained 30 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 100 % of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

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

h. Surface water features.

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

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

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

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

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

- Streams: Name 899-10, 899-1 Classification C, B
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, NYS Wetlands Approximate Size NYS Wetland (in a...
- Wetland No. (if regulated by DEC) BRE-17 & BRE-13

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

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? Area at WWTP outfall & within portions of Transmission ROW ☑ Yes ☐ No

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

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

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

i. Name of aquifer: Principal Aquifer

m. Identify the predominant wildlife species that occupy or use the project site:

Canada geese | mallard |
gray squirrel | opossum |
raccoon | various birds common to the area

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

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

If Yes:

i. Species and listing (endangered or threatened):

State- Lake Sturgeon (threatened), Pied-billed Grebe (threatened), Hairy Small-leaved Tick Trefoil (threatened), Indiana Bat (endangered). Federal- Indiana Bat (endangered), Northern Long-eared Bat (endangered), Tricolored Bat (proposed endangered), Monarch Butterfly (proposed threatened).

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

If Yes:

i. Species and listing:

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☑ Yes ☐ No

If yes, give a brief description of how the proposed action may affect that use:

fishing- Oneida River

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

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

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☑ Yes ☐ No

i. If Yes: acreage(s) on project site? None within OOWWTP Expansion site. Approximately 13-15 acres within transmission ROW

ii. Source(s) of soil rating(s): NRCS Web Soil Survey

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

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

ii. Name: New York State Barge Canal Historic District

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

Meets the national register criteria and the property is nationally significant.

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

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

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

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

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

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

If Yes:

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

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

F. Additional Information

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

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

G. Verification

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

Applicant/Sponsor Name Odean Dyer, PE Date 9.29.25

Signature Title Commissioner

PRINT FORM

EAF Mapper Summary Report

Monday, December 23, 2024 7:35 AM

Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	Yes
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	899-10
E.2.h.iv [Surface Water Features - Stream Classification]	C
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters, NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):2184.0
E.2.h.iv [Surface Water Features - DEC Wetlands Number]	BRE-17
E.2.h.v [Impaired Water Bodies]	No

E.2.i. [Floodway]	Yes
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Lake Sturgeon, Pied-billed Grebe, Hairy Small-leaved Tick Trefoil, Indiana Bat
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	New York State Barge Canal Historic District
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Involved Agencies

Onondaga County Department of Water Environment Protection
Odean Dyer, Commissioner
650 Hiawatha Blvd. West
Syracuse, NY 13204
odeandyer@ongov.net

New York State Department of Environmental Conservation-Region 7
Regional Permit Administrator-Kevin Balduzzi
615 Erie Boulevard West, Room 206
Syracuse, NY 13204-2400
dep.r7@dec.ny.gov

NYS Canal Corporation
Danielle Matthei
Real Estate Specialist 1
149 Northern Concourse
North Syracuse, NY, 13212
Danielle.Matthei@Canals.ny.gov

NYS Environmental Facilities Corporation
Elizabeth Ricci, P.E.
Manager, Western Projects
625 Broadway
Albany, New York 12207-2997
Elizabeth.Ricci@efc.ny.gov

New York State Office of General Services
Jeanette M. Moy, Commissioner
36th Floor, Corning Tower, Empire State Plaza
Albany, NY 12242
Jeanette.moy@ogs.ny.gov

New York State Department of Health
James V. McDonald M.D., M.P.H., Commissioner
Corning Tower
Empire State Plaza,
Albany, NY 12237
DOHWEB@health.ny.gov

Interested Agencies

Division for Historic Preservation
Historic Preservation Field Service Bureau
New York State Office of Parks, Recreation and Historic Preservation
Mr. Daniel McEneny, Director
Peebles Island, P.O. Box 189
Waterford, New York 12188-0189
Daniel.McEneny@parks.ny.gov

US Army Corps of Engineers
Buffalo District
ATTN: Regulatory Branch
1776 Niagara Street
Buffalo, NY 14207-3199
LRB.Regulatory@usace.army.mil

Town of Clay
Mr. Damian M. Ulatowski, Supervisor
4401 Route 31
Clay, NY 13042
supervisor@townofclay.org

Project Description

Onondaga County Department of Water Environment Protection (OCDWEP) is proposing to upgrade and expand the existing Oak Orchard Wastewater Treatment Plant (OOWWTP) to accommodate flow from planned growth in the service area while replacing aging equipment and providing a facility that is energy efficient and operator friendly.

The project proposes the following:

- OOWWTP liquid upgrades
    - Overhaul of the headworks facility
    - Addition of 2 primary clarifiers
    - Replacement of the high purity oxygen activated sludge secondary process with membrane bioreactor secondary process
    - Replacement of existing chlorination and dichlorination disinfection system
    - Odor control
    - New chemical storage, blower and electrical buildings, ancillary equipment and flow distribution
    - New administration building
- OOWWTP regional biosolids facility
    - Demolition of existing gravity thickeners
    - High strength waste (HSW) and municipal solids (MS) receiving stations
    - Blend tanks for HSW and trucked in MS.
    - New gravity thickeners for primary sludge (PSL).
    - In-line sludge screening units for PSL.
    - Gravity belt thickeners for waste activated sludge
    - Anaerobic digesters, digested sludge storage tank, and digester heating system.
    - Dewatering centrifuges
    - Sludge dryer
    - Biogas storage, waste gas flares and biogas conditioning
    - Odor control for new thickening/dewatering and dryer buildings.
    - Return pump station
    - New ancillary equipment, electrical rooms/buildings, chemical feed systems, and chemical storage
- New water reuse facility
- Recycled water pump station
- Force mains
- Maintenance of Plant Operation (MOPO) facilities; a moving bed biofilm reactor including storage tanks
- Substation
- Outfall work in the Oneida River

Separate and apart from the activities described in this EAF for the OOWWTP Expansion Project, National Grid will construct and operate an above-ground 155 kV electric transmission

line from the existing Clay-Teall LN11 Euclid Tap and exiting Woodward-Clay LN17 OCWA Tap to the proposed new substation at the existing OOWWTP (the "National Grid Project"). The new 115 kV line will be under the ownership of National Grid.

Based on potential options, the National Grid Project could range in length from 1.3 miles to 1.4 miles, depending on the route ultimately selected by National Grid, and will cross Mud Creek and state regulated wetland, as well as potentially nine separate parcels of land. The National Grid Project is anticipated to take approximately 6 months to construct and have the following potential impacts:

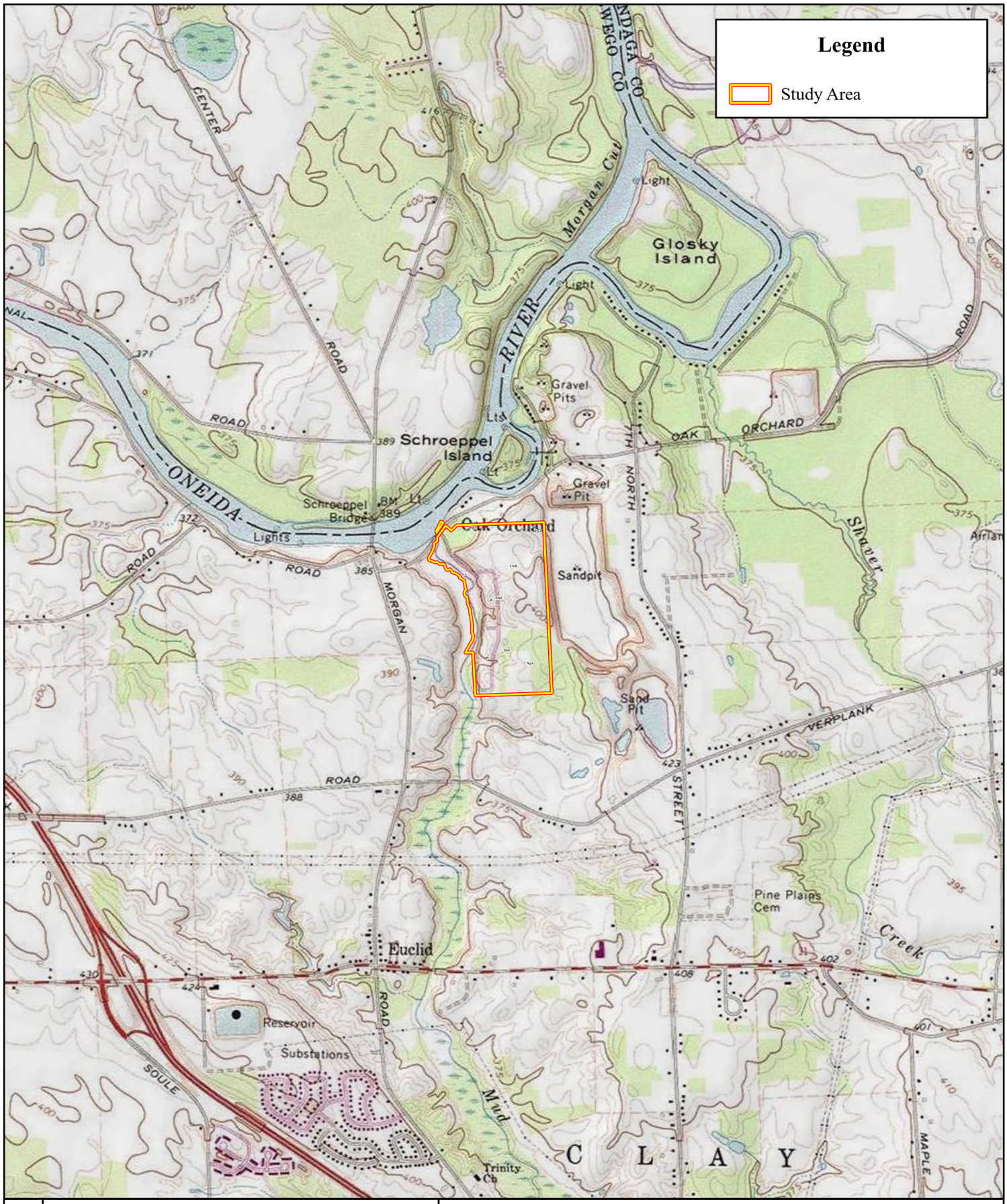
- temporary and permanent impacts to state and federal wetland ranging from 5-6 acres. It is anticipated that permanent impacts will be limited to the footprint of transmission towers but will also include conversion for forested wetland to emergent or scrub-shrub communities as a result of periodic ROW maintenance;
- temporary air emissions and noise impacts during construction;
- the removal of trees in the corridor right of way ranging from 15-20 acres (within upland and wetland forest communities);
- potential loss of agricultural land, although it is anticipated that the much of the land within the ROW can continue to be used for agricultural purposes;
- potential impacts to threatened and endangered species requiring time of year tree cutting restrictions and possibly other measures to prevent impacts;
- potential visual impacts; and
- potential impacts to historic and pre-contact cultural resources due to archaeological sensitivity of the project area.

At this time, the National Grid Project is still in the preliminary design stages and a route has not been selected. Once a route is selected, the exact location of which is not dependent on the OOWWTP Expansion Project, National Grid will apply for the necessary federal, State, and local approvals and consultations, which are anticipated to include:

- U.S. Army Corps of Engineers (USACE) Nationwide Permit 57
- U.S. Fish and Wildlife Service (USFWS) Section 7 Consultation - Review and approval of any potential tree clearing impacts to address potential impacts to federally listed bat species.
- NYS Office of Parks, Recreation and Historic Preservation (OPRHP) State Historic Preservation Office (SHPO) Section 106 consultation for potential impacts to historic and pre-contact archaeological resources.

- NYS Department of Public Service (NYSDPS) Part 102 Installation of Non-Article VII Electric Transmission Facilities.
- NYS Department of Environmental Conservation (NYSDEC) Article 24 Freshwater Wetlands Permit.
- NYSDEC SWPPP with Town of Clay MS4 Acceptance.
- Town of Clay Site Plan Review.

Notwithstanding, the OOWWTP Expansion Project includes the acquisition of the property rights necessary to establish the corridor and determine the final route for National Grid to seek the necessary permits and approvals to construct and operate the 115 kV line. This may include potential property condemnation pursuant to the New York Eminent Domain Procedure Law.



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N

Scale 1" = 2000'

CHA Project No. 090316.000

Figure 1. USGS Project Location Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

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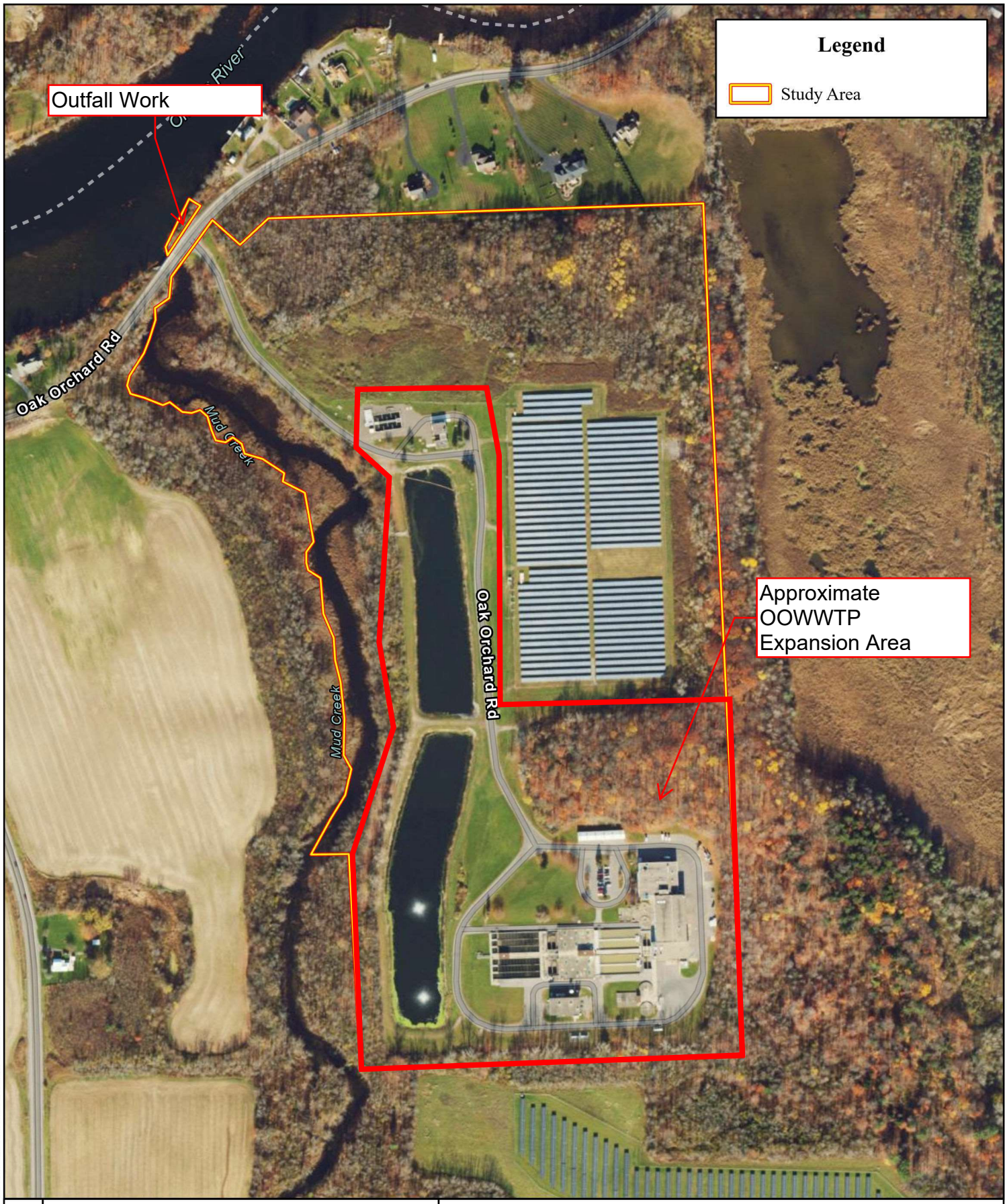
USGS Brewerton NY (2019) Quadrangle.



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N

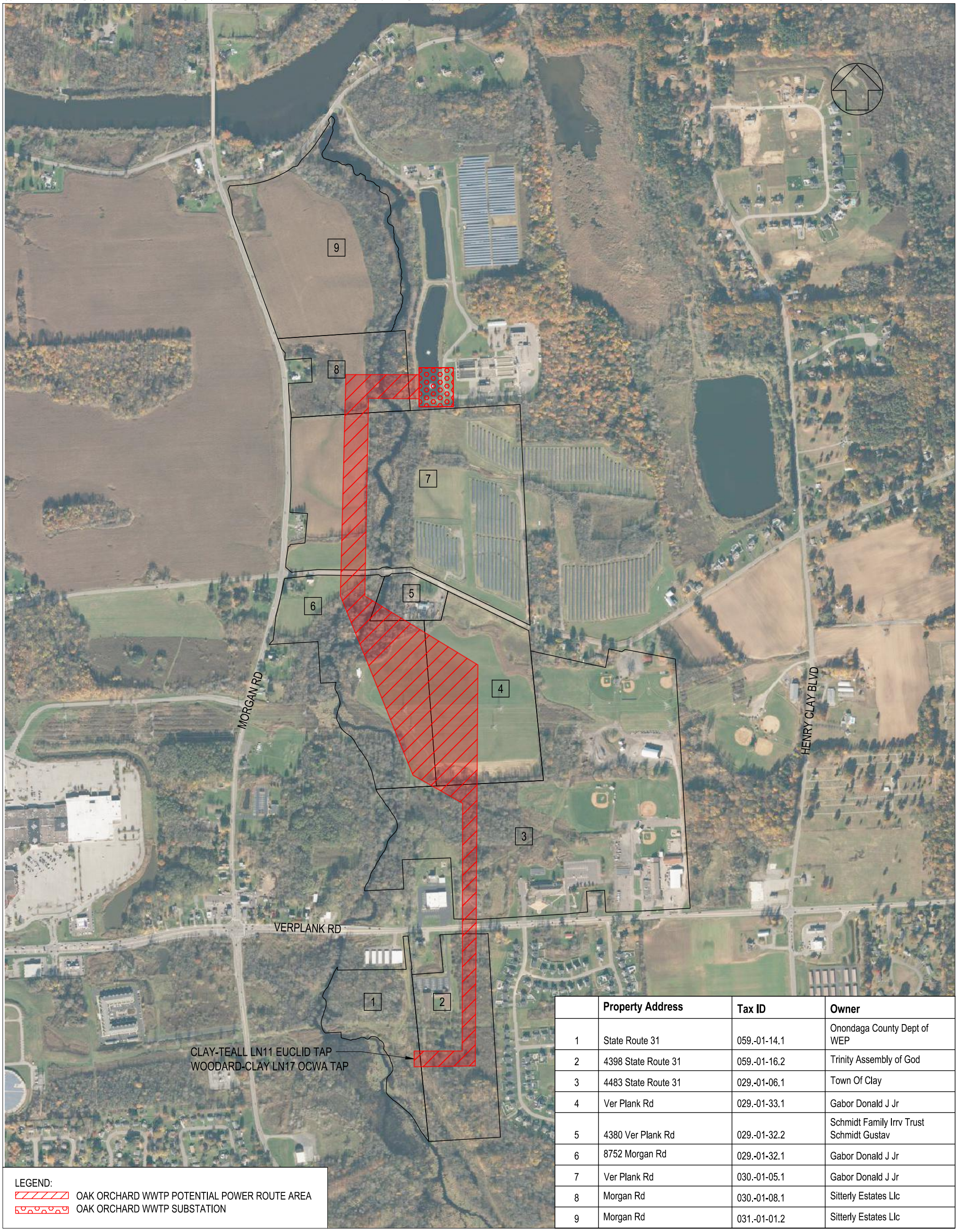
Scale 1" = 400'

CHA Project No.
090316.000

Figure 2. Aerial Location Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

Source: Esri, USDA FSA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS



	Property Address	Tax ID	Owner
1	State Route 31	059.-01-14.1	Onondaga County Dept of WEP
2	4398 State Route 31	059.-01-16.2	Trinity Assembly of God
3	4483 State Route 31	029.-01-06.1	Town Of Clay
4	Ver Plank Rd	029.-01-33.1	Gabor Donald J Jr
5	4380 Ver Plank Rd	029.-01-32.2	Schmidt Family Irrv Trust Schmidt Gustav
6	8752 Morgan Rd	029.-01-32.1	Gabor Donald J Jr
7	Ver Plank Rd	030.-01-05.1	Gabor Donald J Jr
8	Morgan Rd	030.-01-08.1	Sitterly Estates Llc
9	Morgan Rd	031.-01-01.2	Sitterly Estates Llc

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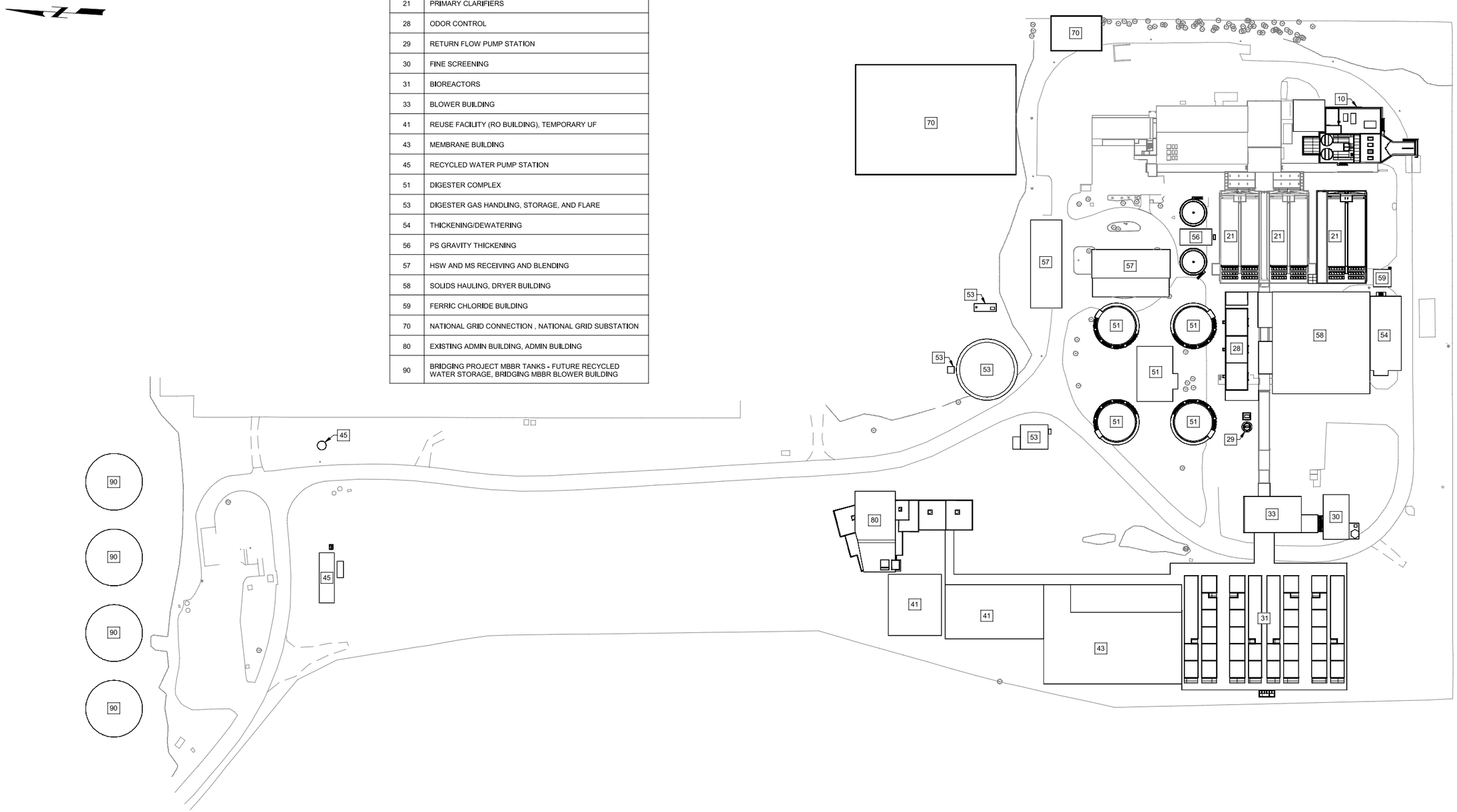
Onondaga County Department of WATER ENVIRONMENT PROTECTION

OAK ORCHARD WWTP EUCLID POWER ROUTE PARCELS

OAK ORCHARD WWTP EXPANSION PROGRAM

Figure 3. Oak Orchard Future Transmission Line ROW & Associated Parcels

AREA CODE	AREAS
10	HEADWORKS
21	PRIMARY CLARIFIERS
28	ODOR CONTROL
29	RETURN FLOW PUMP STATION
30	FINE SCREENING
31	BIOREACTORS
33	BLOWER BUILDING
41	REUSE FACILITY (RO BUILDING), TEMPORARY UF
43	MEMBRANE BUILDING
45	RECYCLED WATER PUMP STATION
51	DIGESTER COMPLEX
53	DIGESTER GAS HANDLING, STORAGE, AND FLARE
54	THICKENING/DEWATERING
56	PS GRAVITY THICKENING
57	HSW AND MS RECEIVING AND BLENDING
58	SOLIDS HAULING, DRYER BUILDING
59	FERRIC CHLORIDE BUILDING
70	NATIONAL GRID CONNECTION , NATIONAL GRID SUBSTATION
80	EXISTING ADMIN BUILDING, ADMIN BUILDING
90	BRIDGING PROJECT MBBR TANKS - FUTURE RECYCLED WATER STORAGE, BRIDGING MBBR BLOWER BUILDING



1 **PLAN**
SCALE: 1" = 80'-0"

REV	DATE	BY	DESCRIPTION
			25% DESIGN SUBMITTAL NOT FOR CONSTRUCTION

DESIGNED Designer
DRAWN Author
CHECKED Checker
DATE SUBMITTAL DATE

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Onondaga County Department of WATER ENVIRONMENT PROTECTION

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
OOWWTP EXPANSION PROGRAM - UPGRADES AND BIOSOLIDS FACILITY
GENERAL
SITE PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 203580
DRAWING NO. 00G07
SHEET NO. OF XX

PLOT DATE: 6/10/2025 9:51:21 PM

FILE NAME: Autodesk Docs://OCDWEP 203580/00-G-3D-101.rvt

Full Environmental Assessment Form
Oak Orchard Waste Water Treatment Plant Upgrade
Attachment 1

Reg. Area	AHJ	Permit or Review	Reg Citation	Description	Anticipated Submission Date
Air	New York State Department of Environmental Conservation (NYSDEC) – Air	State Facility Permit [1]	6 NYCRR 201-4, 6 NYCRR 201-3.2(c)(5)	Permit application for Oak Orchard site, including IWWTP: - Digester Flare, Biosolids Dryer (NOx, CO), Odor Controls, Biogas scrubbing, Tank vents, GHG emission	Nov-25
Chemical Bulk Storage (CBS)	NYSDEC	Tank registration update - temporary or mobile construction tanks > 185 gal	6 NYCRR 596	Construction	Apr-27
CBS	NYSDEC	Authorization of Non-Owners to Submit Facility Registration Application	6 NYCRR 596	Construction	Apr-27
CBS	NYSDEC	Tank registration update	6 NYCRR 596	Post Construction	Jan-31
CBS	NYSDEC	Spill Prevention Report (SPR) Update	6 NYCRR 596-599	Update existing SPR	TBD
CBS	NYSDEC	Change of use notification	6 NYCRR 596-599	If applicable	Mar-27
Petroleum Bulk Storage (PBS)	NYSDEC and USEPA	Update SPCC Plan	40 CFR 112	Update existing SPCC Plan	TBD
PBS	NYSDEC	Petroleum Bulk Storage Tanks	6 NYCRR Part 613	Registration/updates	Apr-27
Water	USEPA Region II, NYSDEC	Calculation of Local Limits – OOWWTP only	40 CFR Part 403, SPDES Permit Condition	Industrial Pretreatment Program Updates	TBD
Water	NYSDEC	SPDES Major Modification	6 NYCRR Part 750	Permit application package - Form 2A - Water Treatment Chemical (increase use or new)	18-Jun-25
Water	NYSDEC	SPDES Construction General Permit	GP-0-25-001	Prior to construction, incorporated into the site civil design Requires review & approved by NYSDEC.	TBD
Water	NYSDEC	Wetland Jurisdictional Determination	6 NYCRR Part 621	Jurisdictional Determinations Request (OOWWTP Site)	May-25
Water	NYSDEC	Joint Permit Application - OOWWTP	6 NYCRR Part 621	Apply for JPA	Aug-25
Water	NYSDEC	Joint Permit Application - Outfall	6 NYCRR Part 621	Outfall only. Approximately 25% design required for submittal.	Apr-26
Water	Onondaga County	SEQRA Type I Action	6 NYCRR Part 617	Concurrence, EAF Form	Aug-25
Water	NYSOGS - Outfall	Permission to work in in state owned lands (river bottom)		Part of JPA	Nov-26
Water	Canal Corp - Outfall	Canal Permit Application Additional Insurance	Commercial Work Permit (CC-W99072)		Jul-27
Water	Canal Corp - Outfall	Canal Permit Application - Permission to Work within the Erie Canalway National Heritage Corridor	Commercial Work Permit (CC-W99072)		Nov-26
Water	USACE - Outfall	Pre-Construction Notification (PCN) Form 6082		Design includes Construction BMPs. Submerged Aquatic Vegetation (SAV) mapping/survey provide Minimal adverse effect on navigation required. Additional requirements if more than 1,300 sq. ft disturbed.	TBD
Water	USACE - Outfall	Nationwide Permit 3 - Maintenance/Nationwide Permit 7 - Outfall Structure and Associated Intake Structure [2]		Nationwide Permit General Conditions and NY District Regional Conditions A-F are incorporated into the design.	Jul-26
Airport	FAA Obstruction Evaluation/Airport Airspace Analysis (OE3A), if needed	Small airport nearby - Airline Enterprises	Form 7460-1	If construction equipment or permanent structure to be 200 ft tall or higher above ground surface.	Jul-26

Notes:

(1) NYSDEC requires the air emissions from the OOWWTP to be combined with the emissions from the new IWWTP as this is one site/one contiguous facility. The PM will provide only OOWWTP upgrade scope.

(2) Nationwide permits (NWPs) are issued once in a 5-year period. USACE plans to issue 56 new NWPs and one new NWP in 2026. No known cultural resources, endangered species, or critical habitats are expected to be affected or found within the vicinity of the proposed activity. https://www.lrd.usace.army.mil/News/Announcements/Article/3885201/2021-new-york-nationwide-permits/

Full Environmental Assessment Form
Oak Orchard Waste Water Treatment Plant Upgrade
Attachment 2

Time Period	Total Connected (MW)
Jan 2027 - Oct 2027	0.75
Nov 2027 - Feb 2029	1.04
Mar 2029 - Jul 2029	3.54
Aug 2029 - May 2030	6.74
Jun 2030 - May 2031	12.36
Jun 2031 - Aug 2031	23.26
Sep 2031 - Aug 2032	38.86
Sep 2032 - Oct 2038	42.02

FULL ENVIRONMENTAL ASSESSMENT FORM PART 2 - IDENTIFICATION OF POTENTIAL PROJECT IMPACTS

Agency Use Only [If applicable]

Project :

Date :

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

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

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

Tips for completing Part 2:

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

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

☐ NO ☑ YES

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

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

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

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

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☐ NO ☑ YES

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

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

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

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

☐ NO ☑ YES

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

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

5. Impact on Flooding

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

☑ NO ☐ YES

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

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

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

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

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

7. Impact on Plants and Animals

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

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

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

8. Impact on Agricultural Resources

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

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

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

9. Impact on Aesthetic Resources

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

☑ NO ☐ YES

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

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

10. Impact on Historic and Archeological Resources

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

☐ NO ☑ YES

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

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

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

11. Impact on Open Space and Recreation

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

☑ NO ☐ YES

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

12. Impact on Critical Environmental Areas

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

☑ NO ☐ YES

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

13. Impact on Transportation

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

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

14. Impact on Energy

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

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

15. Impact on Noise, Odor, and Light

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

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

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

16. Impact on Human Health

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

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

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

17. Consistency with Community Plans

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

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

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

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

18. Consistency with Community Character

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

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

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

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

PRINT FULL FORM

FULL ENVIRONMENTAL ASSESSMENT FORM PART 3 - EVALUATION OF THE MAGNITUDE AND IMPORTANCE OF PROJECT IMPACTS AND DETERMINATION OF SIGNIFICANCE

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

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

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

Reasons Supporting This Determination:
To complete this section:

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

See attached.

Separate and apart from the activities described in this EAF for the OOWWTP Expansion Project, National Grid will construct and operate an above-ground 155 kV electric transmission line from the existing Clay-Teall LN11 Euclid Tap and exiting Woodward-Clay LN17 OCWA Tap to the proposed new substation at the existing OOWWTP (the "National Grid Project"). The new 115 kV line will be under the ownership of National Grid and not the Onondaga County Department of Water Environment Protection.

At this time, the National Grid Project is still in the preliminary design stages, and a route has not been selected. Approval of the OOWWTP Expansion Project does not limit alternatives for the National Grid Project. Rather, it will facilitate route selection by authorizing the acquisition of the property rights necessary to establish the corridor and determine the final route for National Grid to seek the necessary permits and approvals to construct and operate the 115 kV line.

Once a route is selected, the exact location of which is not dependent on the OOWWTP Expansion Project, National Grid will apply for the necessary federal, State, and local approvals and consultations, which will include an environmental review under SEQRA. As such, the environment would not be less protected and there would be no impermissible segmentation.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

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

Upon review of the information recorded on this EAF, as noted, plus this additional support information
Resource mapping, Wetland and Stream Delineation Memorandum and Map, Habitat Assessment,and NYSOPRHP correspondence.

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Onondaga County Department of Water Environment Protection as lead agency that:

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

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

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

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

Name of Action: Oak Orchard Wastewater Treatment Plant Expansion

Name of Lead Agency: Onondaga County Department of Water Environment Protection

Name of Responsible Officer in Lead Agency: Odean Dyer

Title of Responsible Officer: Commissioner

Signature of Responsible Officer in Lead Agency: Date: 9.29.25

Signature of Preparer (if different from Responsible Officer) Date: 9/29/25

For Further Information:

Contact Person: Carollo Engineers- Darcy Sachs

Address: 530 Seventh Avenue, Suite 2402, New York, NY 10018

Telephone Number: 516-863-9057

E-mail: dsachs@carollo.com

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

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

PRINT FULL FORM

FULL ENVIRONMENTAL ASSESSMENT FORM PART 3 DOCUMENTATION

Full Environmental Assessment Form
Part 3 Documentation

Part 2 of the Full Environmental Assessment Form (FEAF) identifies the potential impacts associated with the project based on a series of questions or statements for each major environmental topic. Completion of Part 2 included small and moderate to large impacts. The potential for any of these impacts to occur and their significance are evaluated below. It should be noted that the impacts below primarily pertain to impacts associated with the Oak Orchard Wastewater Treatment Plant (OOWWTP) expansion. The evaluation for the transmission line right-of-way (ROW) primarily focuses on land use impacts.

Impact on Land

According to the Natural Resources Conservation Service, Onondaga County Soil Survey (Attachment A), the water table is less than three feet in the following soils that are identified within the expansion area:

- Niagara silt loam (NgA)
- Saprists and Fluvaquents, ponded (SA)
- Collamer silt loam (ChB)

The project will be completed in four phases. The anticipated schedule is as follows:

- Water Reuse Facility - design and construction: late 2025 to March 2028 (muni recycle water only)
    - *Recycled Water PS is part of Reuse Facility*
- OOWWTP (MTT) Liquid Train- design and construction: late 2027 with completion in late 2031
- Outfall - design and construction: Early 2026 through late 2027
- OOWWTP (MTT) Biosolids – design and construction: starting 2029 with completion in late 2033

There would be some potential for soil erosion during vegetation and soil grading/removal. However, the site plan will include erosion and sedimentation controls designed to prevent sediment laden runoff to reach nearby streams and wetlands. Approximately 7 acres of impervious surface is proposed. A Stormwater Pollution Prevention Plan (SWPPP) will be completed for the project to provide both stormwater management and erosion and sediment control measures to ensure that there will be no impact from stormwater runoff or sedimentation. Therefore, no significant impacts to land are anticipated.

Impact on Surface Water

According to the National Wetland Inventory Map (Attachment B), there are several mapped features within and in close proximity to the OOWWTP expansion project area. The mapped classifications of those features are as follows:

- PUBHx-Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated
- PAB/UBHh-Palustrine, Aquatic Bed, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded
- PSS1/EM5C-Paulstrine, Scrub Shrub, Broad-Leaved Deciduous, Emergent, Phragmites australis, Seasonally Flooded
- PFO1/SS1E-Palustrine, Forested, Broad-Leaved Deciduous, Scrub Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated
- R2UBH-Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded
- R5UBH- Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded

The following features are mapped within or in the vicinity of the transmission line ROW:

- PFO1/SS1E
- PFO1A-Palustrine, Forested, Broad-Leaved Deciduous, Temporary Flooded
- PSS1E-Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
- R2UBH

The New York State Department of Environmental Conservation (NYSDEC) Environmental Resource Mapper (ERM) (Attachment C), shows the following previously mapped freshwater wetlands in close proximity to the OOWWTP expansion project area:

- BRE-17, Class 1
- BRE-13, Class 3

Previously mapped freshwater wetland BRE-17 is also in close proximity to the transmission line ROW.

The NYSDEC ERM also shows that the Oneida River has been classified by the NYSDEC as Class B/ Standard B and Mud Creek has been classified by the NYSDEC as Class C/ Standard C.

A wetland delineation was completed by Environmental Design & Research (EDR). Please refer to Attachment D for a copy of the August 2024 Wetland Delineation Memorandum for further details. Additionally, as a result of the jurisdictional determination site visit with the NYSDEC and USACE, an addendum Wetland and Stream Delineation Map and associated data sheets were prepared (Attachment E). Lastly, at the request of NYSDEC, additional wetland areas were delineated within the existing solar panel array area. Those areas are documented in the Wetland and Stream Delineation Memorandum dated September 18, 2025 (Attachment E).

It should be noted that no wetland and waters delineation has been conducted for the proposed transmission line ROW. The delineation of this area will be completed at a later date and under a separate State Environmental Quality Review (SEQR) process undertaken by National Grid.

A portion of the proposed project will occur within the 100-foot Adjacent Area of State regulated wetland 05-W005 as shown on Sheets 4 and 6 of the Wetland and Stream Delineation Map in Attachment E. However, most of the impact will be to land that is currently occupied by wastewater treatment lagoons and as a result will not significantly change the existing conditions. The project will also impact approximately two acres of wetland that is assumed to be non-jurisdictional wetlands identified as 05-W001 and 05-W006 (See Attachment F for Jurisdictional Determinations from the USACE. The NYSDEC response is pending). Although these wetlands have ecological value similar to the surrounding upland forested habitat, they have no surface water connection to State wetland located to the east and Mud Creek and associated State wetland to the west. As such, they do not provide significant stormwater management or water quality benefits to other water resources within the area. The project will result in the replacement of the existing wastewater treatment plant outfall within the Oneida River. This may require some additional fill in the river to provide scour protection and will require permits from NYSDEC (Article 15 Protection of Waters), USACE (likely Nationwide Permit No. 3, Maintenance), and approval from the NYS Canal Corporation. These permits will be obtained during the design phase of the project.

The contractor would be responsible for identifying suitable areas for staging that are outside of wetlands and waters of the United States. There will be increase in impervious area and therefore the potential to increase runoff to the surface water resources adjacent to the project site. The NYSDEC State Pollutant Discharge Elimination System (SPDES) permit will mitigate these impacts. Stormwater retention basins and controls as well as sedimentation and erosion controls will be incorporated into the design plans. Therefore, the project will have no significant impact on surface water.

Impact on Groundwater- According to the NYSDEC EAF Mapper, the project area is not located over a sole source or primary aquifer; however, it is located over a principal aquifer.

The proposed project would create a new demand for water; however, the existing system has the capacity to serve the proposed project. The project does not entail the construction of water supply wells, or involve the commercial application of pesticides.

Bulk storage of sodium hypochlorite 12.5% (6,000 gallons) and citric acid 50% (3 x 300 gallons) for membrane facility cleaning and ferric chloride (6,000 gallons) for solids processes are proposed. Sodium bisulfite, while not needed forever, will be needed seasonally until a UV system is installed. Chemical containment will be provided within the facility buildings to isolate chemical spills. There will be secondary containment for all chemicals. The citric acid tanks will have concrete (likely with a coating) containment.

Additionally, the storage tanks will be registered with the NYSDEC and managed in compliance with applicable regulations for the storage and handling of hazardous substances. Therefore, no significant impacts to groundwater are anticipated.

Impact on Air- The project will generate approximately 25 tons per year of carbon dioxide, 0.5 tons per year of Hazardous Air Pollutants and 1,192 tons per year of methane. Biogas will be captured and used as boiler and dryer fuel, or flared. Emissions are expected to primarily be criteria pollutants emitted from the combustion of natural gas and biogas generated from the biosolids management and odorous compounds. The project will be permitted through NYSDEC New York State Facility Air Permit. Refer to the Air Permitting Strategy Memo (Attachment J) for further details. Therefore, no significant impacts to air quality are anticipated.

Impact on Plants and Animals- The NYSDEC Natural Heritage Program (NHP) was contacted to see if any rare or state listed animals or plants, or significant natural communities are mapped within the OOWWTP expansion project area. A response was received from the NHP dated February 21, 2025 (Included in Attachment G-Habitat Assessment). The NHP response identified the following species in the project vicinity:

- Pied-billed Grebe (*Podilymbus podiceps*), state threatened
- Bald Eagle (*Haliaeetus leucocephalus*), state threatened
- Lake Sturgeon (*Acipenser fulvescens*), state threatened
- Indiana Bat (*Myotis sodalis*), state endangered
- Hairy Small-leaved Tick Trefoil (*Desmodium ciliare*), state threatened

The United States Fish & Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) database (Included in Attachment G-Habitat Assessment) identified the following results:

- Indiana Bat, federally endangered
- Northern Long-eared Bat (*Myotis septentrionalis*), federally endangered
- Tricolored Bat (*Perimyotis subflavus*), federally proposed endangered
- Monarch Butterfly (*Danaus plexippus*), federally proposed threatened
- No critical habitats have been identified for this location.

CHA completed a Habitat Assessment dated July 2025 (Attachment G). The Habitat Assessment concludes that the proposed development will result in a loss of potential wildlife habitat.

Regarding bats, removal of trees will not occur within 150 feet of a known occupied maternity roost tree or from within 0.25 mile of a hibernaculum, and the project schedule should allow for the time of year tree cutting restrictions (tree removals will be completed in the winter between November 1 and March 31 when the bats are hibernating). Further coordination with the USFWS will be required for the Indiana bat, northern long-eared bat and tricolored bat due to the effects determinations through the IPaC. Coordination will be conducted during the permitting process.

Significant impacts to monarch butterfly, lake sturgeon and pied-billed grebe are not anticipated due to a general lack of suitable habitat within the study area. Hairy small-leaved tick trefoil habitat is not present, so impacts and species-specific surveys do not appear warranted. Further, adherence to erosion and sediment control practices will prevent indirect impacts to water quality and associated fish and wildlife within aquatic systems. Therefore, there will be no significant impacts to the species identified above.

Although the same species and perhaps others could be identified as potentially occurring with the proposed transmission line ROW, acquisition of the land will have no impact on these species.

Impact on Agricultural Resources- There are no farms or other agricultural resources within the OOWWTP expansion project area and therefore the OOWWTP expansion will have no impact on agricultural resources. Likewise, acquisition of land for the proposed transmission line ROW will have no impact on agricultural activities. Future construction of the ROW will likely have minor impacts on agricultural lands if transmission towers are located in the agricultural fields. It is assumed that overall, agricultural activities will be allowed to continue within the future ROW.

Impact on Historic and Archeological Resources- The New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) Cultural Resource Information System (CRIS) was reviewed. The CRIS indicates that the OOWWTP expansion project area is designated as archeologically sensitive and that National Register New York State Barge Canal Historic District (14NR06559) is mapped within the portion of the project area that falls within the Oneida River.

The OOWWTP expansion project was submitted to the NYSOPRHP for review. The NYSOPRHP indicated in a letter dated August 1, 2025, that no historic properties, including archeological and/or historic resources, will be affected by the undertaking (Attachment H). There will be no significant impact to cultural resources.

Based on review of the CRIS, the transmission line ROW is located within area designated as archeologically sensitive. There are no National Register listed or eligible properties mapped within or adjacent to the transmission line ROW project area. The acquisition of land associated with the transmission line ROW will have no impact on historic and archaeological resources.

Impact on Energy- There will be an increase in energy use associated with the OOWWTP expansion. The increase is anticipated to be more than 2,500 MWhrs per year of electricity.

The upgrades to the OOWWTP would require new services, and a new local/site substation to allow for redundant feeds to avoid needing EGENs on site.

The OOWWTP expansion project would include heating and cooling of 74,000 square feet of building areas and proposes a new electrical substation. The source of electricity will be provided from the National Grid substation proposed on site. The facility will be energy efficient.

The facility will also be generating biogas through the digestion process, and it will be utilized onsite as fuel for the boilers and potentially drying. In the future, the County can revisit alternative productive biogas uses such as renewable and cogeneration natural gas conversion.

Acquisition of land for the transmission line ROW will have no impact on energy.

Impact on Noise, Odor and Light- There would be temporary noise impact during construction. This impact would take place from Monday through Friday from the hours of 7am to 5pm. Operational noise is not expected to increase above existing noise levels. No significant adverse impacts are anticipated.

Odors will be managed at the facility as they currently are. The OOWTP (i.e., newly labeled MTT plant) currently uses bioxide to control H2S generation in the Davis Road Pump Station forcemain and the intent is that the plant will continue dosing at the Pump Station to maintain H2S within the general range of 20 ppm or less. Currently there is a hydrogen sulfide meter and a LEL meter installed in "C" building to measure ambient atmospheric conditions. The odor control system which pulls air from the influent bunker, the covered grit chambers, and grit chamber effluent weirs in "C" building also has a hydrogen sulfide sensor. No significant increases in odors are anticipated.

Building/structure mounted light fixtures are proposed. Site lighting will be designed to minimize light pollution. Dark sky complaint light fixtures would be installed around the perimeter of the site and on the exterior of the buildings. There are no non WWTP occupied structures close to the expansion work. No significant adverse impacts are anticipated.

Acquisition of land for the transmission line ROW will have no impact on noise, odor or light.

Impact on Human Health- The NYSDEC Environmental Site Remediation database did not identify any sites within or in close proximity to the project area. The NYSDEC Spills Incidents database identified one spill on the project property (DEC Spill Number 2008650). The spill was petroleum on January 1, 2021, and the record is closed.

The facility is a small quantity generator of hazardous wastes for general site maintenance such as lacquer spray paint and small quantities of other chemicals. These wastes will be disposed of at an existing permitted facility.

The proposed project would generate solid waste during construction and operation, but given the nature of the project, it is not anticipated to generate any extraordinary amounts that could not be handled through existing permitted landfill facilities in the region.

During operation, the project will generate 0.16 tons of solid waste per month. The biosolids will be hauled from the site to an approved landfill as per NYS Part 360 Regulations.

No significant adverse impact on human health is anticipated. Additionally, acquisition of land for the transmission line ROW will have no impact on human health.

Additional Considerations- In addition to the above resources and in further support of the determination of no significant impacts, no impacts will occur to the following resources:

- Geology: There are no unique or unusual landforms within the project area.
- Flooding: Based on review of the Flood Insurance Rate Map (Panel No. 36067C0079F), a small portion of the project area is within the floodplain (Attachment I). This area is where modifications/ replacement of the existing outfall in the Oneida River are proposed. This work is not anticipated to result in any significant fills within the floodplain that could result in raising flood elevations. It is anticipated that the proposed transmission ROW will cross the floodplain, however, the nature of work would not result in raising flood elevations.
- There will be no impact to open space or recreational resources.
- There are no Critical Environmental Areas within or adjoining the project area.
- The project will not result in an increase in traffic during operation. There may be some minor delays or slow downs during construction, but this will be a temporary condition over a short duration of time.
- Aesthetics/Visual Impacts: There will be no impact to aesthetic resources as a result of the OOWWTP expansion since the project is an expansion of an existing WWTP within their own property. Additionally, the acquisition of land for the transmission line ROW will have no impact on aesthetics or views. It is recognized that the future construction of a 200-foot wide ROW with the potential to remove forested lands and with the construction of 80 foot high transmission towers could have visual effects on visual resources. This will require evaluation during the design phase of the transmission line project and will likely require the preparation of a Visual Impact Assessment. However, as noted in the section below, the new ROW will not be inconsistent with other transmission line corridors located within the general project area.
- Community Plans, Zoning & Character: The expansion of the OOWWTP on the existing OOWWTP property will have no impact on the character of the community and is consistent with the existing zoning and land use. Likewise, the acquisition of land for the proposed transmission line ROW will have no impact on community character, land use or zoning. It will simply allow the County to further investigate potential alignments for the ROW. However, the potential future land use as a transmission line will be evaluated further during the design phase of the transmission line project and will involve the opportunity for further input from the community through a separate SEQR process and local approvals, as well as approval from the Public Service Commission. Several zoning districts would be crossed by the ROW; but in general, public utilities are permitted in all zoning districts in the Town of Clay by special use permit. Other transmission line corridors occur within the general area of the proposed transmission line and will not be out of character with the area.

Oak Orchard Wastewater Treatment Plant Expansion
& Transmission ROW Land Acquisition
SEQR Full Environmental Assessment Form
LIST OF ATTACHMENTS

Attachment A - Soils Map

Attachment B - National Wetland Inventory Map

Attachment C - State Aquatic Resources Map

Attachment D - Wetland Delineation Memorandum

Attachment E - Wetland Delineation Addendums

Attachment F - USACE Approved Jurisdictional Determination

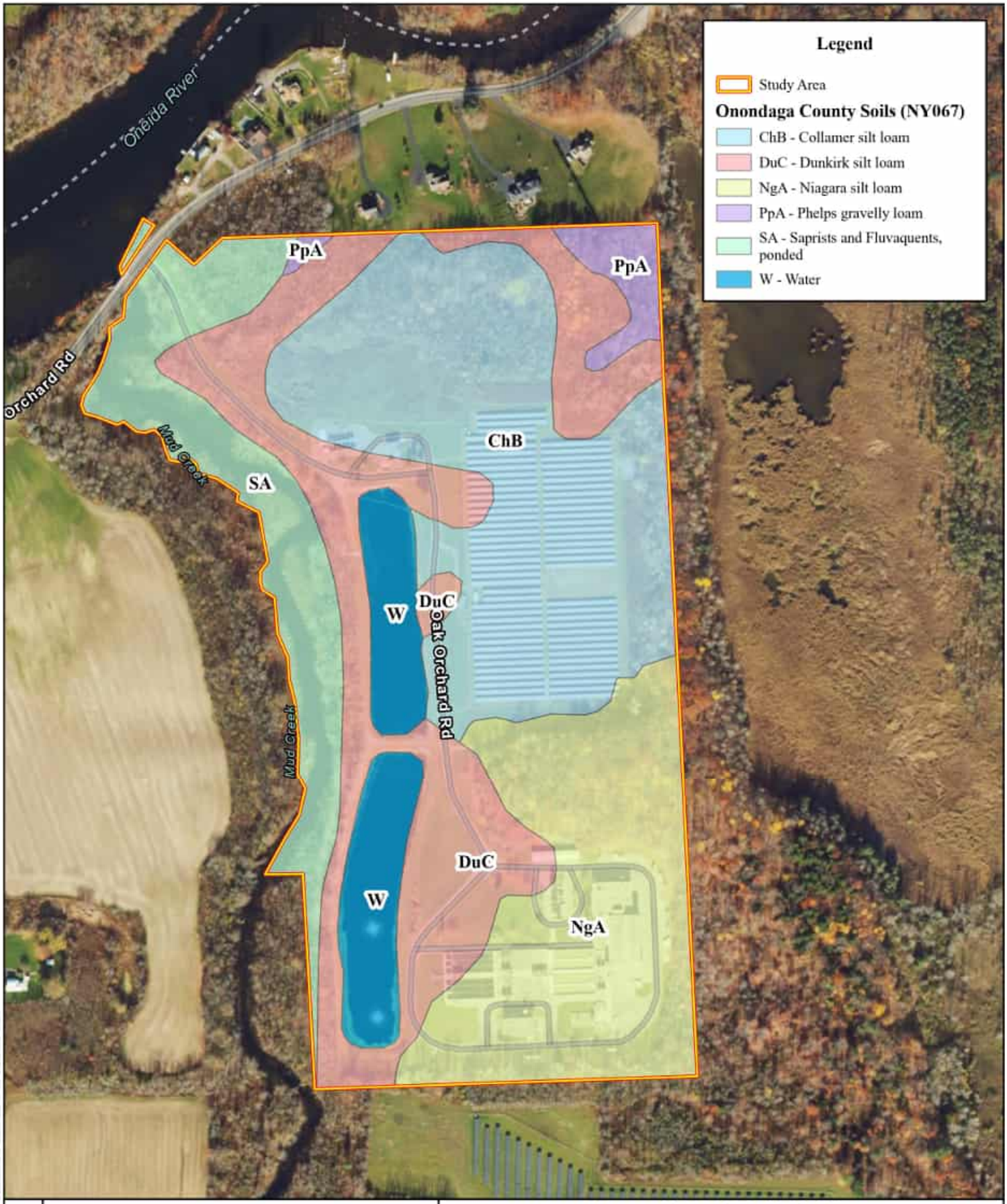
Attachment G - Habitat Assessment Report

Attachment H - SHPO Correspondence

Attachment I - FEMA Flood Map

Attachment J – Air Permitting Strategy

Attachment A



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Scale 1" = 400'

CHA Project No. 090316.000

Figure 3. NRCS Soils Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

Source: Esri, USDA FSA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS. Soils courtesy of the Natural Resource Conservation Service.

Attachment B

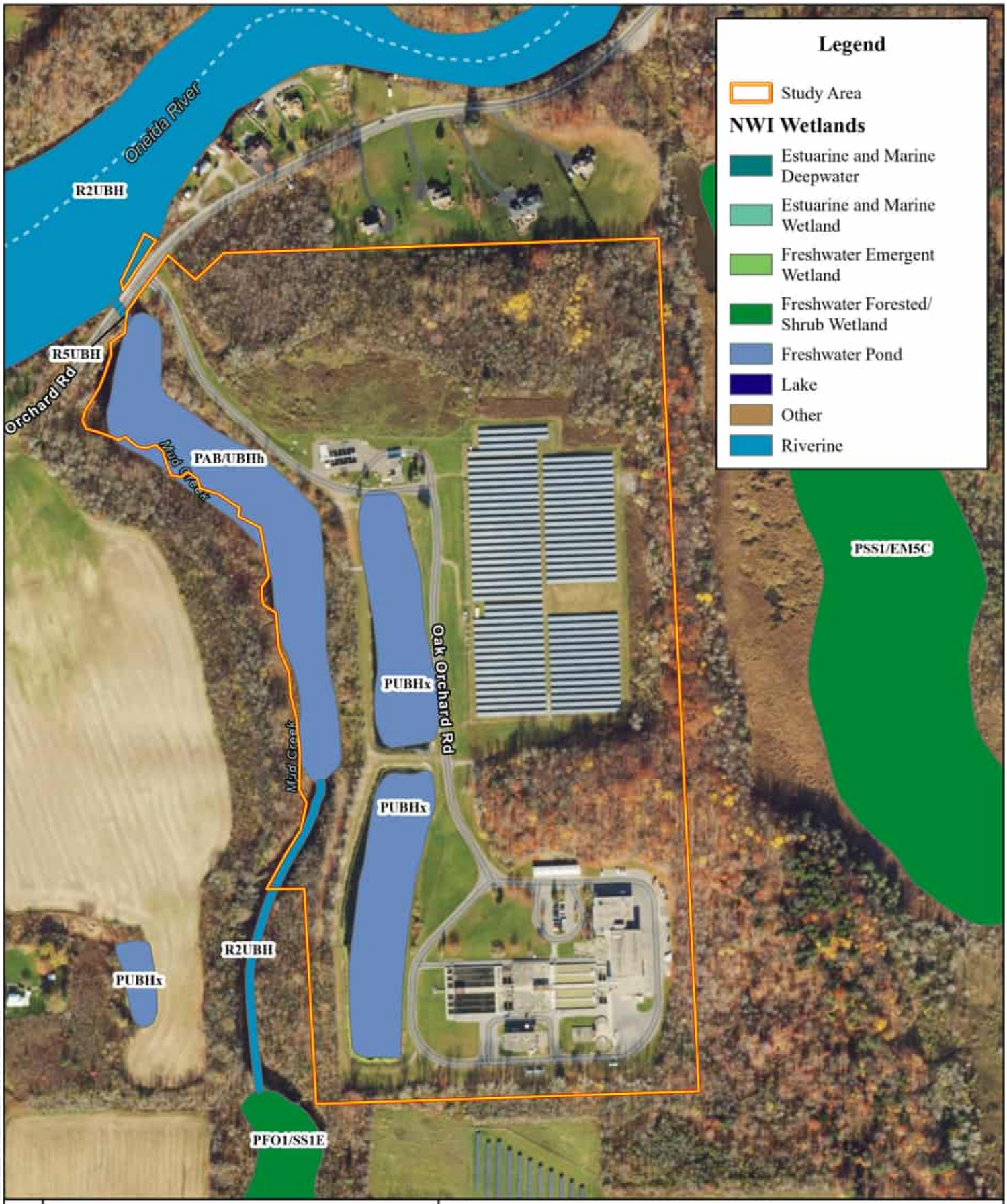

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Figure 4. National Wetlands Inventory (NWI) Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

Scale 1" = 400'

CHA Project No. 090316.000

Source: Esri, USDA FSA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS. Wetlands courtesy of the USFWS NWI.

Attachment C

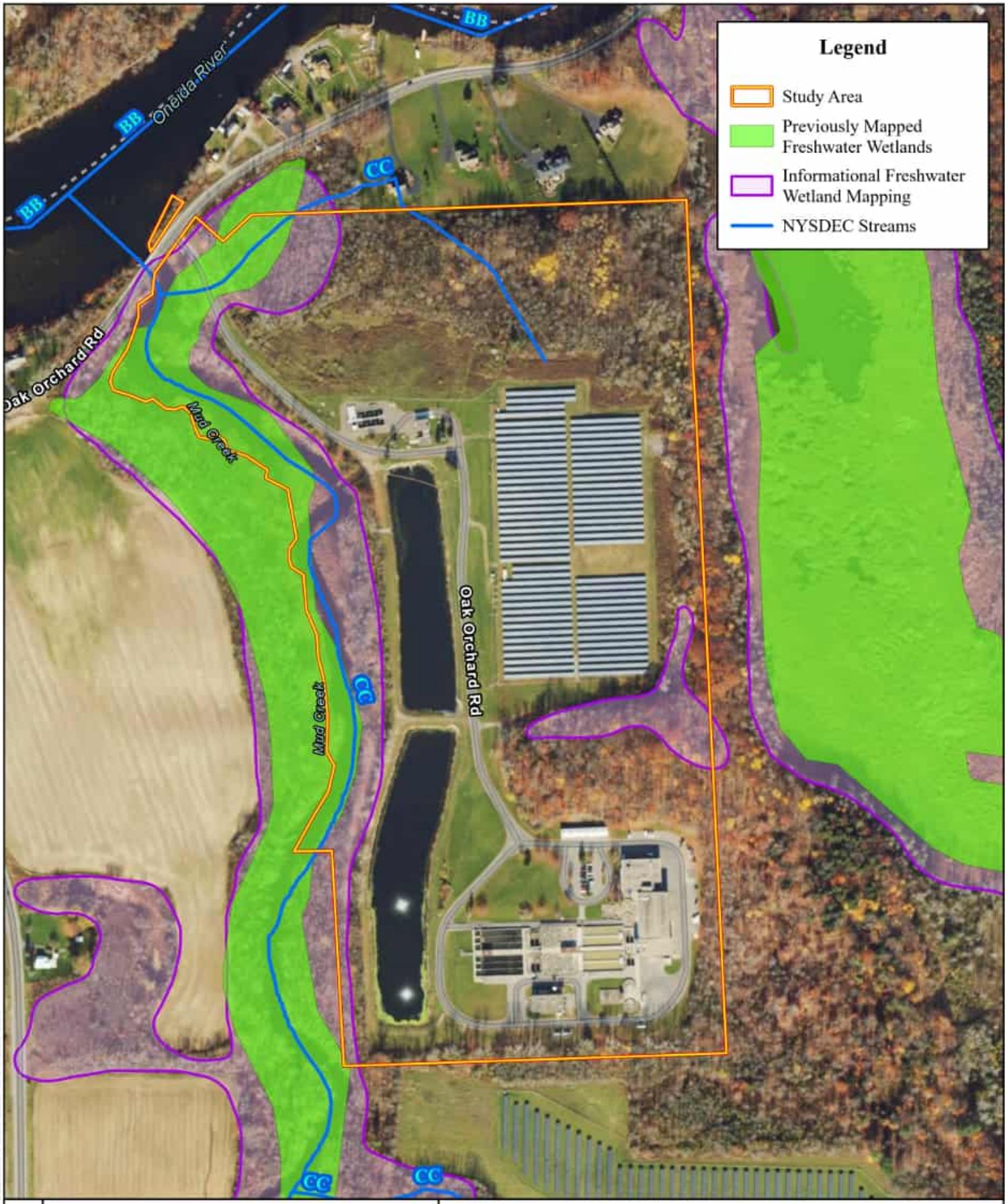

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Figure 5. NYSDEC Aquatic Resources Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

Scale 1" = 400'

CHA Project No. 090316.000

Source: Esri, USDA FSA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS. Wetlands courtesy of the New York State Department of Environmental Conservation.

Attachment D

EDR

Memorandum

To:	Onondaga County Department of Water Environment Protection 650 Hiawatha Blvd. West Syracuse, NY 13204
From:	Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C.
Date:	August 16, 2024
Reference:	Wetland and Stream Delineation Memorandum Oak Orchard Project Town of Clay, Onondaga County, New York
EDR Project No:	24293

At the request of the Onondaga County Department of Water Environment Protection, Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) conducted a wetland and stream delineation on an approximately 76.7-acre Study Area on July 30 and 31, 2024. The Study Area is located in the Town of Clay, Onondaga County, New York, and is loosely bound by the Oneida River to the north, Henry Clay Boulevard to the east, Verplank Road to the south and Mud Creek to the west (Figure 1; all figures are in Appendix A).

Review of Background Data

EDR's review of NWI mapping indicates the presence of five water resources within the Study Area. The mapped water resources include two riverine features (R2UBH), which correspond with the Oneida River and Mud Creek; two freshwater pond features (PUBHx), which correspond with wastewater treatment lagoons; and one freshwater pond feature (PAB/UBHh) that corresponds with a portion of Mud Creek. New York State (NYS) Freshwater Wetlands mapping indicates that there is one state mapped wetland within the Study Area. The mapped NYS Freshwater Wetland, BRE-17, is a Class 1 wetland that corresponds with the riparian area along Mud Creek. Based on available NYSDEC stream classification mapping, the Study Area includes two Class C streams and one Class B stream. The Class C streams include Mud Creek and an unnamed tributary of Mud Creek; the Class B stream is the Oneida River, which is designated as a U.S. Army Corps of Engineers (USACE) traditional navigable water (TNW) and a state protected stream under Article 15 of the Environmental Conservation Law (Figure 2).

A review of the Study Area on U.S. Department of Agriculture (USDA) Web Soil Survey maps identified six distinct mapping units. Table 1 lists the mapping units within the Study Area, along with their slope, drainage class, hydric rating, and hydric classification. Although soil mapping units may have a hydric rating in the online databases indicating hydric, non-hydric or potentially non-hydric conditions, this is for general use and does not supersede specific conditions documented in the field.

Table 1. Study Area Soil Mapping Units

Mapping Unit Symbol	Mapping Unit	Percent of Study Area	Slope	Drainage[1]	Hydric Rating[2]	Hydric Classification[3]
ChB	Collamer silt loam	32.5%	4%	MWD	0%	Non-hydric
DuC	Dunkirk silt loam, rolling	24.7%	9%	WD	0%	Non-hydric
NgA	Niagara silt loam	21.6%	2%	SPD	7%	Predominantly non-hydric
SA	Saprists and Fluvaquents, ponded	10.5%	2%	VPD	100%	Hydric
W	Water	8.4%	--	--	--	--
PpA	Phelps gravelly loam	2.2%	2%	MWD	5%	Predominantly non-hydric

[1] WD = well drained, MWD = moderately well drained, SPD = somewhat poorly drained, and VPD = very poorly drained.

[2] Map units are composed of one or more component soil types, each of which is individually rated as hydric or not hydric. The hydric rating, as provided in the USDA Web Soil Survey, indicates the percentage of the map unit that meets hydric criteria.

[3] Hydric classification categories are based on the total percentage of hydric soils in the map unit. as listed on the USDA Web Soil Survey. Hydric = 100% of map unit components rated as hydric. Predominantly hydric = 66%–99% of map unit components rated as hydric. Partially hydric = 33%–66% of map unit components rated as hydric. Predominantly non-hydric = up to 33% of map unit components rated as hydric. Non-hydric = 0% of map unit components rated as hydric.

Field Visit and Methodology

On July 30 and 31, 2024, an EDR Ecological Resources Specialist and an EDR Field Technician visited the site to delineate any wetlands and/or streams present within the Study Area.

The identification of wetland boundaries was based on the methodology described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). Determination of wetland boundaries was also guided by the methodologies presented in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (Regional Supplement) (USACE, 2012) and *New York State Freshwater Wetland Delineation Manual* (NYSDEC, 1995). Attention was given to the size of the wetland (including portions that may extend outside the Study Area), evidence of disturbance, and the identification of potential hydrologic connections between wetlands and other waters, as these factors could influence jurisdictional status. Wetland boundaries were defined in the field with sequentially numbered pink surveyor's flagging and mapped using a GPS unit with reported sub-meter accuracy.

Delineated features were characterized according to the wetlands and deepwater habitats classification system used in NWI mapping (Cowardin et al., 1979). Data were collected from sample plots in representative wetland cover types and recorded on USACE Routine Wetland Determination forms (see Appendix B). The data collected at each delineated wetland included dominant vegetation, hydrology indicators, and soil characteristics. Data to confirm upland areas were also collected adjacent to wetland boundaries and in areas where aerial photograph signatures or existing wetland mapping suggested potential wet conditions. Upland data were also documented and recorded on USACE Routine Wetland Determination forms (Appendix B)

Wetland hydrology was evaluated based on the presence of primary and secondary indicators. The Regional Supplement lists the following primary indicators of wetland hydrology: (A1) surface water, (A2) high water table, (A3) soil saturation, (B1) water marks, (B2) sediment deposits, (B3) drift deposits, (B4) algal mat or crust, (B5) iron deposits, (B7) inundation visible on aerial imagery, (B8) sparsely vegetated concave surface, (B9) water-stained leaves, (B13) aquatic fauna, (B15) marl deposits, (C1) hydrogen sulfide odor, (C3) oxidized rhizospheres on living roots, (C4) presence of reduced iron, (C6) recent iron reduction in tilled soils, and (C7) thick muck surface. Per the Regional Supplement, the presence of any one of these primary indicators is sufficient evidence that wetland hydrology is present. In addition, the Regional Supplement identifies the following secondary indicators, which were also used by EDR to determine wetland hydrology: (B6) surface soil cracks, (B10) drainage patterns, (B16) moss trim lines, (C2) dry-season water table, (C8) crayfish burrows, (C9) saturation visible on aerial imagery, (D1) stunted or stressed plants, (D2) geomorphic position, (D3) shallow aquitard, (D4) microtopographic relief, and (D5) results of the FAC-neutral test. In accordance with the Regional Supplement, in the absence of a primary indicator, the presence of any two secondary indicators is considered a suitable indication of wetland hydrology.

Wetland vegetation is indicated by a dominance of hydrophytic plant species, or species that have adapted to grow in areas of inundation and saturation. Assessment of vegetation focused on the identification of dominant plant species in four categories: trees (greater than or equal to 3 inches diameter at breast height [DBH]), saplings/shrubs (less than 3 inches DBH and greater than 3.2 feet tall), herbs (all vegetation less than 3.2 feet tall), and woody vines. Dominance was determined by visually estimating those species having the greatest absolute percent cover within each stratum. Vascular plant nomenclature and wetland indicator status for dominant plant species were determined by the Wildnote field data collection application, which refers to the USDA PLANTS Database (USDA NRCS, 2021) and the National Wetland Plant List, an interagency effort compiled by the USACE (2020). The indicator status represents a plant's likelihood of occurring in wetlands. The five indicator statuses and their probability of being observed in a wetland are as follows:

- Obligate (OBL): Plants occur within wetlands more than 99% of the time
- Facultative Wetland (FACW): Plants occur within wetlands 67 to 99% of the time
- Facultative (FAC): Plants occur within wetlands 33 to 67% of the time
- Facultative Upland (FACU): Plants occur within wetlands 1 to 33% of the time
- Upland (UPL): Plants occur within wetlands less than 1% of the time

Those plant species that are not assigned an indicator status in the National Wetland Plant List are assumed to always be found in uplands and assigned an indicator status of UPL. Wetlands are indicated by a dominance and/or prevalence of hydrophytic plant species (i.e., those assigned an indicator status of OBL, FACW, or FAC).

Hydric soils are those that are poorly drained and are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil layer. The presence of hydric soils is indicative of the possible presence of wetlands (Environmental Laboratory, 1987). Hydric soil conditions were determined in the field through observation of soil composition, color, and morphology. Soils data were collected by using a Dutch auger and tiling spade to examine the soil profile. Soil colors were determined using Munsell Soil Charts (Munsell Color, 2009). Information concerning soil series, color, texture, and matrix and concentration color was recorded at each sample location and used to determine whether the soils displayed hydric characteristics.

Streams were identified according to the Cowardin et al. (1979) classification system, and stream boundaries were determined based on the presence of ordinary high water mark (OHWM) characteristics, including a "clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris" (33 CFR 329.11). Stream boundaries were defined and mapped in the field using the same method as described above for wetlands. The OHWM, if present, was determined through evaluation of hydrologic, geomorphic, and biological characteristics in accordance with the *USACE National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams: Interim Version* (David et al., 2022). Data regarding stream morphology, stream bank and channel width, water depth, stream bed substrate, in-stream cover, and biological indicators were collected and recorded on OHWM data forms (Appendix B).

Photographs were taken of each wetland and stream delineated within the Study Area (Appendix C).

Findings

Five wetlands (05-W001, 05-W002, 05-W003, 05-W004, and 05-W005) and five streams (05-ST001, 05-ST002, 05-ST003, 05-ST004, and 05-ST005), totaling 6.95 acres and 2,837 linear feet, respectively, were delineated within the Study Area (Figure 3). Two constructed wastewater treatment lagoons were located within the Study Area. The boundaries of these features were digitized based on arial imagery and verified in the field. The wastewater lagoons are presumed to be non-jurisdictional features as wastewater treatment facilities are specifically listed by the USACE as exclusions from Waters of the United States (WOTUS). (Figure 3, Photograph 1 in Appendix C). Detailed descriptions of the wetlands, their associated uplands, and the streams delineated on site are provided below.

<u>Wetland 05-W001 (Photographs 2 through 5 in Appendix C)</u>
Wetland 05-W001 is a palustrine forested and palustrine emergent wetland complex totaling 1.52 acres within the Study Area. It is located south of an existing solar panel array and drains west to its lowest point at a stormwater drop culvert. The drop culvert is situated approximately 1 to 2 feet above the existing grade of the wetland (Photograph 3 in Appendix C). There was no observable connection to any other surface water within the Study Area. The boundary of wetland 05-W001 continues approximately 40 feet east of the Study Area, where it is surrounded by upland forest and does not appear to continue further or connect to another body of water based on aerial imagery and on-site observations (Photograph 4 in Appendix C).

The forested portion of Wetland 05-W001 totaled 1.39 acres within the Study Area. The canopy was dominated by red maple (*Acer rubrum*) and tuliptree (*Liriodendron tulipifera*) and the herbaceous understory was dominated by eastern poison ivy (*Toxicodendron radicans*), spotted jewelweed (*Impatiens capensis*), green ash saplings (*Fraxinus pennsylvanica*), and northern spicebush saplings (*Lindera benzoin*). The wetland exhibited strong pit and mound microtopography with the mounds hosting localized upland vegetation such as tuliptree. The indicators of wetland hydrology included water-stained leaves (B9), drainage patterns (B10), and microtopographic relief (D4). Soils in this portion of the wetland were composed of two layers. In the top layer, which occurred at a depth of 0 to 8 inches, soils were very dark gray (10YR 3/1) with a fine sandy loam texture. In the lower layer, which occurred at a depth of 8 to 18 inches, soils were grayish brown (10YR 5/2) with 20% yellowish brown (10YR 5/8) redox concentrations in the matrix and a fine sandy loam texture. This soil profile satisfies the hydric soil indicator of depleted matrix (F3). The wetland/upland

transition varied, but was typically abrupt and followed site topography along the northern boundary of the wetland compared to a more gradual transition that followed a change in vegetation along the southern boundary of the wetland. The adjacent upland was forested with a canopy dominated by American beech (*Fagus grandifolia*) and an understory dominated by American beech saplings and eastern poison ivy. Photograph 6 in Appendix C illustrates conditions in this upland area.

The palustrine emergent portion of Wetland 05-W001 totaled 0.13 acres within the Study Area. Dominant herbaceous vegetation included smooth goldenrod (*Solidago gigantea*), common reed (*Phragmites australis*), common boneset (*Eupatorium perfoliatum*), green bulrush (*Scirpus atrovirens*), and purple loosestrife (*Lythrum salicaria*). Indicators of wetland hydrology included oxidized rhizospheres on living roots (C3) and results of the FAC-neutral test (D5). Soils in the emergent portion of the wetland were composed of two layers. In the top layer, which occurred at a depth of 0 to 12 inches, soils were very dark grayish brown (10YR 3/2) with 10% yellowish brown (10YR 5/6) redox concentrations in the pore lining and matrix and a clay loam texture. In the lower layer, which occurred at a depth of 12 to 18 inches, soils were brown (10YR 5/3) with 30% yellowish brown (10YR 5/8) redox concentrations in the matrix and a sand texture. This soil profile satisfies the hydric soil indicator of redox dark surface (F6). The wetland/upland transition was abrupt and followed both the local topography and a change in vegetation. The adjacent upland was dominated by herbaceous vegetation including brownray knapweed (*Centaurea jacea*), American bird's foot trefoil (*Lotus unifoliolatus*), and common timothy (*Phleum pratense*). Photograph 7 in Appendix C illustrates conditions in this upland area.

Wetland 05-W002 (Photograph 8 in Appendix C)

Wetland 05-W002 is a 0.02-acre palustrine emergent wetland located in the southeastern corner of the Study Area. It extends beyond the southern boundary of the Study Area into an upland deciduous forest. Herbaceous vegetation within the wetland included common spike rush (*Eleocharis palustris*), slender rush (*Juncus tenuis*), and redtop (*Agrostis stolonifera*). Indicators of wetland hydrology included oxidized rhizospheres on living roots (C3) and results of the FAC-neutral test (D5). Soils in Wetland 05-W002 were composed of two layers. In the top layer, which occurred at a depth of 0 to 5 inches, soils were dark grayish brown (10YR 4/2) with 5% brown (7.5YR 4/4) redox concentrations in the pore linings and matrix and a clay loam texture. In the lower layer, which occurred at a depth of 5 to 18 inches, soils were dark gray (2.5Y 4/1) with 10% yellowish brown (10YR 5/8) redox concentrations in the pore lining and matrix and a clay loam texture. This soil profile satisfies the hydric soil indicator of a depleted matrix (F3). The wetland/upland transition was gradual and generally followed the local topography. The adjacent uplands included a scrub-shrub area dominated by autumn olive (*Elaeagnus umbellata*), Morrow's honeysuckle (*Lonicera morrowii*), and European buckthorn (*Rhamnus cathartica*) and a maintained field dominated by common dandelion (*Taraxacum officinale*), English plantain (*Plantago lanceolata*), common plantain (*Plantago major*), and self heal (*Prunella vulgaris*). Photograph 9 in Appendix C illustrates conditions in this upland area.

Wetland 05-W003 (Photograph 10 in Appendix C)

Wetland 05-W003 is a 0.79-acre palustrine scrub-shrub wetland located in the northeastern corner of the Study Area. The wetland does not extend beyond the Study Area; however, it drains into an intermittent stream (05-ST002) that exits the Study Area to the east. The canopy cover in this wetland was sparse and consists entirely of green ash (both dead and alive). Dominant shrub species included gray dogwood (*Cornus racemosa*) and green ash saplings. Herbaceous vegetation within the wetland included wrinkle-leaf goldenrod (*Solidago rugosa*), slender rush, aster (*Symphyotrichum* sp.), spotted jewelweed, and rough avens (*Geum laciniatum*). Indicators of wetland hydrology included drainage patterns (B10), microtopographic

relief (D4), and results of the FAC-neutral test (D5). Within 18 inches of the surface, soils in Wetland 05-W003 were composed of a single layer. These soils were dark grayish brown (10YR 4/2) with 10% brown (7.5YR 4/4) redox concentrations in the matrix and a clay loam texture. This soil profile satisfies the hydric soil indicator of a depleted matrix (F3). The wetland/upland transition was gradual and generally followed the local topography. The adjacent upland was forested with a canopy dominated by red maple, red pine (*Pinus resinosa*), and dead or dying green ash. Dominant shrub species included European buckthorn and black walnut (*Juglans nigra*) saplings. Herbaceous vegetation was dominated by Virginia creeper (*Parthenocissus quinquefolia*), green ash seedlings, European buckthorn seedlings, jumpseed (*Persicaria virginiana*), and multiflora rose (*Rosa multiflora*). Photograph 11 in Appendix C illustrates conditions in this upland area.

Wetland 05-W004 (Photograph 12 in Appendix C)

Wetland 05-W004 is a 2.45-acre palustrine forested wetland located in the northwestern corner of the Study Area and extending north beyond the Study Area boundary. A portion of this wetland overlaps NYSDEC-mapped Wetland BRE-17. Dominant canopy species included red maple and green ash; dominant shrub species included green ash saplings and European buckthorn; and dominant herbaceous vegetation included lizard's-tail (*Saururus cernuus*) and sensitive fern (*Onoclea sensibilis*). Indicators of wetland hydrology included surface water (A1), high water table (A2), soil saturation (A3), geomorphic position (D2), and results of the FAC-neutral test (D5). Within 18 inches of the surface, soils in Wetland 05-W004 were composed of a single layer. These soils were dark gray (10YR 4/1) with 5% yellowish brown (10YR 5/6) redox concentrations in the matrix and a clay loam texture. This soil profile satisfies the hydric soil indicator of a depleted matrix (F3). The wetland/upland transition was abrupt and generally followed a distinct change in topography. The adjacent upland was forested with a canopy dominated by black walnut and green ash. Understory shrubs species included Morrow's honeysuckle and sparse green ash saplings . Dominant herbaceous understory species included jumpseed and Allegheny blackberry (*Rubus allegheniensis*). Photograph 13 in Appendix C illustrates conditions in this upland area.

Wetland 05-W005 (Photographs 14 and 15 in Appendix C)

Wetland 05-W005 is a mixed palustrine forested and emergent wetland totaling 2.16 acres within the Study Area. It is located along (and extends beyond) the western border of the Study Area in the riparian area associated with Mud Creek (05-ST004) and corresponds with NYSDEC-mapped Wetland BRE-17. Portions of this wetland were inaccessible at the time of delineation due to the water level of Mud Creek. Delineations for these areas are based on satellite imagery and wetland flags are absent as shown in Figure 3.

The forested portion of Wetland 05-W005 totaled 0.92 acres within the Study Area. Dominant species in the canopy included American elm (*Ulmus americana*) and red maple; dominant shrub species included multiflora rose, American hornbeam (*Carpinus caroliniana*), and swamp white oak (*Quercus bicolor*); and dominant herbaceous species included lizard's tail and Virginia creeper. Indicators of wetland hydrology included geomorphic position (D2) and results of the FAC-neutral test (D5). Soils in the forested portion of this wetland were composed of one layer. From 0 to 18 inches, soils were very dark gray (3/N) with 10% dark gray (5Y 4/1) redox depletions in the matrix and 5% dark yellowish brown (10YR 4/6) redox concentrations in the matrix with a clay loam texture. This soil profile satisfies the hydric soil indicator of loamy gleyed matrix (F2). The wetland/upland transition was abrupt and occurred at the base of a slope. The adjacent upland was disturbed, with soils containing crushed rock fill. The sparse canopy was dominated by chokecherry (*Prunus virginiana*) and eastern cottonwood (*Populus deltoides*) and European buckthorn was the only understory shrub species. Herbaceous vegetation included Virginia creeper, river-bank grape

(*Vitis riparia*), and eastern poison ivy. Photographs 16 and 17 in Appendix C illustrate conditions in this upland area.

The emergent portion of Wetland 05-W005 totaled 1.24 acres within the Study Area. Dominant herbaceous vegetation included green arrow arum (*Peltandra virginica*), narrow leaf cattail (*Typha angustifolia*), and sensitive fern. Indicators of wetland hydrology included surface water (A1), high water table (A2), soil saturation (A3), oxidized rhizospheres on living roots (C3), and results of the FAC-neutral test (D5). Soils in the emergent portion of the wetland were composed of two layers. In the top layer, which occurred at a depth of 0 to 8 inches, soils were very dark gray (10YR 3/1) with 10% yellowish red (5YR 4/6) redox concentrations in the pore linings and matrix and a clay loam texture. In the lower layer, which occurred at a depth of 8 to 18 inches, soils were gray (7.5YR 5/1) with a clay loam texture. This soil profile satisfies the hydric soil indicators of redox dark surface (F6) and depleted matrix (F3). Within the Study Area, this emergent community occurred between the forested portion of the wetland and the adjacent stream, and no wetland/upland transition was observed.

Stream 05-ST001 (Photograph 18 in Appendix C)
Stream 05-ST001 is a 167-linear foot ephemeral stream segment located in the southeast corner of the Study Area. The stream begins in an upland forest and continues beyond the southern border of the Study Area. The stream appears to only convey water in direct response to precipitation and no water was present in the stream channel at the time of delineation. Stream width averaged from 4 to 6 feet based on OHWMs on opposing banks and the stream was characterized by a gentle gradient, absence of vegetation in the stream channel, and a substrate consisting of sand, silt, and clay. Indicators used to define the OHWM included a break in slope and a change in vegetation. The stream was classified as ephemeral due to lack of biological indicators, absence of water in the stream channel, and overland sheet flow from precipitation as the sole source of water.

Stream 05-ST002 (Photograph 19 in Appendix C)
Stream 05-ST002 is a 94-linear foot intermittent stream segment located in the northeast corner of the Study Area. It begins where Wetland 05-W003 channelizes and exits the Study Area to the east toward NYSDEC-mapped Wetland BRE-13. Stream width was 4 feet based on OHWMs on opposing banks and the stream was characterized by a well-developed bed and banks, gentle gradient, and a substrate consisting of sand, silt, and clay. Indicators used to define the OHWM included a break in slope, a change in vegetation, and the presence of large wood in the stream channel. The stream was classified as intermittent because it receives water from Wetland 05-W003, but water was absent from the stream channel at the time of survey.

Stream 05-ST003 (Photograph 20 in Appendix C)
Stream 05-ST003 is a 49-linear foot intermittent stream segment located in the southwest corner of the Study Area. The stream begins at the outlet of a culvert and flows southwest to where it connects with NYSDEC-mapped Wetland BRE-17 and Mud Creek outside the Study Area. Stream width was 3 feet based on OHWMs on opposing banks and it had a water depth of 2 inches at the time of the survey. Stream 05-ST003 was characterized by well-developed banks, a gentle gradient, and a substrate consisting of cobble, gravel, sand, silt, and clay. Indicators used to define the OHWM included a break in slope and a change in vegetation. The stream was classified as intermittent due to the presence of water in the channel and its source at a culvert outlet, but a lack of biological indicators that would suggest a perennial flow regime.

Stream 05-ST004 (Photograph 21 in Appendix C)

Stream 05-ST004 is a perennial stream corresponding with Mud Creek, a NYSDEC Class C mapped stream. The delineated reach included 2,330 linear feet along the western boundary of the Study Area and was bordered by a forested and emergent wetland complex on both sides of the stream. Portions of this stream were inaccessible at the time of delineation due to the water level. Delineations for these areas are based on satellite imagery and stream flags are absent as shown in Figure 3. The stream enters the Study Area from the south, passes under Oak Orchard Road, and flows into the Oneida River (Stream 05-ST005) in the northwest corner of the Study Area. Stream 05-ST004 was characterized by a wide, well-developed channel;

anticipated to fall under both federal and NYSDEC jurisdictions. Stream 05-ST004 is expected to fall under federal jurisdiction because it connects to the Oneida River, which is a TNW, and is expected to fall under NYSDEC jurisdiction because it is a potential state-navigable water. Stream 05-ST005 corresponds with a small portion of the Oneida River and is anticipated to fall under federal jurisdiction because it is a TNW. It is anticipated to be NYSDEC jurisdictional based on both its probable classification as a state-navigable water and its Class B designation. However, final determination of jurisdictional status of all wetland and streams delineated within the Study Area must be made by the USACE and NYSDEC.

List of Appendices

Appendix A. Figures

Figure 1: Regional Project Location

Figure 2: Mapped Wetlands and Streams

Figure 3. Delineated Wetlands and Streams

Appendix B. Routine Wetland Determination Data Sheets and OHWM Data Forms

Appendix C. Photo Documentation

References

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Appendix A

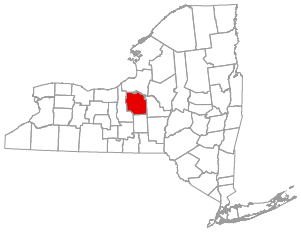
Figures

Figure 1. Regional Project Location

Oak Orchard Project

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Memorandum



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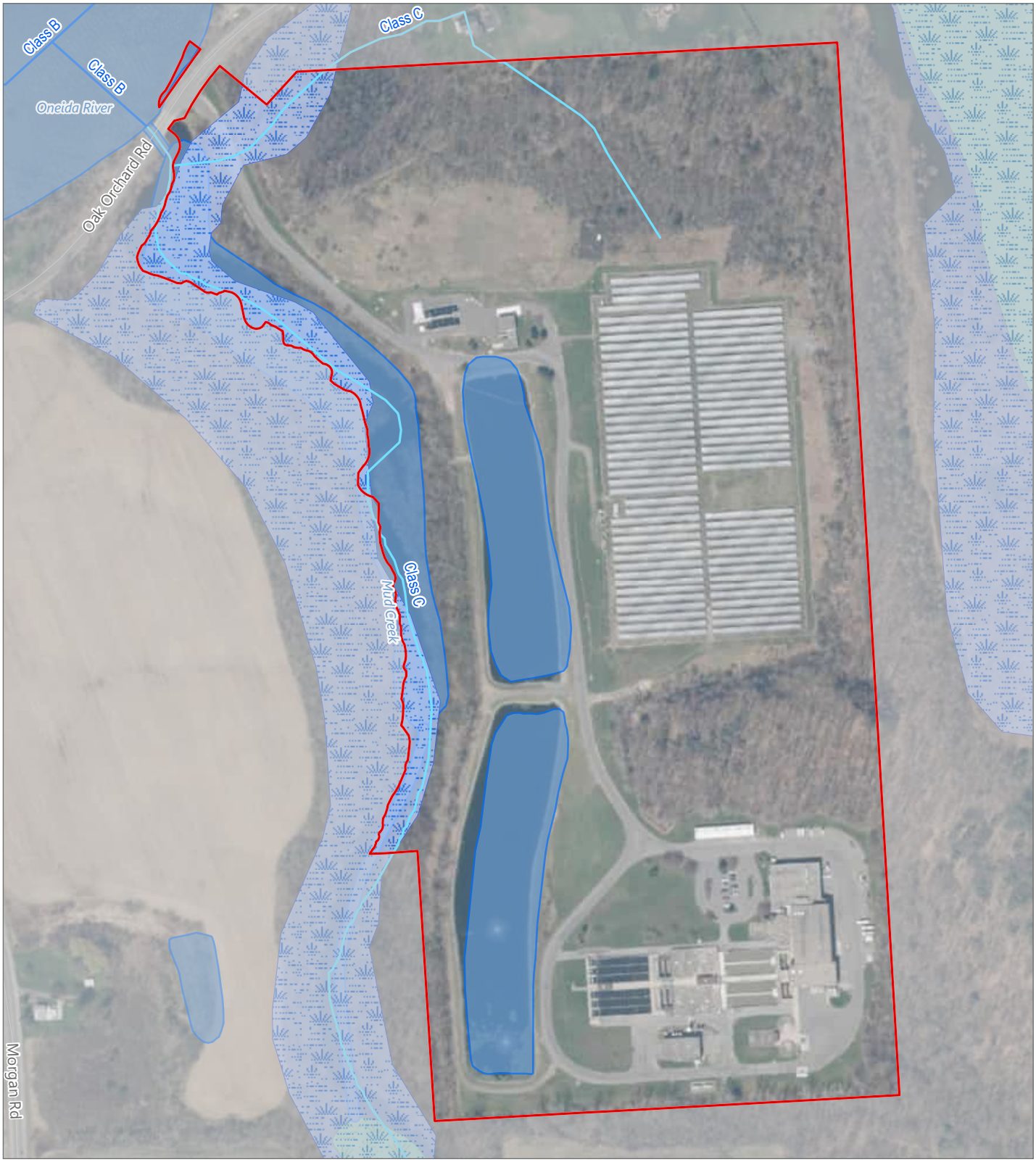
Miles

Prepared August 13, 2024

Basemap: Esri "World Street Map" map service

EDR

Figure 2. Mapped Wetlands and Streams



Oak Orchard Project

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Memorandum

NYSDEC Stream Classification
- Class A, B, C(TS), or C(T) Stream
- Class C or D Stream
- NYSDEC Mapped Wetland
- NWI Mapped Wetland
- NWI Mapped Pond/Lake/Riverine
- Study Area

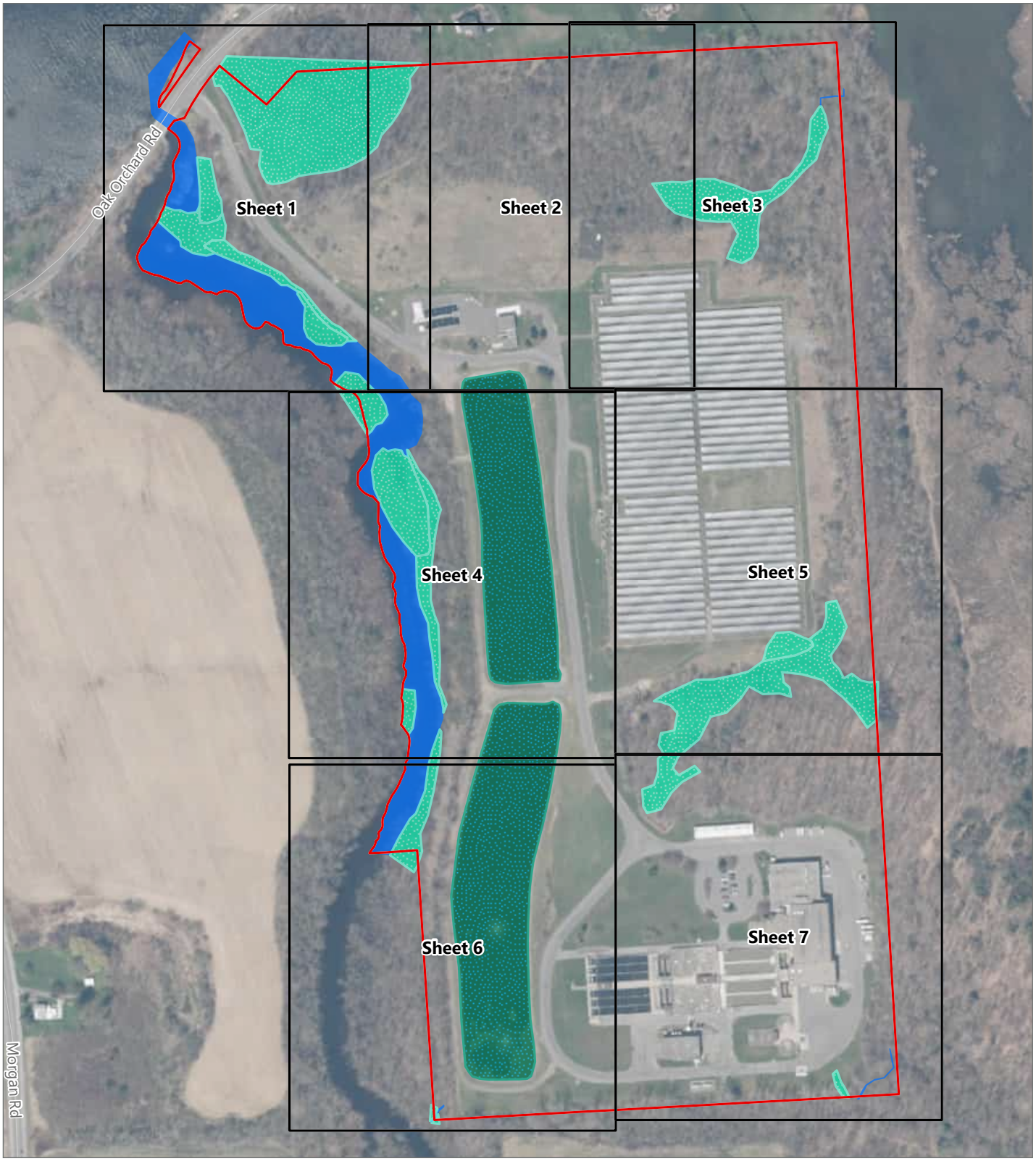
0 100 200 400
Feet

Prepared August 13, 2024
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 3. Delineated Wetlands and Streams

Index



Oak Orchard Project

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Memorandum

Delineated Stream
Delineated Wetland
Wastewater Treatment Lagoon
Study Area

0 100 200 400
Feet

Prepared August 14, 2024
Basemap: NYSDOP "2022" orthoimagery map service

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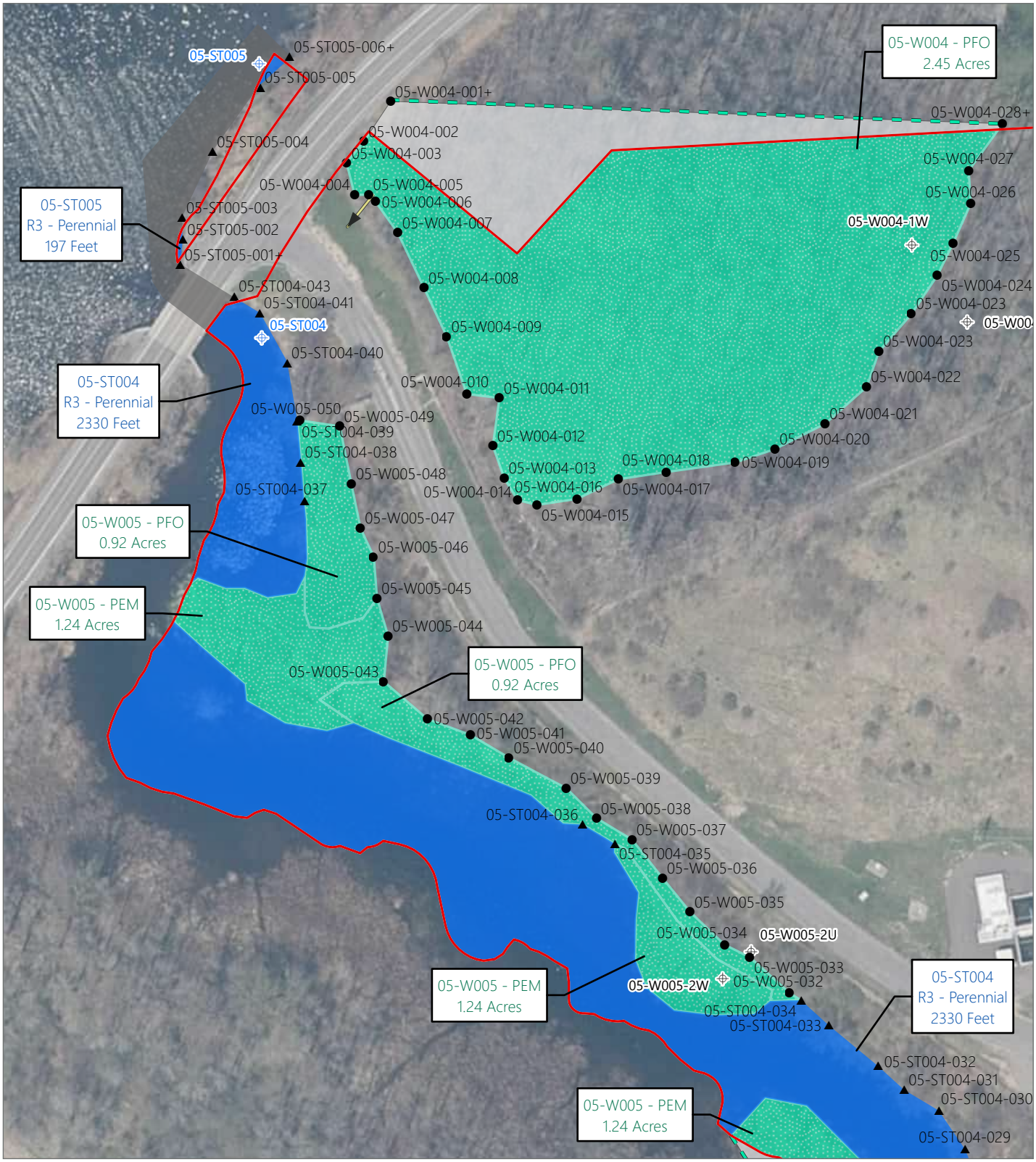
Figure 3. Delineated Wetlands and Streams



Oak Orchard Project

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Memorandum

- Stream Flag
- Wetland Flag
- Datapoint Stream
- Datapoint Wetland
- Culvert
- Wetland Continues
- Delineated Stream inside Study Area
- Delineated Stream outside Study Area
- Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Study Area

0 50 100 200

Feet

Prepared August 14, 2024

Basemap: NYSDOP "2022" orthoimagery map service

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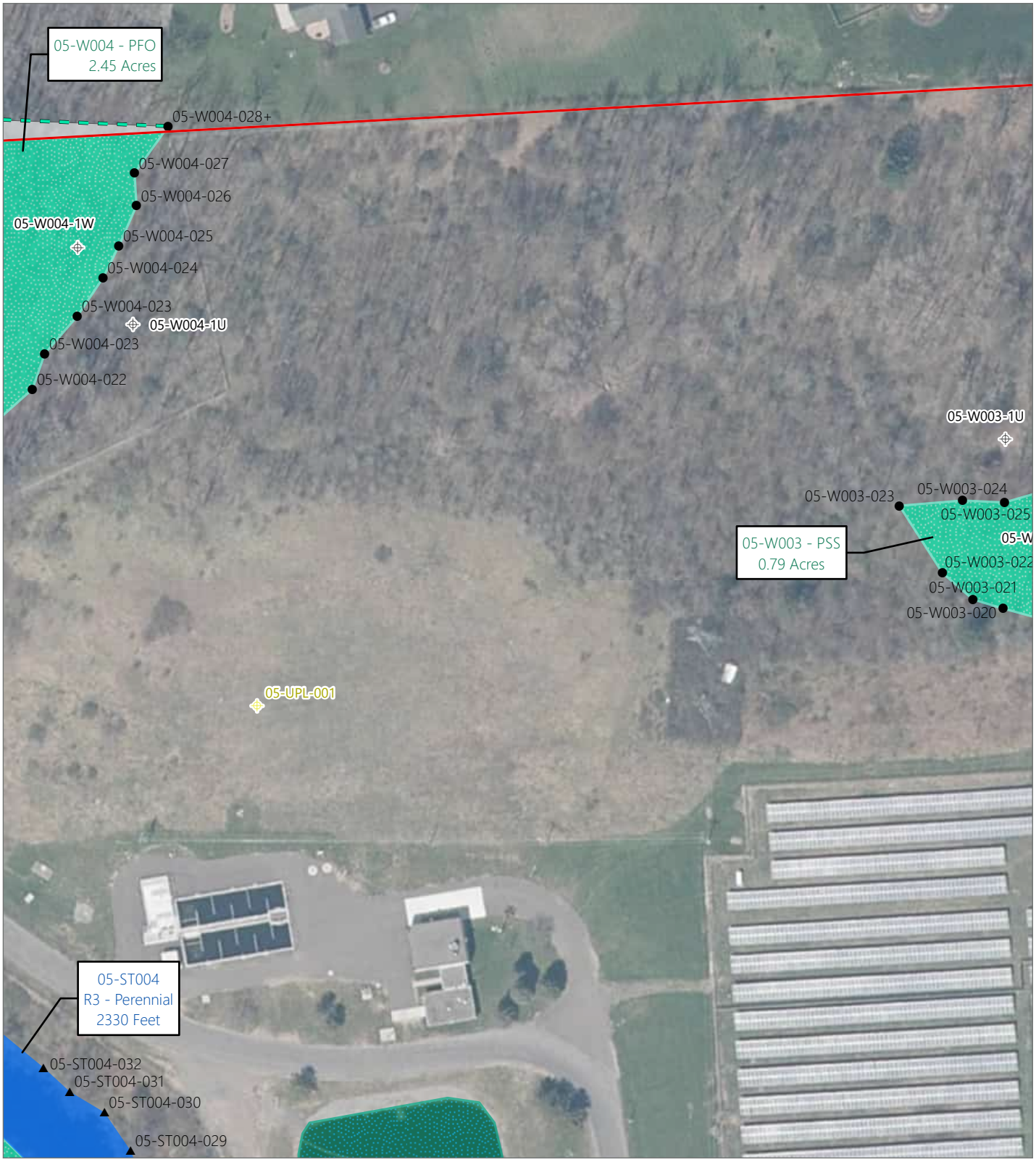
Figure 3. Delineated Wetlands and Streams



Oak Orchard Project

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Memorandum

- Stream Flag
- Wetland Flag
- Datapoint Wetland
- Non-Wetland Verification Point
- Wetland Continues
- Delineated Stream inside Study Area
- Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
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- Study Area

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Feet

Prepared August 14, 2024

Basemap: NYSDOP "2022" orthoimagery map service

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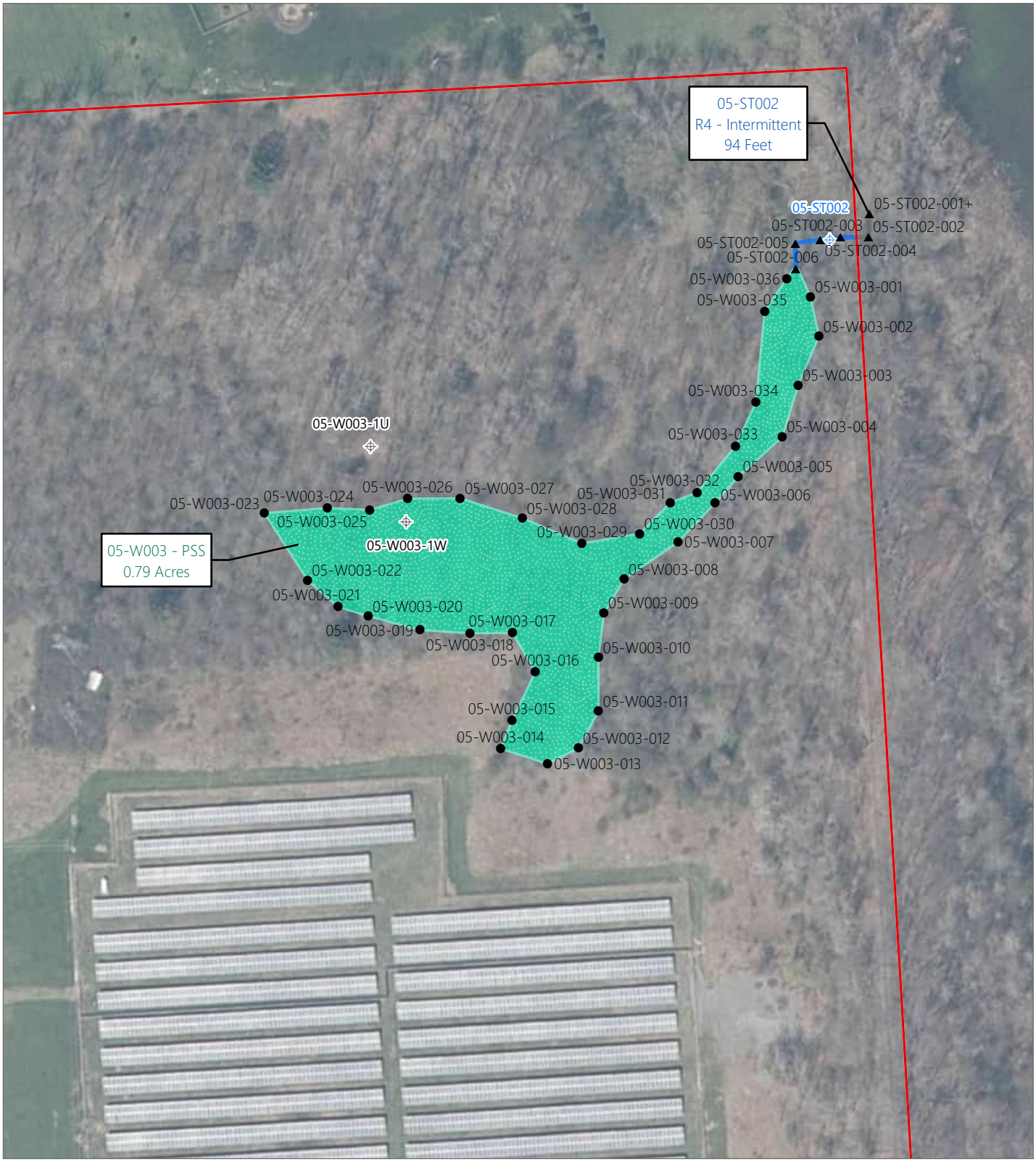

Oak Orchard Project

Town of Clay, Onondaga County, New York

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- Wetland Flag
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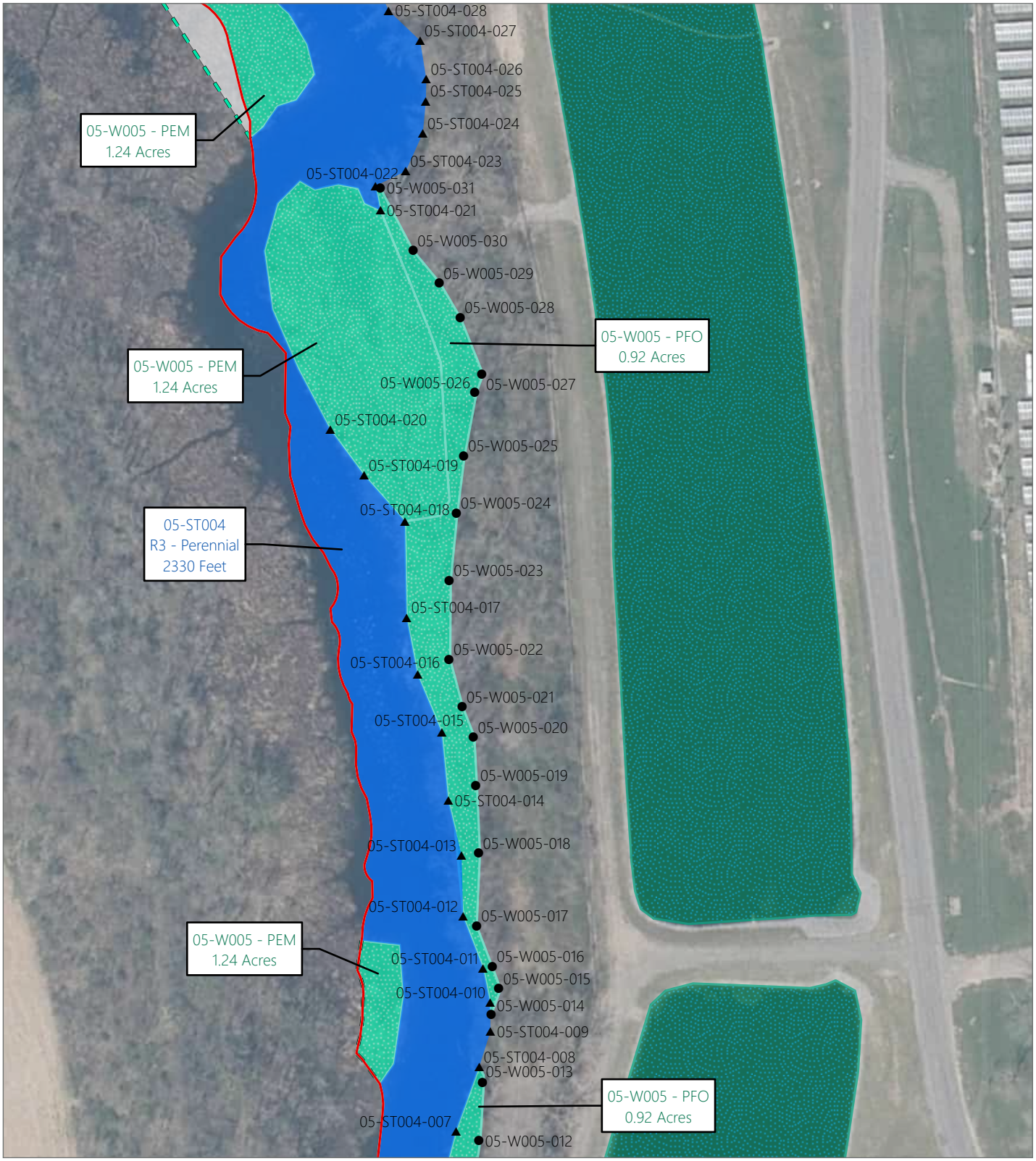
Feet

Prepared August 14, 2024

Basemap: NYSDOP "2022" orthoimagery map service

Figure 3. Delineated Wetlands and Streams



Oak Orchard Project

Town of Clay, Onondaga County, New York

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Prepared August 14, 2024

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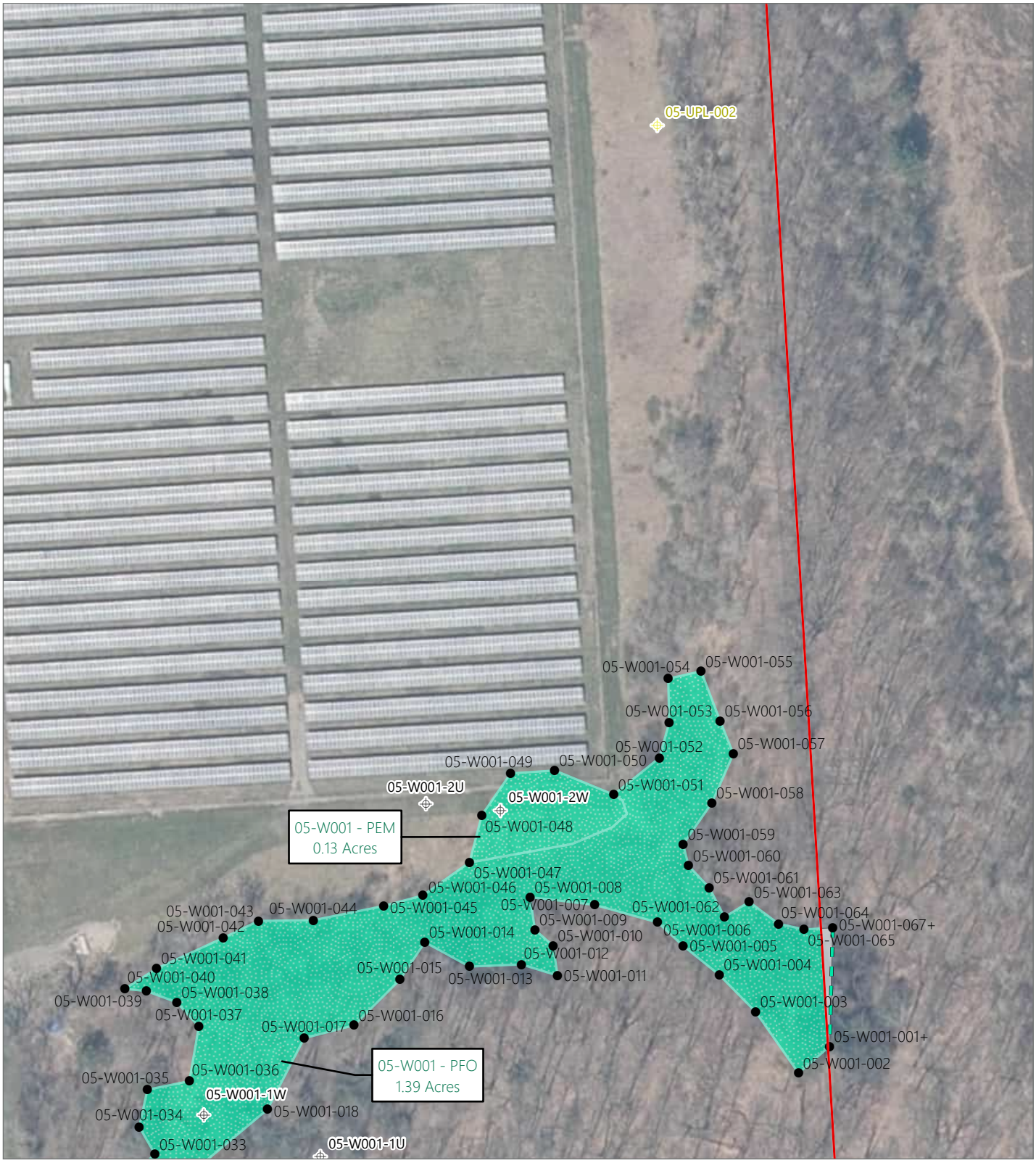

Oak Orchard Project

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Memorandum

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- Study Area

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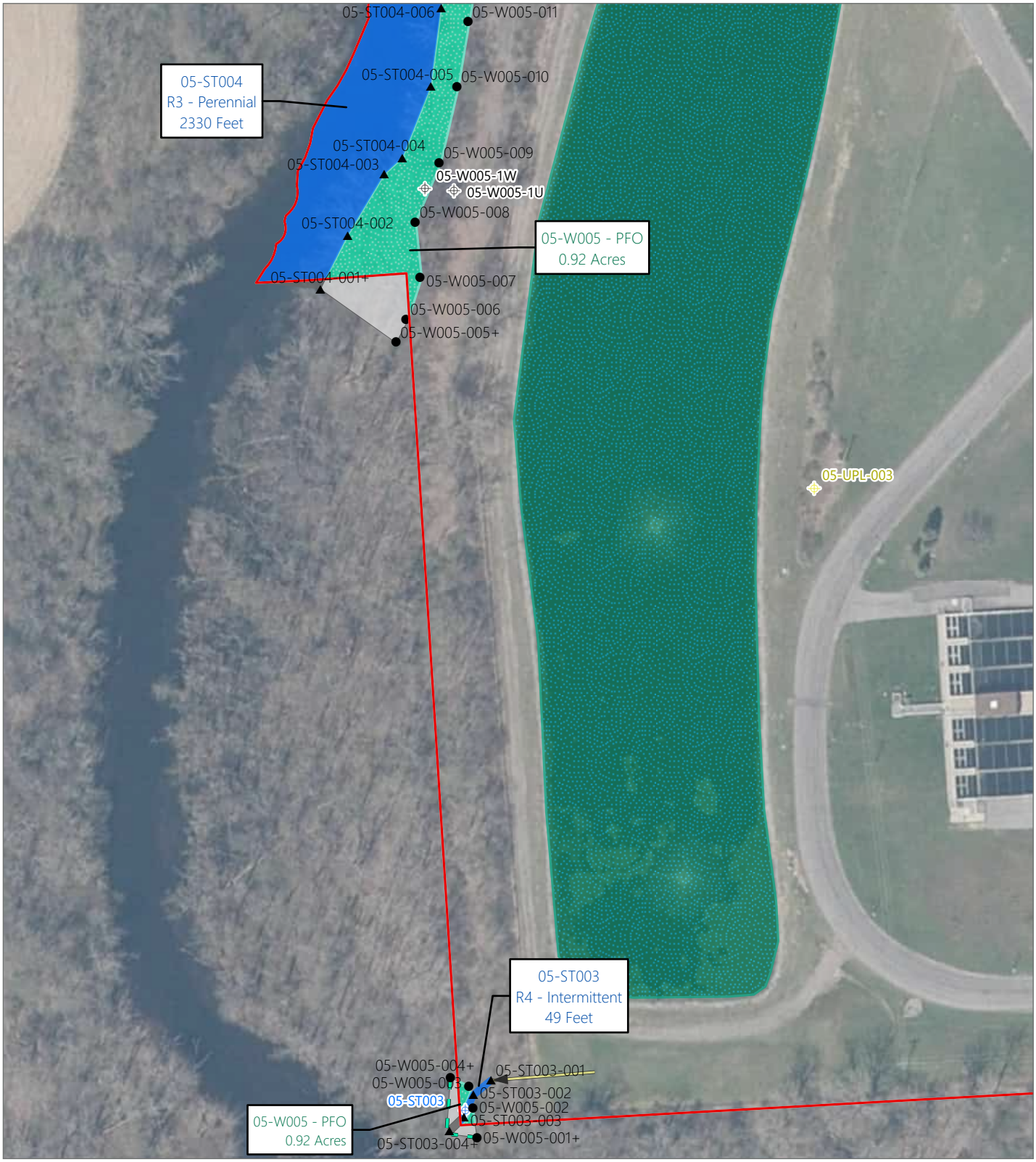
Feet

EDR

Prepared August 14, 2024

Basemap: NYSDOP "2022" orthoimagery map service

Figure 3. Delineated Wetlands and Streams



Oak Orchard Project

Town of Clay, Onondaga County, New York

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Feet

Prepared August 14, 2024

Basemap: NYSDOP "2022" orthoimagery map service

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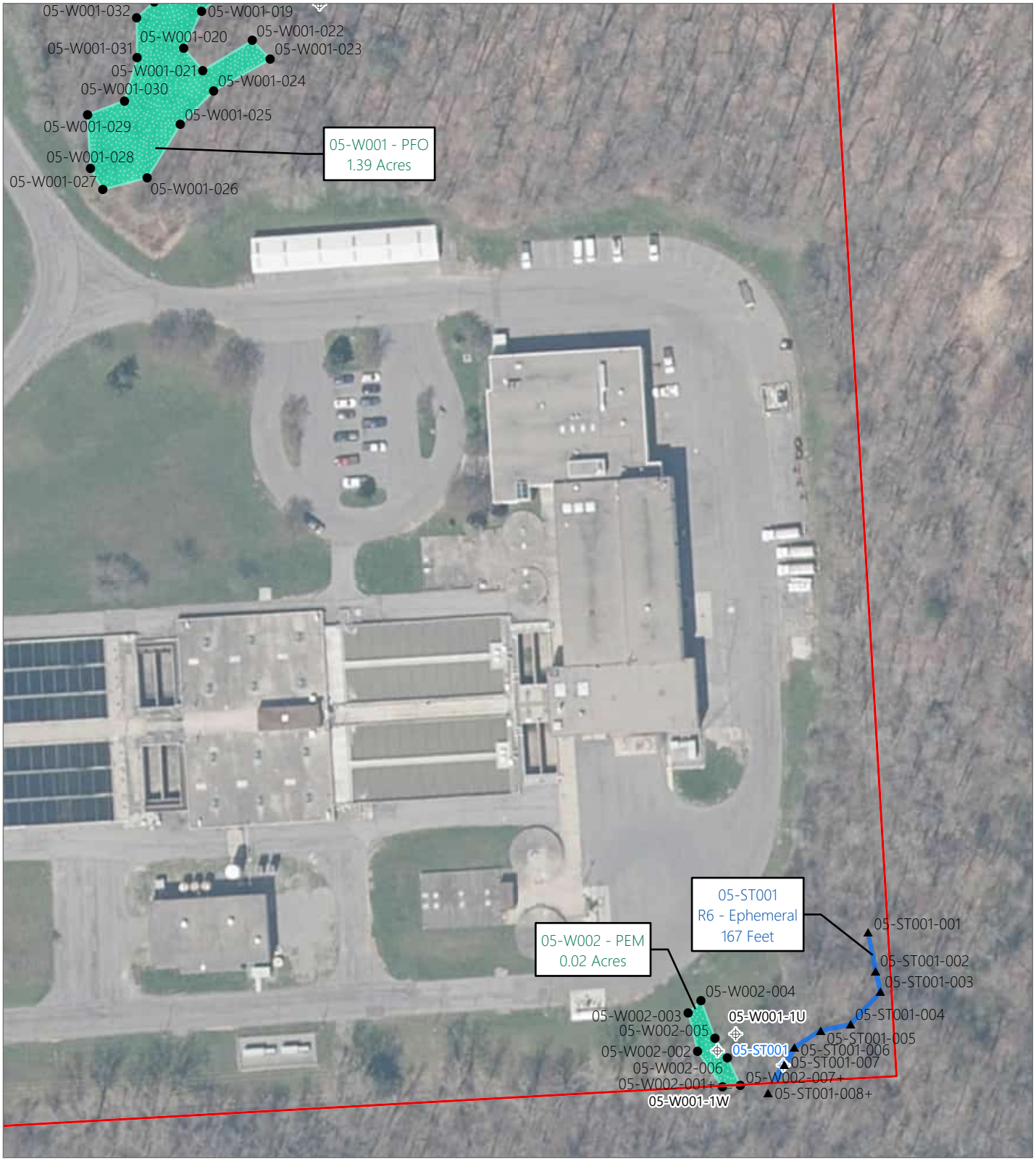
Figure 3. Delineated Wetlands and Streams



Oak Orchard Project

Town of Clay, Onondaga County, New York

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- Study Area

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Feet

Prepared August 14, 2024

Basemap: NYSDOP "2022" orthoimagery map service

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Appendix B

Routine Wetland Determination Data Sheets and OHWM Data Forms

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Onondaga County Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County State: New York Sampling Point: 05-UPL-001
Investigator(s): JK, MC Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): none Slope (%): 0-5
Subregion (LRR or MLRA): LRR L Lat: 43.2039295 Long: -76.21140133333333 Datum: WGS 1984
Soil Map Unit Name: Collamer silt loam, 2 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X
If yes, optional Wetland Site ID: ____

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-UPL-001

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Lotus unifoliolatus* / American bird's foot trefoil	50	Yes	NI
2. *Centaurea jacea* / Brownray knapweed	50	Yes	FACU
3. *Solidago altissima* / Canada goldenrod	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	60	x 4 =	240	
UPL species	50	x 5 =	250	
Column Totals:	110	(A)	490	(B)

Prevalence Index = B/A = 4.45

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: 05-UPL-001

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Very gravelly. Gravel refusal at 5 inches.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Onondaga County Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County State: New York Sampling Point: 05-UPL-002
Investigator(s): JK, MC Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): none Slope (%): 0-5
Subregion (LRR or MLRA): LRR L Lat: 43.20270583333333 Long: -76.20796383333334 Datum: WGS 1984
Soil Map Unit Name: Collamer silt loam, 2 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X
If yes, optional Wetland Site ID: ____

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-UPL-002

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides* / Eastern cottonwood	20	Yes	FAC
2. *Populus tremuloides* / Quaking aspen	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Lonicera morrowii* / Morrow's honeysuckle	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Solidago canadensis* / Canada goldenrod	90	Yes	FACU
2. *Rosa multiflora* / Multiflora rose, Multiflora rosa	10	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	120	x 4 =	480
UPL species	0	x 5 =	0
Column Totals:	140 (A)		540 (B)

Prevalence Index = B/A = 3.86

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: 05-UPL-002

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/3	100					Silt Loam	
12-18	2.5Y 5/6	100					Clay Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Onondaga County Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County State: New York Sampling Point: 05-UPL-003
Investigator(s): JK, MC Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): none Slope (%): 0-5
Subregion (LRR or MLRA): LRR L Lat: 43.19940466666667 Long: -76.2105315 Datum: WGS 1984
Soil Map Unit Name: Dunkirk silt loam, rolling NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X
If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
un mowed area adjacent to around utility pole, adjacent to waste water lagoon.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-UPL-003

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Lonicera morrowii* / Morrow's honeysuckle	20	Yes	FACU
2. *Salix sp.* / Willow	5	Yes	NI
3.			
4.			
5.			
6.			
7.			
	25	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Solidago canadensis* / Canada goldenrod	40	Yes	FACU
2. *Phragmites australis* / Common reed	30	Yes	FACW
3. *Lythrum salicaria* / Purple loosestrife	2	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	72	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	60	x 4 =	240
UPL species	5	x 5 =	25
Column Totals:	97 (A)		327 (B)

Prevalence Index = B/A = 3.37

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: 05-UPL-003

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/3	90	10YR 4/4	10	C	M	Silt Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W001-1U
Investigator(s): JK, MC | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Flat | Local relief (concave, convex, none): none | Slope (%): 0-5
Subregion (LRR or MLRA): LRR L | Lat: 43.20050216666667 | Long: -76.20896066666667 | Datum: WGS 1984
Soil Map Unit Name: Niagara silt loam, 0 to 4 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W001-1U

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia* / American beech	25	Yes	FACU
2. *Carya ovata* / Shag-bark hickory	15	Yes	FACU
3. *Liriodendron tulipifera* / Tuliptree	15	Yes	FACU
4. *Acer rubrum* / Red maple	10	No	FAC
5.			
6.			
7.			
	65	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Fagus grandifolia* / American beech	10	Yes	FACU
2. *Acer rubrum* / Red maple	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	

Herb Stratum (Plot size: 5-ft)			
1. *Toxicodendron radicans* / Eastern poison ivy	10	Yes	FAC
2. *Podophyllum peltatum* / May-apple	5	Yes	FACU
3. *Fraxinus pennsylvanica* / Green ash	5	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20	= Total Cover	

Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	5	x 2 =	10	
FAC species	25	x 3 =	75	
FACU species	70	x 4 =	280	
UPL species	0	x 5 =	0	
Column Totals:	100	(A)	365	(B)

Prevalence Index = B/A = 3.65

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: 05-W001-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	100					Silt Loam	
14-18	10YR 5/3	80	10YR 5/8	20	C	M	Fine Sndy Lm	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W001-1W
Investigator(s): JK, MC | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Bowl shaped depression | Local relief (concave, convex, none): concave | Slope (%): 0-6
Subregion (LRR or MLRA): LRR L | Lat: 43.20058566666667 | Long: -76.20930383333334 | Datum: WGS 1984
Soil Map Unit Name: Niagara silt loam, 0 to 4 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** Yes X No ___
Hydric Soil Present?	Yes X	No ___	If yes, optional Wetland Site ID: 05-W001-1W PFO
Wetland Hydrology Present?	Yes X	No ___	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W001-1W

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum* / Red maple	20	Yes	FAC
2. *Liriodendron tulipifera* / Tuliptree	15	Yes	FACU
3. *Carya ovata* / Shag-bark hickory	10	No	FACU
4. *Tsuga canadensis* / Eastern hemlock	10	No	FACU
5.			
6.			
7.			
	55	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum (Plot size: 5-ft)			
1. *Toxicodendron radicans* / Eastern poison ivy	60	Yes	FAC
2. *Impatiens capensis* / Spotted jewelweed	35	Yes	FACW
3. *Fraxinus pennsylvanica* / Green ash	10	No	FACW
4. *Lindera benzoin* / Northern spicebush	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110	= Total Cover	

Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	80	x 3 =	240
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	165 (A)		480 (B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: 05-W001-1W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	100					Fine Sndy Lm	
8-18	10YR 5/2	80	10YR 5/8	20	C	M	Fine Sndy Lm	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Onondaga County Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County State: New York Sampling Point: 05-W001-2U
Investigator(s): JK, MC Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Mound Local relief (concave, convex, none): convex Slope (%): 2-6
Subregion (LRR or MLRA): LRR L Lat: 43.20125566666667 Long: -76.20863966666667 Datum: WGS 1984
Soil Map Unit Name: Collamer silt loam, 2 to 6 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X
If yes, optional Wetland Site ID: ____

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W001-2U

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Centaurea jacea* / Brownray knapweed	50	Yes	FACU
2. *Lotus unifoliolatus* / American bird's foot trefoil	50	Yes	NI
3. *Phleum pratense* / Common timothy, Cultivated timothy	10	No	FACU
4. *Phragmites australis* / Common reed	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	5	x 2 =	10	
FAC species	0	x 3 =	0	
FACU species	60	x 4 =	240	
UPL species	50	x 5 =	250	
Column Totals:	115	(A)	500	(B)

Prevalence Index = B/A = 4.35

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: 05-W001-2U

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Very gravelly. Gravel refusal at 5 inches.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W001-2W
Investigator(s): JK, MC | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Flat | Local relief (concave, convex, none): none | Slope (%): 0-5
Subregion (LRR or MLRA): LRR L | Lat: 43.20124383333334 | Long: -76.20844483333333 | Datum: WGS 1984
Soil Map Unit Name: Collamer silt loam, 2 to 6 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** Yes X No ___
Hydric Soil Present?	Yes X	No ___	If yes, optional Wetland Site ID: 05-W001-2W PEM
Wetland Hydrology Present?	Yes X	No ___	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W001-2W

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Solidago gigantea* / Smooth goldenrod	30	Yes	FACW
2. *Phragmites australis* / Common reed	20	Yes	FACW
3. *Eupatorium perfoliatum* / Common boneset	10	No	FACW
4. *Scirpus atrovirens* / Green bulrush	10	No	OBL
5. *Lythrum salicaria* / Purple loosestrife	5	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	60	x 2 =	120
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	75 (A)		135 (B)

Prevalence Index = B/A = 1.8

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: 05-W001-2W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	90	10YR 5/6	10	C	PL,M	Clay Loam	
12-18	10YR 5/3	70	10YR 5/8	30	C	M	Sand	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Onondaga County Sampling Date: 07/30/2024
Applicant/Owner: Onondaga County State: New York Sampling Point: 05-W002-1U
Investigator(s): JK, MC Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): convex Slope (%): 0-4
Subregion (LRR or MLRA): LRR L Lat: 43.19829833333333 Long: -76.207756 Datum: WGS 1984
Soil Map Unit Name: Niagara silt loam, 0 to 4 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W002-1U

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Lonicera morrowii* / Morrow's honeysuckle	10	Yes	FACU
2. *Elaeagnus umbellata* / Autumn olive	10	Yes	NI
3. *Rhamnus cathartica* / European buckthorn	10	Yes	FAC
4. *Rosa multiflora* / Multiflora rose, Multiflora rosa	5	No	FACU
5.			
6.			
7.			
	35	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Taraxacum officinale* / Red seeded dandelion, Common dan	25	Yes	FACU
2. *Plantago lanceolata* / Ribwort, English plantain	20	Yes	FACU
3. *Plantago major* / Common plantain	15	Yes	FACU
4. *Prunella vulgaris* / Self heal	15	Yes	FAC
5. *Oxalis stricta* / Upright yellow wood-sorrel	10	No	FACU
6. *Centaurea stoebe* / Spotted knapweed	10	No	NI
7. *Toxicodendron radicans* / Eastern poison ivy	5	No	FAC
8. *Daucus carota* / Carrot, Carrot, Queen anne's lace	5	No	UPL
9. *Hieracium caespitosum* / Meadow hawkweed	5	No	NI
10.			
11.			
12.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	85	x 4 =	340
UPL species	30	x 5 =	150
Column Totals:	145 (A)		580 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: 05-W002-1U

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 07/30/2024
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W002-1W
Investigator(s): JK, MC | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Hillslope | Local relief (concave, convex, none): concave | Slope (%): 0-4
Subregion (LRR or MLRA): LRR L | Lat: 43.19826183333333 | Long: -76.207809 | Datum: WGS 1984
Soil Map Unit Name: Niagara silt loam, 0 to 4 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** Yes X No ___
Hydric Soil Present?	Yes X	No ___	If yes, optional Wetland Site ID: 05-W002-1W PEM
Wetland Hydrology Present?	Yes X	No ___	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Small seep from maintained lawn adjacent pavement area.

VEGETATION - Use scientific names of plants. Sampling Point: 05-W002-1W

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Agrostis stolonifera* / Redtop, Creeping bent	40	Yes	FACW
2. *Eleocharis palustris* / Common spikerush	20	Yes	OBL
3. *Juncus tenuis* / Slender rush, Poverty or slender rush	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	40	x 2 =	80
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	65 (A)		115 (B)

Prevalence Index = B/A = 1.77

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: 05-W002-1W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2	95	7.5YR 4/4	5	C	PL,M	Clay Loam	
5-18	2.5Y 4/1	90	10YR 5/8	10	C	PL,M	Clay Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 07/30/2024
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W003-1U
Investigator(s): JK, MC | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Mound | Local relief (concave, convex, none): convex | Slope (%): 0-6
Subregion (LRR or MLRA): LRR L | Lat: 43.20449783333333 | Long: -76.20919766666667 | Datum: WGS 1984
Soil Map Unit Name: Collamer silt loam, 2 to 6 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W003-1U

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum* / Red maple	60	Yes	FAC
2. *Pinus resinosa* / Red pine	15	No	FACU
3. *Fraxinus pennsylvanica* / Green ash	10	No	FACW
4.			
5.			
6.			
7.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Rhamnus cathartica* / European buckthorn	15	Yes	FAC
2. *Juglans nigra* / Black walnut	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	25	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Parthenocissus quinquefolia* / Virginia creeper	40	Yes	FACU
2. *Persicaria virginiana* / Jumpseed	20	Yes	FAC
3. *Fraxinus pennsylvanica* / Green ash	15	No	FACW
4. *Rosa multiflora* / Multiflora rose, Multiflora rosa	10	No	FACU
5. *Rhamnus cathartica* / European buckthorn	10	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	105	x 3 =	315
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	205 (A)		665 (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: 05-W003-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/3	100					Silt Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 07/30/2024
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W003-1W
Investigator(s): JK, MC | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Toeslope | Local relief (concave, convex, none): concave | Slope (%): 0-6
Subregion (LRR or MLRA): LRR L | Lat: 43.20430766666666 | Long: -76.20910716666667 | Datum: WGS 1984
Soil Map Unit Name: Collamer silt loam, 2 to 6 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** Yes X No ___
Hydric Soil Present?	Yes X	No ___	If yes, optional Wetland Site ID: 05-W003-1W PSS
Wetland Hydrology Present?	Yes X	No ___	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W003-1W

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica* / Green ash	15	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Cornus racemosa* / Gray dogwood	30	Yes	FAC
2. *Fraxinus pennsylvanica* / Green ash	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	50	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Solidago rugosa* / Wrinkle-leaf goldenrod	40	Yes	FAC
2. *Juncus tenuis* / Slender rush, Poverty or slender rush	20	Yes	FAC
3. *Symphyotrichum sp.* / Aster	15	No	NI
4. *Impatiens capensis* / Spotted jewelweed	10	No	FACW
5. *Geum laciniatum* / Rough avens	10	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	55	x 2 =	110
FAC species	90	x 3 =	270
FACU species	0	x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	160 (A)		455 (B)

Prevalence Index = B/A = 2.84

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: 05-W003-1W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/2	90	7.5YR 4/4	10	C	M	Clay Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Onondaga County Sampling Date: 07/30/2024
Applicant/Owner: Onondaga County State: New York Sampling Point: 05-W004-1U
Investigator(s): JK, MC Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): convex Slope (%): 8-15
Subregion (LRR or MLRA): LRR L Lat: 43.204748 Long: -76.211759 Datum: WGS 1984
Soil Map Unit Name: Dunkirk silt loam, rolling NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X
If yes, optional Wetland Site ID: ____

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W004-1U

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juglans nigra* / Black walnut	30	Yes	FACU
2. *Fraxinus pennsylvanica* / Green ash	10	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Lonicera morrowii* / Morrow's honeysuckle	25	Yes	FACU
2. *Fraxinus pennsylvanica* / Green ash	5	No	FACW
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Persicaria virginiana* / Jumpseed	40	Yes	FAC
2. *Rubus allegheniensis* / Allegheny blackberry	25	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	40	x 3 =	120
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	135 (A)		470 (B)

Prevalence Index = B/A = 3.48

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: 05-W004-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/3	100					Silt Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 07/30/2024
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W004-1W
Investigator(s): JK, MC | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Bowl shaped depression | Local relief (concave, convex, none): concave | Slope (%): 2-15
Subregion (LRR or MLRA): LRR L | Lat: 43.204913 | Long: -76.211904 | Datum: WGS 1984
Soil Map Unit Name: Dunkirk silt loam, rolling | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: 05-W004-1W PFO
Wetland Hydrology Present?	Yes X	No ____	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 2
Water Table Present?	Yes X	No ____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W004-1W

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum* / Red maple	30	Yes	FAC
2. *Fraxinus pennsylvanica* / Green ash	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Fraxinus pennsylvanica* / Green ash	30	Yes	FACW
2. *Rhamnus cathartica* / European buckthorn	15	Yes	FAC
3. *Lonicera morrowii* / Morrow's honeysuckle	5	No	FACU
4.			
5.			
6.			
7.			
	50	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Saururus cernuus* / Lizard's-tail	30	Yes	OBL
2. *Onoclea sensibilis* / Sensitive fern	20	Yes	FACW
3. *Impatiens capensis* / Spotted jewelweed	10	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	80	x 2 =	160
FAC species	45	x 3 =	135
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	160 (A)		345 (B)

Prevalence Index = B/A = 2.16

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: 05-W004-1W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	95	10YR 5/6	5	C	M	Clay Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W005-1U
Investigator(s): JK, MC | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Hillslope | Local relief (concave, convex, none): convex | Slope (%): 8-15
Subregion (LRR or MLRA): LRR L | Lat: 43.200039 | Long: -76.2115765 | Datum: WGS 1984
Soil Map Unit Name: Saprists and Fluvaquents, ponded | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil X, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Soils problematic due to rocks fill along slope.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W005-1U

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus virginiana* / Chokecherry	10	Yes	FACU
2. *Populus deltoides* / Eastern cottonwood	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Rhamnus cathartica* / European buckthorn	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Parthenocissus quinquefolia* / Virginia creeper	15	Yes	FACU
2. *Vitis riparia* / River-bank grape	10	Yes	FAC
3. *Toxicodendron radicans* / Eastern poison ivy	10	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	65 (A)		220 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: 05-W005-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Rock refusal at 0 inches. Large area adjacent to wetland has been filled along seep grad with 2+ inch rock fill.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W005-1W
Investigator(s): JK, MC | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Toeslope | Local relief (concave, convex, none): concave | Slope (%): 0-15
Subregion (LRR or MLRA): LRR L | Lat: 43.200048 | Long: -76.21166 | Datum: WGS 1984
Soil Map Unit Name: Saprists and Fluvaquents, ponded | NWI classification: PAB/UBHh
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: 05-W005-1W PFO
Wetland Hydrology Present?	Yes X	No ____	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W005-1W

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana* / American elm	15	Yes	FACW
2. *Acer rubrum* / Red maple	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Rosa multiflora* / Multiflora rose, Multiflora rosa	15	Yes	FACU
2. *Carpinus caroliniana* / American hornbeam	15	Yes	FAC
3. *Quercus bicolor* / Swamp white oak	10	Yes	FACW
4. *Rhamnus cathartica* / European buckthorn	5	No	FAC
5. *Fraxinus pennsylvanica* / Green ash	5	No	FACW
6.			
7.			
	50	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Saururus cernuus* / Lizard's-tail	30	Yes	OBL
2. *Parthenocissus quinquefolia* / Virginia creeper	10	Yes	FACU
3. *Rosa multiflora* / Multiflora rose, Multiflora rosa	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	30	x 2 =	60
FAC species	30	x 3 =	90
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	120 (A)		300 (B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: 05-W005-1W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	N 3/	85	5Y 4/1	10	D	M	Clay Loam	
0-18			10YR 4/6	5	C	M	Clay Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Onondaga County Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County State: New York Sampling Point: 05-W005-2U
Investigator(s): JK, MC Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): convex Slope (%): 8-20
Subregion (LRR or MLRA): LRR L Lat: 43.20340566666667 Long: -76.21240116666667 Datum: WGS 1984
Soil Map Unit Name: Saprists and Fluvaquents, ponded NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X
If yes, optional Wetland Site ID: ____

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W005-2U

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juglans nigra* / Black walnut	30	Yes	FACU
2. *Ulmus rubra* / Slippery elm	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Elaeagnus umbellata* / Autumn olive	40	Yes	UPL
2. *Lonicera morrowii* / Morrow's honeysuckle	20	Yes	FACU
3. *Rhamnus cathartica* / European buckthorn	10	No	FAC
4.			
5.			
6.			
7.			
	70	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Toxicodendron radicans* / Eastern poison ivy	25	Yes	FAC
2. *Persicaria virginiana* / Jumpseed	10	Yes	FAC
3. *Amphicarpaea bracteata* / American hog-peanut	8	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	43	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	63	x 3 =	189
FACU species	50	x 4 =	200
UPL species	40	x 5 =	200
Column Totals:	153 (A)		589 (B)

Prevalence Index = B/A = 3.85

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: 05-W005-2U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3	100					Silt Loam	
5-14	10YR 5/3	100					Silt Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Very gravelly. Gravel refusal at 14 inches.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 07/31/2024
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W005-2W
Investigator(s): JK, MC | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Riverine | Local relief (concave, convex, none): concave | Slope (%): 0-8
Subregion (LRR or MLRA): LRR L | Lat: 43.2033305 | Long: -76.21240616666667 | Datum: WGS 1984
Soil Map Unit Name: Saprists and Fluvaquents, ponded | NWI classification: PAB/UBHh
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: 05-W005-2W PEM
Wetland Hydrology Present?	Yes X	No ____	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 4+
Water Table Present?	Yes X	No ____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W005-2W

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Peltandra virginica* / Green arrow arum, Tuckahoe	20	Yes	OBL
2. *Typha angustifolia* / Narrow leaf cattail, Narrow-leaved cattai	15	Yes	OBL
3. *Onoclea sensibilis* / Sensitive fern	10	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	45 (A)		55 (B)

Prevalence Index = B/A = 1.22

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: 05-W005-2W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	90	5YR 4/6	10	C	PL,M	Clay Loam	
8-18	7.5YR 5/1	100					Clay Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Oak Orchard - OHWM 1.1

Project	24187 - Oak Orchard
ID	470604
Survey Date	07/30/2024
User	Megan Cammett
General Information	
Sampling Point	05-ST001
Project	Oak Orchard
Date	07/30/2024
Time	08:53 AM
Location	
Latitude	43.1982327
Longitude	-76.2076213
Investigator(s)	JK, MC
Step 1: Site overview from remote and online resources	
Check boxes for online resources used to evaluate site	LiDAR, climatic data, geologic maps, land use maps, other, satellite imagery, topographic maps
Other	Natural Resource Mapper
Describe land use and flow conditions from online resources.	Stream flows through forested area directly adjacent to wastewater treatment plant. Forested area is bordered by fields with solar panels on south side.
Step 2: Site conditions during field assessment	
Describe Site Condition	Ephemeral stream flows southwest through forested area. No flow at time of delineation. Developed bank present at the lower stretch with a change in vegetation.
Step 3 Indicators	
Geomorphic Indicators	
Break in slope	Present
Break in Slope Indicator Location	x
On the bank	Present
On the bank Indicator Location	x
Undercut Bank	
Valley Bottom	
Other break in slope description	
Shelving	
Channel bar	

made with Wildnote

Instream bedforms and other bedload transport evidence	
Secondary channels	

Sediment Indicators	
Soil development	
Changes in character of soil	
Mudcracks	
Changes in particle-sized distribution	

Vegetation Indicators	
Change in vegetation type and/or density	Present
Vegetation Indicator Location	x
Vegetation Change From	vegetation absent
Vegetation Change To	forbs
Vegetation matted down and/or bent:	
Exposed roots below intact soil layer:	

Ancillary Indicators	
Wracking/presence of organic litter	
Presence of large wood	
Leaf litter disturbed or washed away	
Water staining	
Weathered clasts or bedrock	
Other observed indicators?	No

Step 4: Additional Information	
Is additional information needed to support this determination?	No

Step 5: Rationale	
Describe rationale for location of OHWM	The OHWM indicators of break in slope on the bank and change in vegetation were persistent throughout the entire delineated reach of stream.
Additional observations or notes	

Photos	
Photo log attached?	Yes
Photos	

Change in vegetation type and break in slope.

Oak Orchard - OHWM 1.1

Project	24187 - Oak Orchard
ID	470608
Survey Date	07/30/2024
User	Megan Cammett
General Information	
Sampling Point	05-ST002
Project	Oak Orchard
Date	07/30/2024
Time	12:04 PM
Location	
Latitude	43.2049395
Longitude	-76.20786683333333
Datum	NAD83/2011
Investigator(s)	JK, MC
Step 1: Site overview from remote and online resources	
Check boxes for online resources used to evaluate site	LiDAR, climatic data, geologic maps, land use maps, other, satellite imagery, topographic maps
Other	Natural Resource Mapper
Describe land use and flow conditions from online resources.	Stream flows through shrubland bordered by residential housing and wastewater treatment plant.
Step 2: Site conditions during field assessment	
Describe Site Condition	Intermittent drainage stream flows west from offsite through successional shrubland and drains wetland. No flow at time of delineation. Bank and bed well developed.
Step 3 Indicators	
Geomorphic Indicators	
Break in slope	Present
Break in Slope Indicator Location	x
On the bank	Present
On the bank Indicator Location	x
Undercut Bank	
Valley Bottom	
Other break in slope description	
Shelving	
Channel bar	
Instream bedforms and other bedload transport evidence	

Secondary channels	

Sediment Indicators	
Soil development	
Changes in character of soil	
Mudcracks	
Changes in particle-sized distribution	

Vegetation Indicators	
Change in vegetation type and/or density	Present
Vegetation Indicator Location	x
Vegetation Change From	vegetation absent
Vegetation Change To	forbs
Vegetation matted down and/or bent:	
Exposed roots below intact soil layer:	

Ancillary Indicators	
Wracking/presence of organic litter	
Presence of large wood	Present
Presence of Large Wood Indicator Location	x
Leaf litter disturbed or washed away	
Water staining	
Weathered clasts or bedrock	
Other observed indicators?	No

Step 4: Additional Information	
Is additional information needed to support this determination?	No

Step 5: Rationale	
Describe rationale for location of OHWM	The OHWM indicators of brake in slope on the bank and change in vegetation type were persistent throughout the entire delineated reach of stream. The indicator of presence of large wood was observed but not persistent.
Additional observations or notes	

Photos	
Photo log attached?	Yes
Photos	

Break in slope on the bank and change in vegetation type.

Presence of large wood.

Oak Orchard - OHWM 1.1

Project	24187 - Oak Orchard
ID	471569
Survey Date	08/01/2024
User	Megan Cammett
General Information	
Sampling Point	05-ST003
Project	Oak Orchard
Date	07/31/2024
Time	08:27 AM
Location	
Latitude	43.1980791
Longitude	-76.2115564
Investigator(s)	JK, MC
Step 1: Site overview from remote and online resources	
Check boxes for online resources used to evaluate site	LiDAR, climatic data, geologic maps, land use maps, other, satellite imagery, topographic maps
Other	Natural Resource Mapper
Describe land use and flow conditions from online resources.	Surrounded by forested area bordered by developed land of wastewater treatment plant. Northeast of NWI mapped wetland with classification PFO1/SS1E, NYSDEC Class C mapped stream, and NYSDEC mapped wetland BRE-17.
Step 2: Site conditions during field assessment	
Describe Site Condition	Intermittent stream flows southwest through forested wetland. Fed from culvert with outflow from wastewater treatment plant. Light base flow at time of delineation. Well developed bank and substrate bottom present.
Step 3 Indicators	
Geomorphic Indicators	
Break in slope	Present
Break in Slope Indicator Location	x
On the bank	Present
On the bank Indicator Location	x
Undercut Bank	
Valley Bottom	
Other break in slope description	
Shelving	
Channel bar	
Instream bedforms and other bedload transport evidence	

Secondary channels	

Sediment Indicators	
Soil development	
Changes in character of soil	
Mudcracks	
Changes in particle-sized distribution	

Vegetation Indicators	
Change in vegetation type and/or density	Present
Vegetation Indicator Location	x
Vegetation Change From	vegetation absent
Vegetation Change To	forbs
Vegetation matted down and/or bent:	
Exposed roots below intact soil layer:	

Ancillary Indicators	
Wracking/presence of organic litter	
Presence of large wood	Present
Presence of Large Wood Indicator Location	x
Leaf litter disturbed or washed away	
Water staining	
Weathered clasts or bedrock	
Other observed indicators?	No

Step 4: Additional Information	
Is additional information needed to support this determination?	No

Step 5: Rationale	
Describe rationale for location of OHWM	The OHWM indicators of break in slope on the bank and change in vegetation type were persistent throughout the entire delineated reach of stream. The indicator of presence of large wood was noted but not persistent.
Additional observations or notes	In addition to forbs, vegetation also changed to woody shrubs.

Photos	
Photo log attached?	Yes
Photos	

Presence of large wood.

Change in vegetation type and break in slope on the bank.

Oak Orchard - OHWM 1.1

Project	24187 - Oak Orchard
ID	471572
Survey Date	08/01/2024
User	Megan Cammett
General Information	
Sampling Point	05-ST004
Project	Oak Orchard
Date	07/31/2024
Time	04:17 PM
Location	
Latitude	43.20472
Longitude	-76.213823
Investigator(s)	JK, MC
Step 1: Site overview from remote and online resources	
Check boxes for online resources used to evaluate site	LiDAR, climatic data, geologic maps, land use maps, other, satellite imagery, topographic maps
Other	Natural Resource Mapper
Describe land use and flow conditions from online resources.	Stream corresponds with NYSDEC Class C mapped stream. Also flows within NYSDEC mapped wetland BRE-17 and an NWI mapped wetland with classification PAB/UBHh. Stream flows through forested area that is bordered by an agriculture field and wastewater treatment plant.
Step 2: Site conditions during field assessment	
Describe Site Condition	Perennial stream flows north bordered by a forested and emergent wetland complex on both sides. Outflows into 05-ST005 via under a road bridge. Strong base flow rate during time of delineation. Stream has a well developed bank and distinct change in vegetation. Downhill from wastewater treatment plant.
Step 3 Indicators	
Geomorphic Indicators	
Break in slope	Present
Break in Slope Indicator Location	x
On the bank	Present
On the bank Indicator Location	x
Undercut Bank	
Valley Bottom	
Other break in slope description	
Shelving	
Channel bar	
Instream bedforms and	

other bedload transport evidence	
Secondary channels	

Sediment Indicators	
Soil development	
Changes in character of soil	
Mudcracks	
Changes in particle-sized distribution	

Vegetation Indicators	
Change in vegetation type and/or density	Present
Vegetation Indicator Location	x
Vegetation Change From	vegetation absent
Vegetation Change To	forbs
Vegetation matted down and/or bent:	
Exposed roots below intact soil layer:	

Ancillary Indicators	
Wracking/presence of organic litter	
Presence of large wood	
Leaf litter disturbed or washed away	
Water staining	
Weathered clasts or bedrock	
Other observed indicators?	Yes
Describe	Aquatic vegetation was observed during time of delineation.

Step 4: Additional Information	
Is additional information needed to support this determination?	No

Step 5: Rationale	
Describe rationale for location of OHWM	The OHWM indicators of break in slope on the bank and change in vegetation type were persistent throughout the entire delineated reach of stream.
Additional observations or notes	In addition to forbs, vegetation also changes to woody shrubs and deciduous trees.

Photos	
Photo log attached?	Yes
Photos	

Break in slope on the bank.

Change in vegetation type.

Oak Orchard - OHWM 1.1

Project	24187 - Oak Orchard
ID	471575
Survey Date	08/01/2024
User	Megan Cammett
General Information	
Sampling Point	05-ST005
Project	Oak Orchard
Date	07/31/2024
Time	11:19 AM
Location	
Latitude	43.205311
Longitude	-76.213826
Investigator(s)	JK, MC
Step 1: Site overview from remote and online resources	
Check boxes for online resources used to evaluate site	LiDAR, climatic data, geologic maps, land use maps, other, satellite imagery, topographic maps
Other	Natural Resource Mapper
Describe land use and flow conditions from online resources.	Stream corresponds with NYSDEC Class B mapped stream and NWI mapped waterbody with classification R2UBH. Bordered by deciduous forests, residential neighborhoods, and paved roads with multiple bridge overpasses. Outflows into Oneida Lake.
Step 2: Site conditions during field assessment	
Describe Site Condition	Perennial stream flows northwest through developed, successional scrub shrub, and forested areas. Receives outflow from 05-ST004 via under road bridge. Strong base flow present during time of delineation. Well developed bank and distinct change in vegetation present.
Step 3 Indicators	
Geomorphic Indicators	
Break in slope	Present
Break in Slope Indicator Location	x
On the bank	Present
On the bank Indicator Location	x
Undercut Bank	
Valley Bottom	
Other break in slope description	
Shelving	
Channel bar	
Instream bedforms and other bedload transport	

evidence	
Secondary channels	

Sediment Indicators	
Soil development	
Changes in character of soil	
Mudcracks	
Changes in particle-sized distribution	

Vegetation Indicators	
Change in vegetation type and/or density	Present
Vegetation Indicator Location	x
Vegetation Change From	vegetation absent
Vegetation Change To	deciduous trees
Vegetation matted down and/or bent:	
Exposed roots below intact soil layer:	

Ancillary Indicators	
Wracking/presence of organic litter	
Presence of large wood	
Leaf litter disturbed or washed away	
Water staining	
Weathered clasts or bedrock	
Other observed indicators?	No

Step 4: Additional Information	
Is additional information needed to support this determination?	No

Step 5: Rationale	
Describe rationale for location of OHWM	The OHWM indicators of break in slope on the bank and change in vegetation type were persistent throughout the entire delineated reach of stream.
Additional observations or notes	In addition to deciduous trees, vegetation also changes to woody shrubs and forbs.

Photos	
Photo log attached?	Yes
Photos	

Change in vegetation type.

Break in slope on the bank.

Appendix C

Photo Documentation

Photo 1
Representative photograph of a wastewater treatment lagoon.

Photo 2
Representative photograph of the palustrine forested (PFO) portion of wetland 05-W001.

Photo 3
Photograph of drop culvert within wetland 05-W001.

Photo 4
Photograph of wetland 05-W001 beyond the Study Area. Wetland extends approximately 40 feet into upland forest.

Photo 5
Representative photograph of the palustrine emergent (PEM) portion of wetland 05-W001.

Photo 6
Representative photograph of the upland area adjacent to the PFO portion of wetland 05-W001.

Photo 7
Representative photograph of the upland area adjacent to the PEM portion of wetland 05-W001.

Photo 8
Representative photograph of palustrine emergent (PEM) wetland 05-W002.

Photo 9
Representative photograph of the upland area adjacent to wetland 05-W002.

Photo 10
Representative photograph of palustrine scrub-shrub (PSS) wetland 05-W003.

Photo 11
Representative photograph of the upland area adjacent to wetland 05-W003.

Photo 12
Representative photograph of palustrine forested (PFO) wetland 05-W004.

Photo 13
Representative photograph of the upland area adjacent to wetland 05-W004.

Photo 14
Representative photograph of the palustrine forested (PFO) portion of wetland 05-W005.

Photo 15
Representative photograph of the palustrine emergent (PEM) portion of wetland 05-W005.

Photo 16
Representative photograph of the upland area adjacent to the PFO portion of wetland 05-W005.

Photo 17
Representative photograph of the upland area adjacent to the PFO portion of wetland 05-W005.

Photo 18
Representative photograph of ephemeral stream 05-ST001.

Photo 19
Representative photograph of intermittent stream 05-ST002.

Photo 20
Representative photograph of intermittent stream 05-ST003.

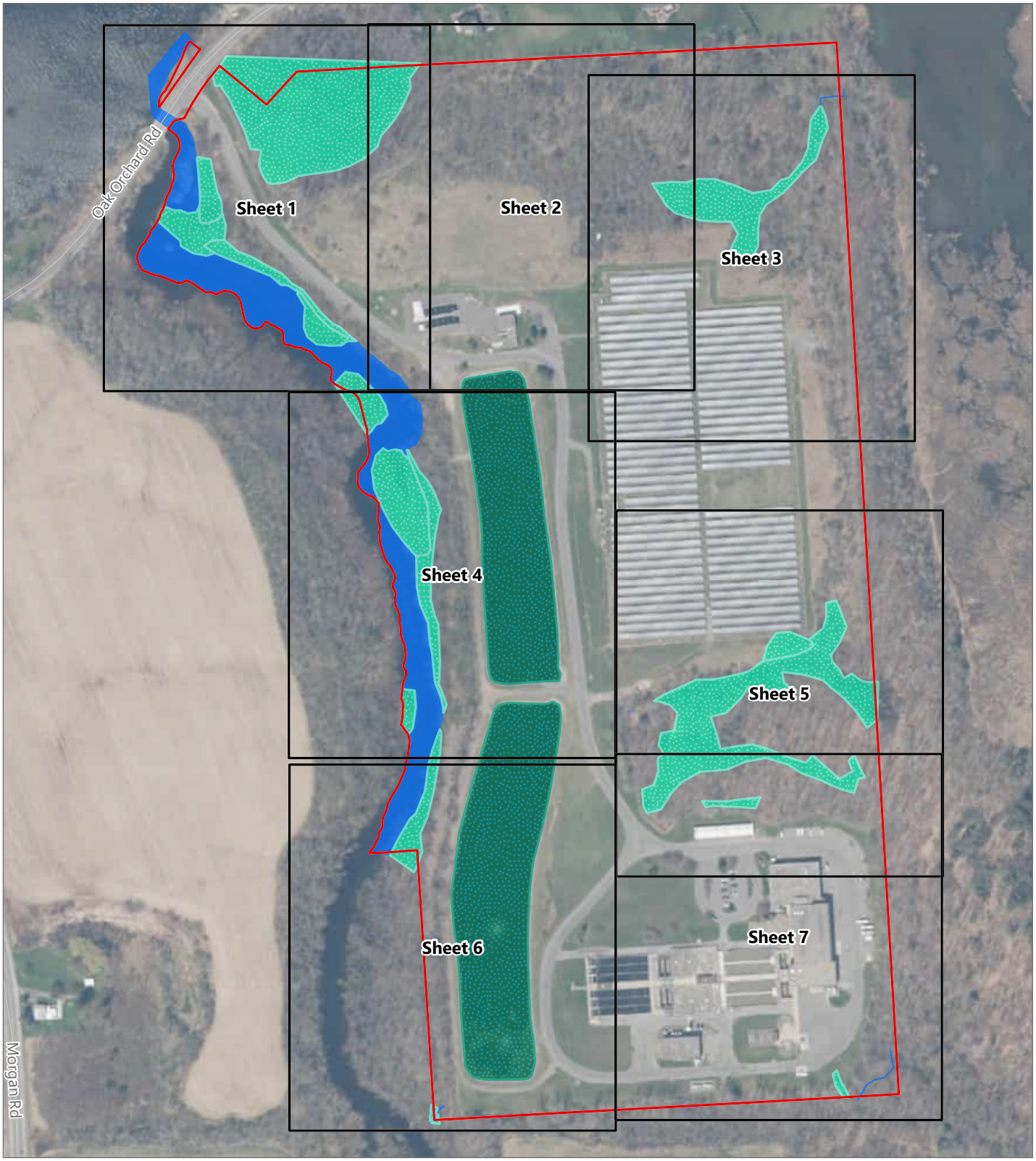
Photo 21
Representative photograph of Mud Creek, perennial stream 05-ST004.

Photo 22
Representative photograph of the Oneida River, perennial stream 05-ST005.

Attachment E

Figure 1. Delineated Wetland and Stream Extensions

Index



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

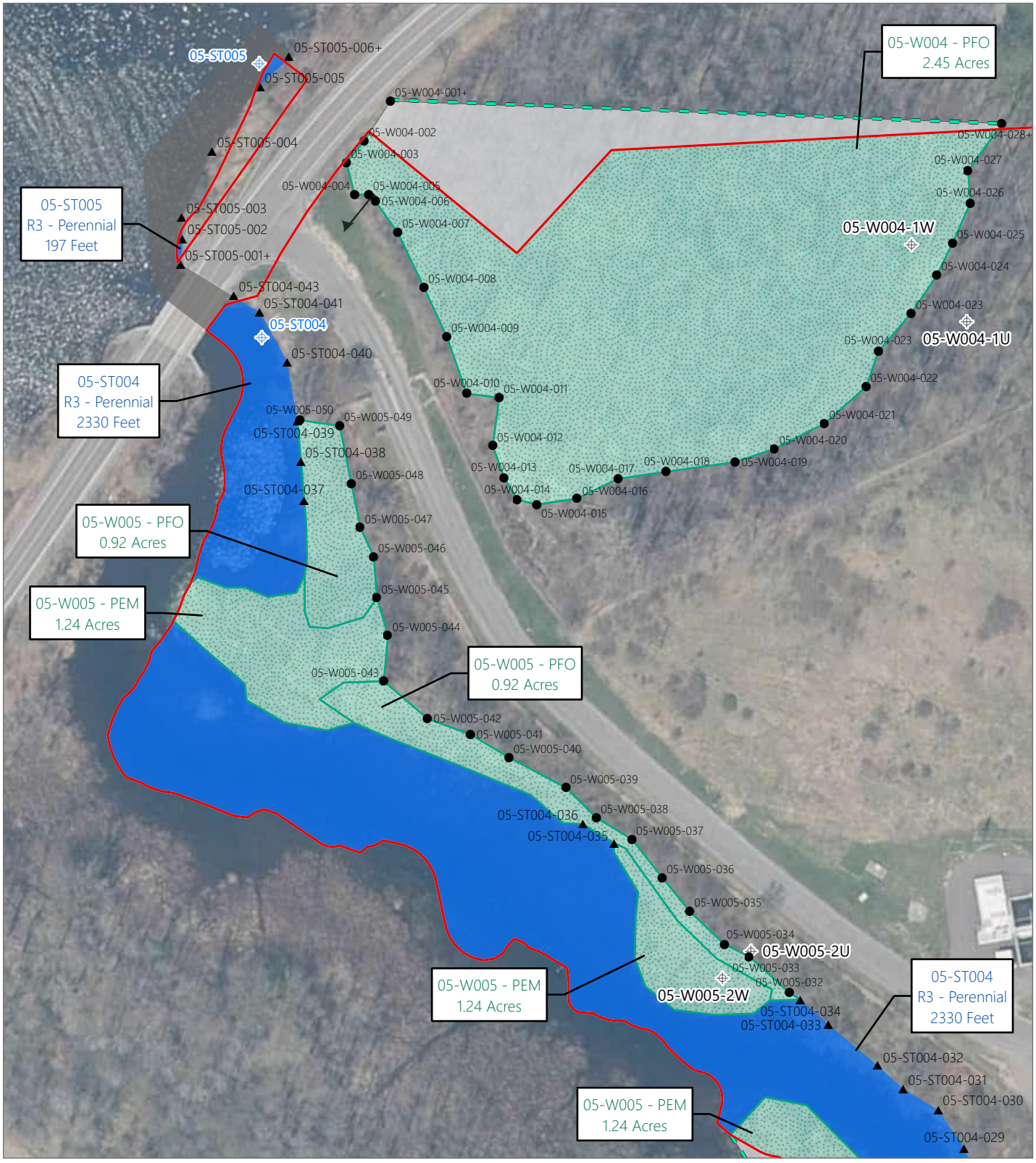
Delineated Stream
Delineated Wetland
Wastewater Treatment Lagoon
Study Area

0 100 200 400
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

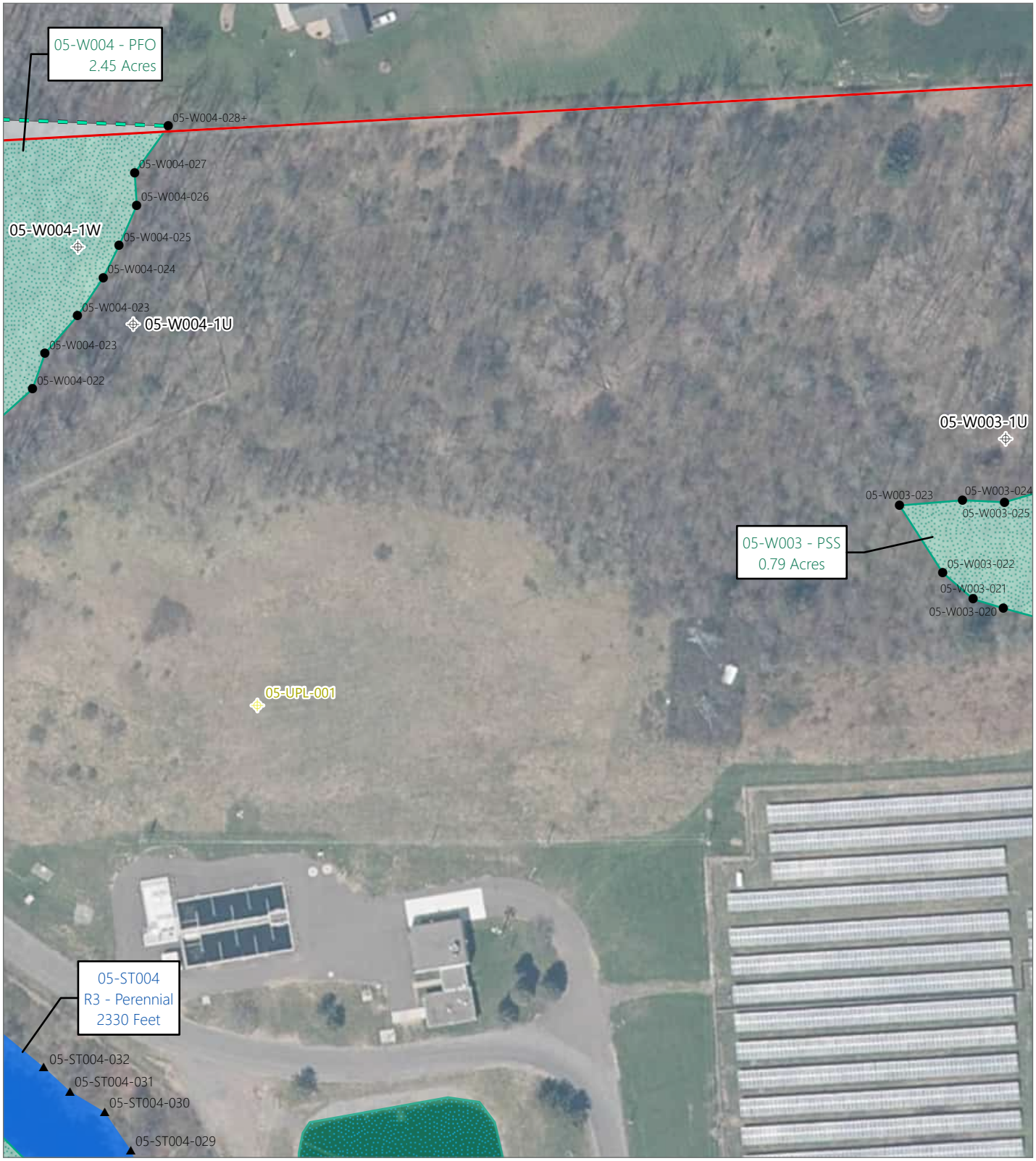
- Stream Flag
- Wetland Flag
- Datapoint Stream
- Datapoint Wetland
- Culvert
- Wetland Continues
- Delineated Stream inside Study Area
- Delineated Stream outside Study Area
- Previously Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Study Area

0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

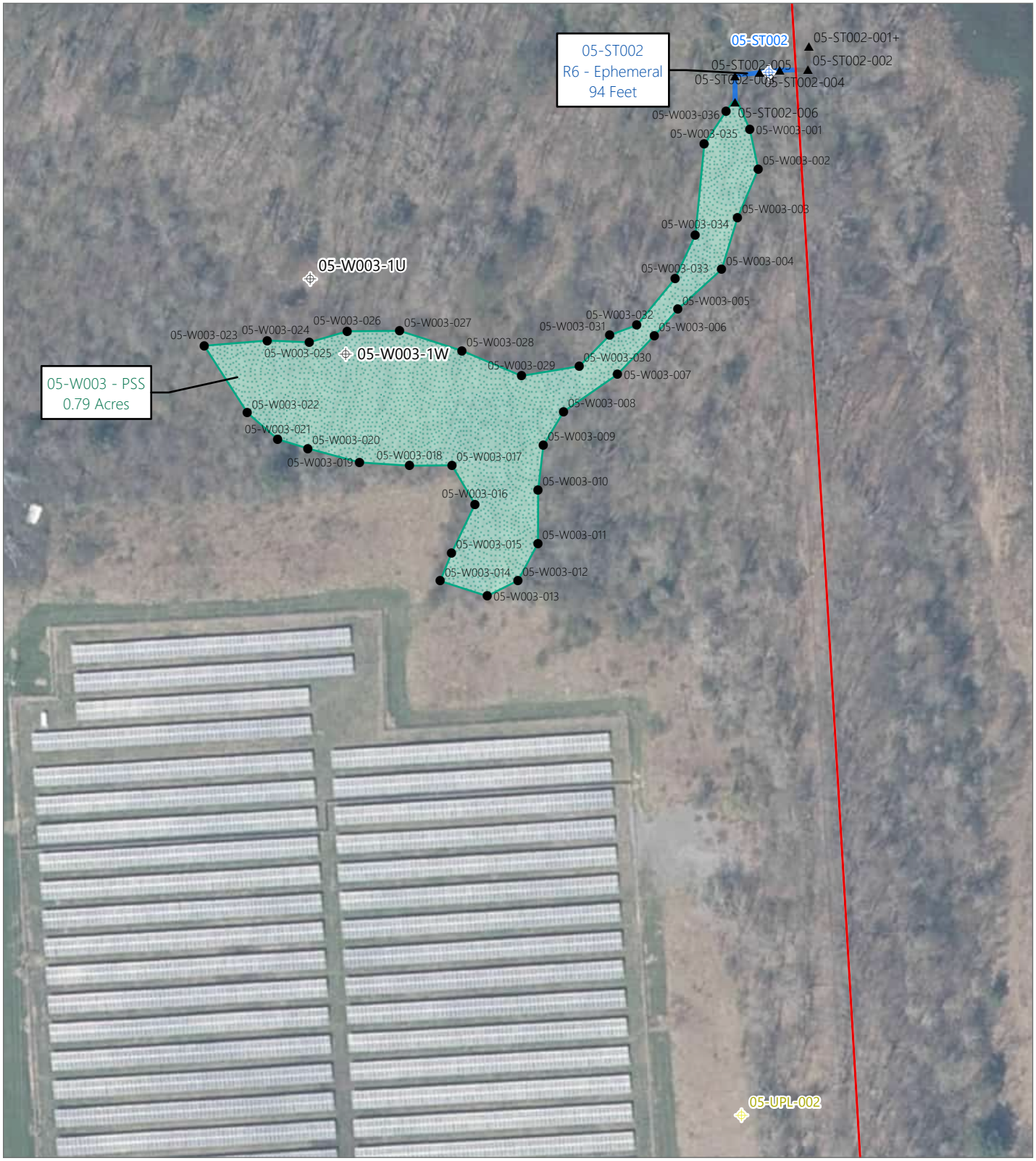
- Stream Flag
- Wetland Flag
- Datapoint Wetland
- Non-Wetland Verification Point
- Wetland Continues
- Delineated Stream inside Study Area
- Previously Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Wastewater Treatment Lagoon
- Study Area

0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

- Stream Flag
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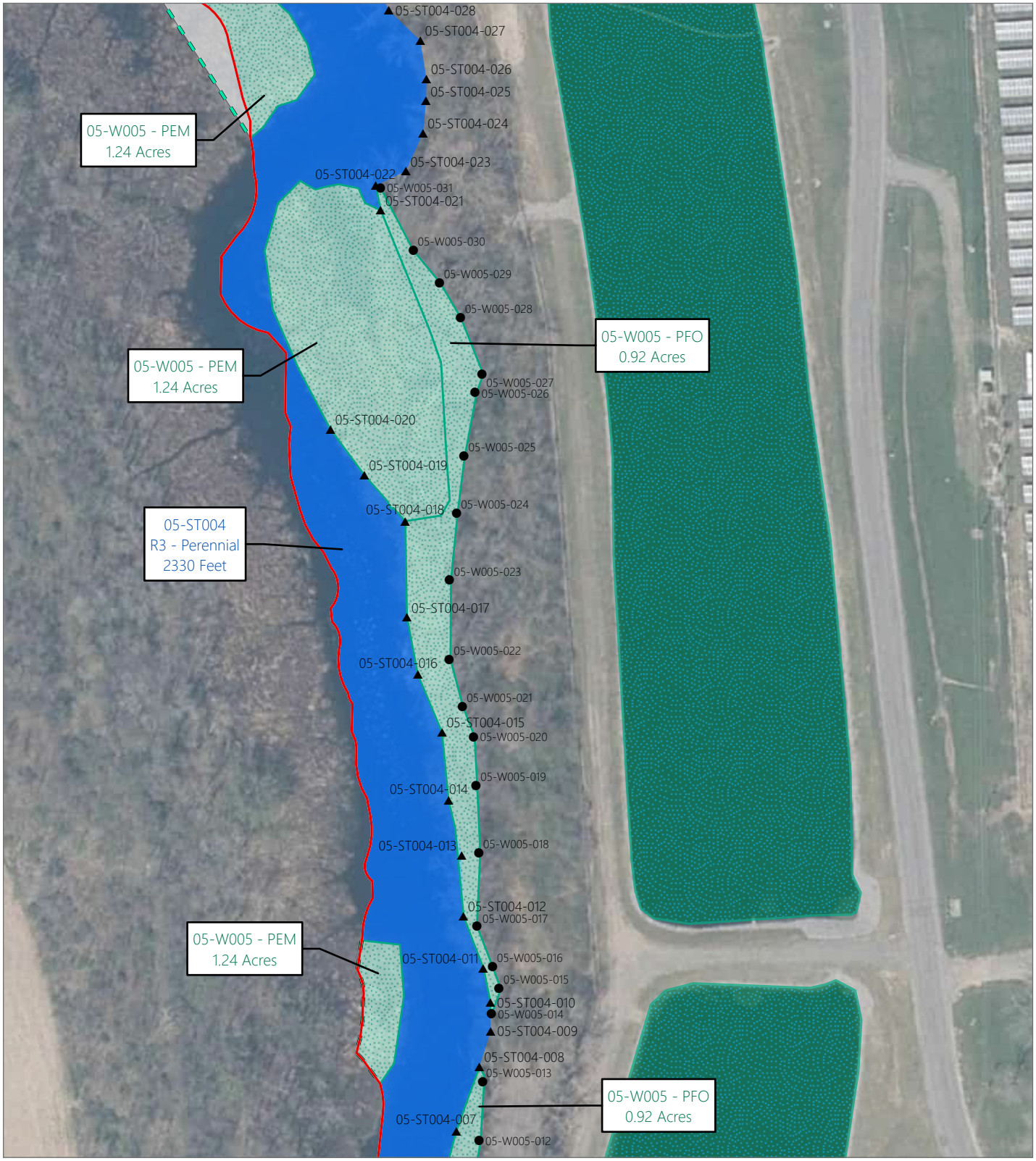
0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

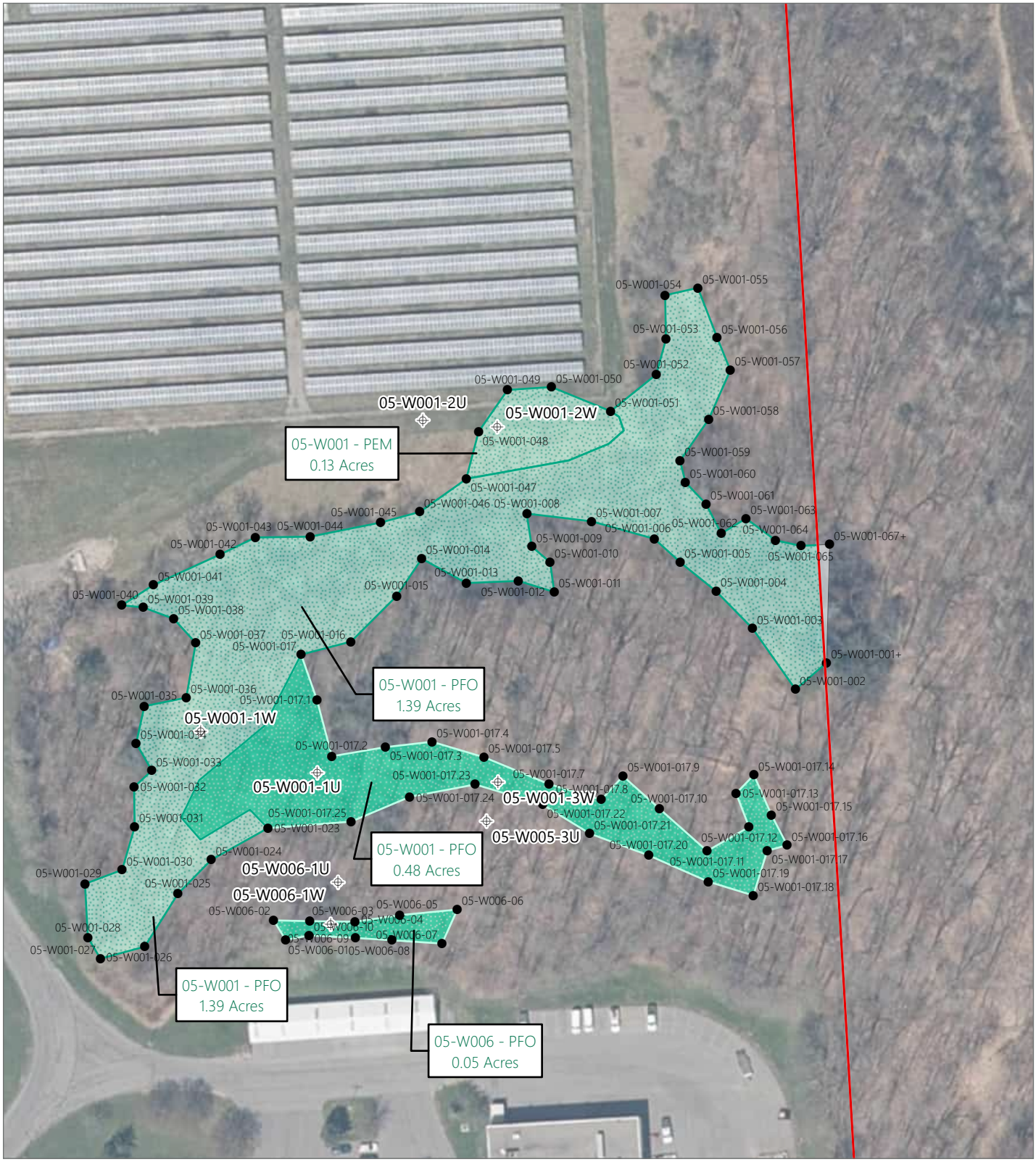
- Stream Flag
- Wetland Flag
- Wetland Continues
- Delineated Stream inside Study Area
- Previously Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Wastewater Treatment Lagoon
- Study Area

0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

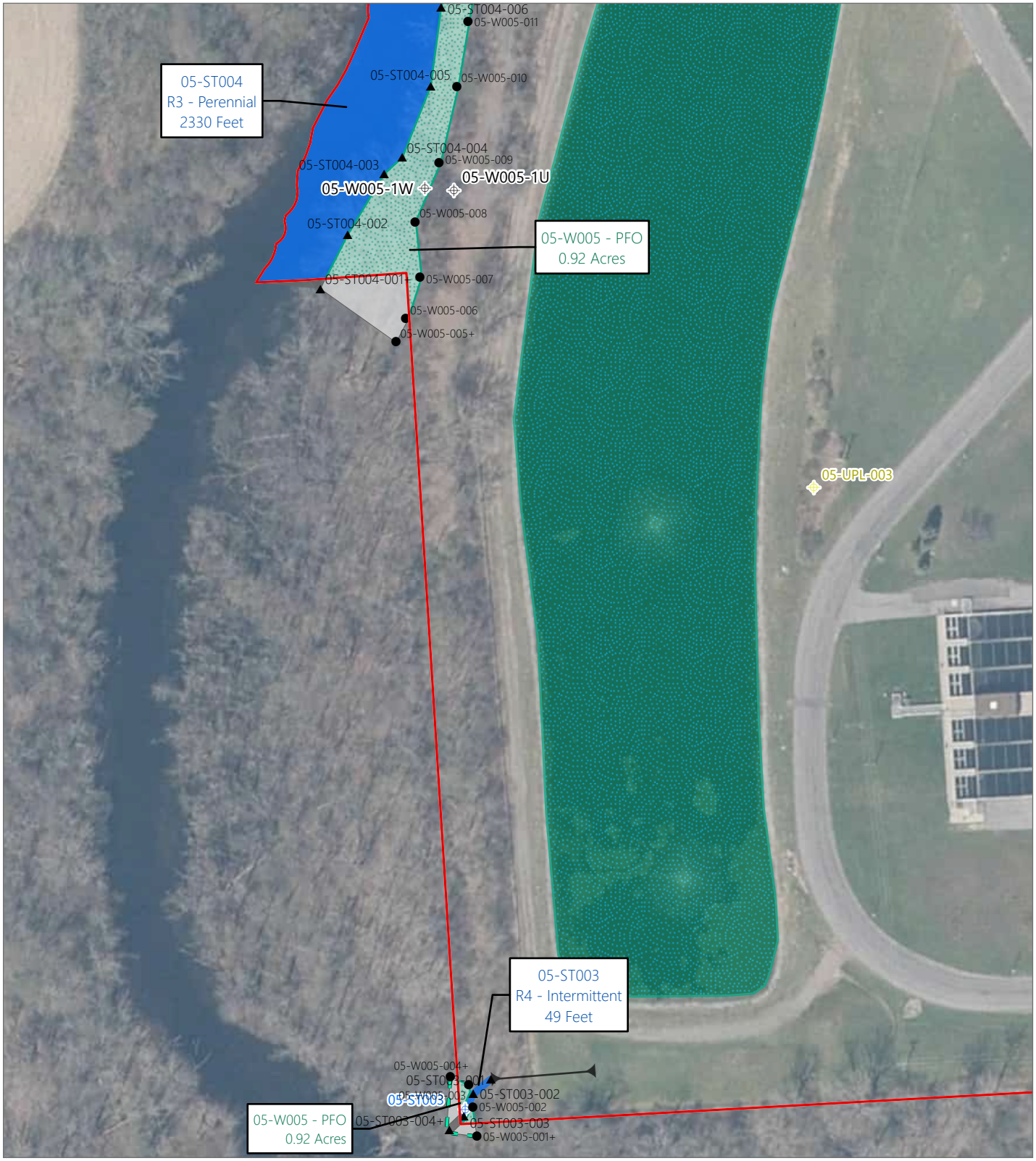
- Wetland Flag
- Datapoint Wetland
- May 2025 Delineated Wetland inside Study Area
- Previously Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Study Area

0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

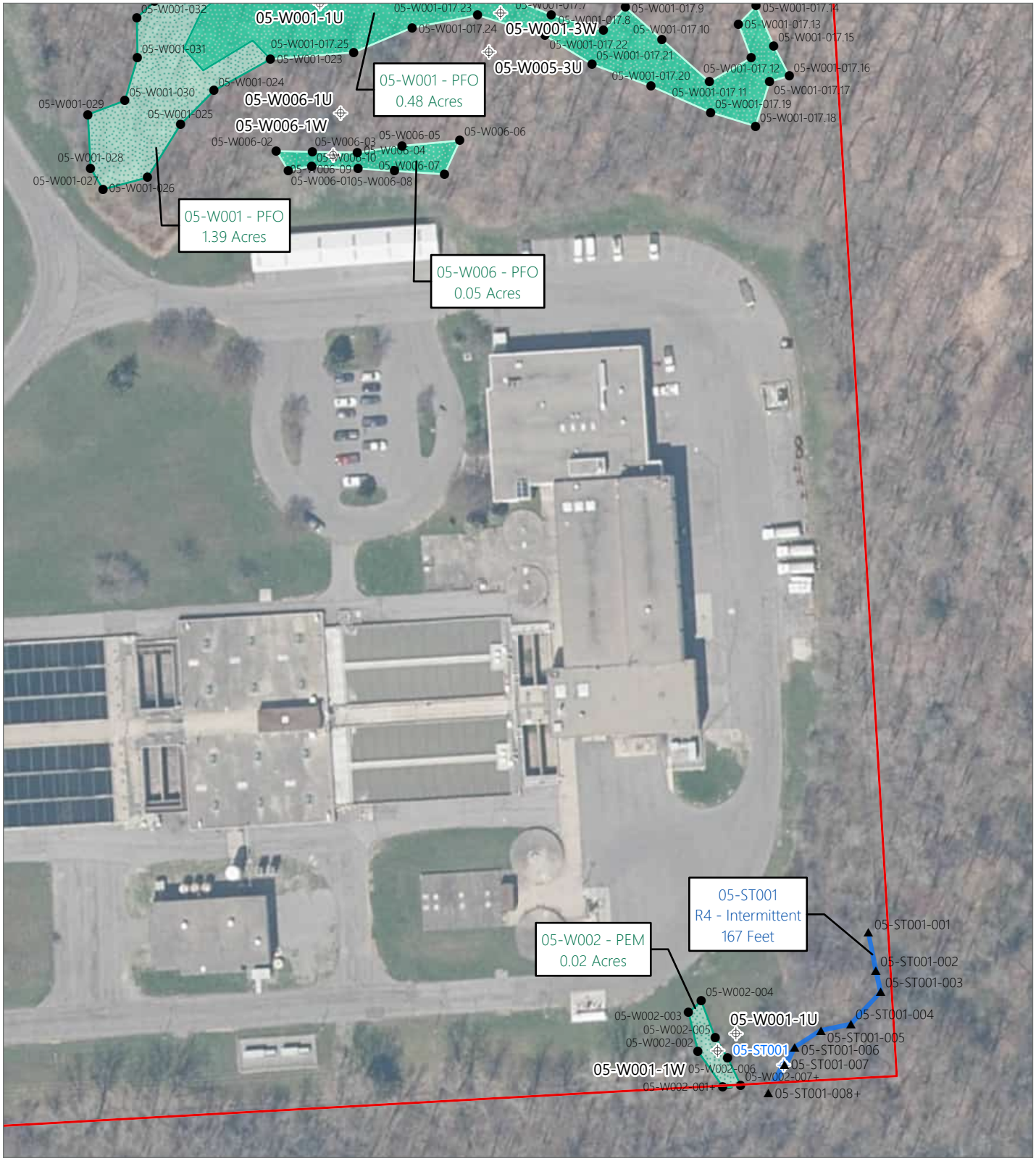
- Stream Flag
- Wetland Flag
- Datapoint Stream
- Datapoint Wetland
- Non-Wetland Verification Point
- Culvert
- Wetland Continues
- Delineated Stream inside Study Area
- Delineated Stream outside Study Area
- Previously Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Wastewater Treatment Lagoon
- Study Area

0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

- Stream Flag
- Wetland Flag
- Datapoint Stream
- Datapoint Wetland
- Wetland Continues
- Delineated Stream inside Study Area
- Delineated Stream outside Study Area
- May 2025 Delineated Wetland inside Study Area
- Previously Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Study Area

0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 05/14/2025
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W001-3U
Investigator(s): JK | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Hillslope | Local relief (concave, convex, none): convex | Slope (%): 2-5
Subregion (LRR or MLRA): LRR L | Lat: 43.200395 | Long: -76.20847 | Datum: WGS 1984
Soil Map Unit Name: Niagara silt loam, 0 to 4 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W001-3U

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia* / American beech	30	Yes	FACU
2. *Carya ovata* / Shag-bark hickory	30	Yes	FACU
3. *Acer saccharum* / Sugar maple	5	No	FACU
4.			
5.			
6.			
7.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Fagus grandifolia* / American beech	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Fagus grandifolia* / American beech	2	Yes	FACU
2. *Fraxinus pennsylvanica* / Green ash	2	Yes	FACW
3. *Erythronium rostratum* / Yellow trout-lily	2	Yes	NI
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	6	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	0	x 3 =	0
FACU species	72	x 4 =	288
UPL species	2	x 5 =	10
Column Totals:	76 (A)		302 (B)

Prevalence Index = B/A = 3.97

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: 05-W001-3U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					Silt Loam	
2-20	10YR 4/4	100					Silt Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 05/14/2025
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W001-3W
Investigator(s): JK | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Lowland | Local relief (concave, convex, none): concave | Slope (%): 0-3
Subregion (LRR or MLRA): LRR L | Lat: 43.200491 | Long: -76.208427 | Datum: WGS 1984
Soil Map Unit Name: Niagara silt loam, 0 to 4 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present?	Yes	X	No		

Is the Sampled Area within a Wetland? Yes X No ___
If yes, optional Wetland Site ID: 05-W001-3W PFO

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches): ___
Water Table Present?	Yes	X	No	___	Depth (inches): 6
Saturation Present? (includes capillary fringe)	Yes	X	No	___	Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W001-3W

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra* / Northern red oak	20	Yes	FACU
2. *Acer saccharum* / Sugar maple	20	Yes	FACU
3. *Fagus grandifolia* / American beech	10	No	FACU
4. *Carya ovata* / Shag-bark hickory	10	No	FACU
5.			
6.			
7.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Fraxinus pennsylvanica* / Green ash	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Toxicodendron radicans* / Eastern poison ivy	10	Yes	FAC
2. *Polystichum acrostichoides* / Christmas fern	2	No	FACU
3. *Fraxinus pennsylvanica* / Green ash	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	14	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	12	x 2 =	24
FAC species	10	x 3 =	30
FACU species	62	x 4 =	248
UPL species	0	x 5 =	0
Column Totals:	84 (A)		302 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting

x Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

All the tree stratum species were not located withing the boundary of the wetland but the canopy of the trees overhung the wetland.

SOIL

Sampling Point: 05-W001-3W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					Silt Loam	
8-18	10YR 4/2	95	7.5YR 4/6	5	C	M	Clay Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 05/14/2025
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W006-1U
Investigator(s): JK | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Hillslope | Local relief (concave, convex, none): convex | Slope (%): 2-5
Subregion (LRR or MLRA): LRR L | Lat: 43.200276 | Long: -76.208916 | Datum: WGS 1984
Soil Map Unit Name: Niagara silt loam, 0 to 4 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W006-1U

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia* / American beech	30	Yes	FACU
2. *Carya ovata* / Shag-bark hickory	20	Yes	FACU
3. *Tsuga canadensis* / Eastern hemlock	5	No	FACU
4. *Acer saccharum* / Sugar maple	5	No	FACU
5.			
6.			
7.			
	60	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Prunus serotina* / Black cherry	3	No	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	3	= Total Cover	

Herb Stratum (Plot size: 5-ft)			
1. *Fagus grandifolia* / American beech	5	Yes	FACU
2. *Polystichum acrostichoides* / Christmas fern	5	Yes	FACU
3. *Caulophyllum thalictroides* / Blue cohosh	5	Yes	NI
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	15	= Total Cover	

Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	73	x 4 =	292
UPL species	5	x 5 =	25
Column Totals:	78 (A)		317 (B)

Prevalence Index = B/A = 4.06

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: 05-W006-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					Silt Loam	
2-20	10YR 4/4	100					Silt Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Oak Orchard | City/County: Onondaga County | Sampling Date: 05/14/2025
Applicant/Owner: Onondaga County | State: New York | Sampling Point: 05-W006-1W
Investigator(s): JK | Section, Township, Range: Town of Clay
Landform (hillslope, terrace, etc): Bowl-shaped depression | Local relief (concave, convex, none): concave | Slope (%): 0-3
Subregion (LRR or MLRA): LRR L | Lat: 43.200178 | Long: -76.208927 | Datum: WGS 1984
Soil Map Unit Name: Niagara silt loam, 0 to 4 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present?	Yes	X	No		

Is the Sampled Area within a Wetland? Yes X No ___
If yes, optional Wetland Site ID: 05-W006-1W PFO

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches): ___
Water Table Present?	Yes	X	No	___	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes	X	No	___	Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: 05-W006-1W

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia* / American beech	50	Yes	FACU
2. *Carpinus caroliniana* / American hornbeam	10	No	FAC
3. *Quercus rubra* / Northern red oak	10	No	FACU
4.			
5.			
6.			
7.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Rhamnus cathartica* / European buckthorn	10	Yes	FAC
2. *Ostrya virginiana* / Eastern hop-hornbeam	10	Yes	FACU
3. *Carpinus caroliniana* / American hornbeam	5	Yes	FAC
4.			
5.			
6.			
7.			
	25	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Carex gracillima* / Graceful sedge	5	Yes	FACU
2. *Podophyllum peltatum* / May-apple	5	Yes	FACU
3. *Rhamnus cathartica* / European buckthorn	5	Yes	FAC
4. *Rosa multiflora* / Multiflora rose, Multiflora rosa	5	Yes	FACU
5. *Phragmites australis* / Common reed	2	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	22	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	30	x 3 =	90
FACU species	85	x 4 =	340
UPL species	0	x 5 =	0
Column Totals:	117 (A)		434 (B)

Prevalence Index = B/A = 3.71

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- x Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

All the tree stratum species were not located withing the boundary of the wetland but the canopy of the trees overhung the wetland.

SOIL

Sampling Point: 05-W006-1W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	96	7.5YR 4/4	4	C	M	Clay Loam	

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Memorandum

To: New York State Department of Environmental Conservation (NYSDEC) Region 7
5768 Widewaters Parkway
Syracuse, NY 13214-1867

From: Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C.

Date: September 18, 2025

Subject: Wetland and Stream Delineation Memorandum
Solar Panel Array Site Visit with New York State Department of Environmental Conservation (NYSDEC)
Onondaga County Industrial Wastewater Treatment Plant (IWWTP) Project
Town of Clay, Onondaga County, New York

INTRODUCTION

At the request of New York State Department of Environmental Conservation (NYSDEC) Region 7, EDR conducted a field reconnaissance of the land area occupied by an existing solar panel array with Nathan Carlton, Biologist, of NYSDEC on September 3, 2025 located within a portion of the proposed Onondaga County IWWTP Project Site in the Town of Clay, Onondaga County, New York (see Figure 1 in Appendix A). The Project consists of the construction of a new industrial wastewater treatment plant, which will require the removal of the existing solar panel array prior to construction, to support the proposed Micron Technology, Inc. (Micron) semiconductor manufacturing campus (Micron Site) located at the White Pine Commerce Park, also in the Town of Clay (Figure 1).

This memorandum details the results of the September 3, 2025, field reconnaissance conducted by EDR and NYSDEC, and serves as an addendum to the *Oak Orchard Project Wetland and Stream Delineation Memorandum* prepared by EDR and submitted to NYSDEC by CHA Consulting, Inc. (CHA) on May 1, 2025, for the larger Project Site where the IWWTP is proposed. The purpose of this field reconnaissance was to evaluate the site conditions of the previously disturbed land within the existing solar panel array. Access to the solar panel array was not authorized/provided by the owner (Tesla) prior to the original wetland and stream delineations conducted on July 30 and 31, 2024, as detailed in the *Oak Orchard Project Wetland and Stream Delineation Memorandum*, which is the reason for the additional field reconnaissance visit in September 2025.

During the field reconnaissance, NYSDEC determined, based on the evaluation of the site conditions, that three wetlands were present within the solar panel array. This determination was guided by the methodology set forth in the *New York State Freshwater Wetland Delineation Manual* (NYSDEC, 1995). NYSDEC requested EDR delineate these features during the site visit. A predominance of hydrophytic (i.e., wetland indicator) vegetation was present within these three features; however, soil samples could not be collected due to the presence of underground electrical cables, and no signs of hydrology were present during the site visit.

REVIEW OF BACKGROUND DATA

In preparation for the field reconnaissance with NYSDEC, EDR reviewed publicly available data related to physiography, soils, hydrology, and vegetation in and adjacent to the solar panel array. Mapping and data were obtained from various sources, including but not limited to the following:

- United States Geological Survey (USGS) topographic mapping
- NYSDEC Freshwater Wetlands mapping (Environmental Resource Mapping)
- National Wetland Inventory (NWI) mapping
- U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) mapping
- Recent aerial imagery

The publicly available data indicated that there are no mapped wetland or riverine features within the solar panel array. The nearest NYSDEC-mapped feature is approximately 25 feet southeast of the solar panel array and the nearest NWI-mapped wetland is located approximately 100 feet west of the solar panel array. The nearest NHD-mapped feature is an unnamed waterbody located approximately 80 feet north of the solar panel array (Figure 2).

In addition to reviewing publicly available wetland and stream databases, EDR reviewed the Onondaga County Soil Survey to evaluate soils mapped within the solar panel array (Soil Survey Staff, 2025). There are three soil mapping units mapped within the solar panel array, with hydric characteristics ranging from somewhat poorly drained to well drained and textures of silt loam. Soils within the solar panel array are mostly nonhydric (1 to 32%). It must be noted that prior to development of the solar panel array that all ground within the footprint of the array was disturbed and graded. Therefore, soils within the array are not likely to reflect conditions of original soil mapping.

Table 1. Solar Panel Array Soil Mapping Units

Mapping Unit Symbol	Mapping Unit	Percent of Study Area	Percent Slope	Drainage[1]	Hydric Rating[2]	Hydric Classification[3]
ChB	Collamer silt loam	96.0%	2-6%	MWD	0%	Non-hydric
DuC	Dunkirk silt loam, rolling	3.5%	6-12%	WD	0%	Non-hydric
NgA	Niagara silt loam	0.5%	0-4%	SPD	7%	Predominant Non-hydric

[1] WD = well drained, MWD = moderately well drained, and SPD = somewhat poorly drained.

[2] Map units are composed of one or more component soil types, each of which is individually rated as hydric or not hydric. The hydric rating, as provided in the USDA Web Soil Survey, indicates the percentage of the map unit that meets hydric criteria.

[3] Hydric classification categories are based on the total percentage of hydric soils in the map unit. as listed on the USDA Web Soil Survey. Hydric = 100% of map unit components rated as hydric. Predominantly hydric = 66%–99% of map unit components rated as hydric. Partially hydric = 33%–66% of map unit components rated as hydric. Predominantly non-hydric = up to 33% of map unit components rated as hydric. Non-hydric = 0% of map unit components rated as hydric.

FIELD VISIT AND METHODOLOGY

On September 3, 2025, EDR Environmental Scientists delineated three wetlands within the solar panel array at the request of NYSDEC. No streams were observed and delineated within the solar panel array.

The identification of wetland boundaries was primarily based on the methodology described in the *New York State Freshwater Wetland Delineation Manual* (NYSDEC, 1995) with focus on the presence of hydrophytic vegetation. As stated above, no hydrology was observed on site during the field reconnaissance, and soil samples could not be obtained due to the presence of existing underground electric cables. Determination of wetland boundaries was also guided by the methodologies presented in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0 (Regional Supplement)* (USACE, 2012).

EDR interpreted the potential state jurisdictional status and class of state regulated wetlands utilizing the methods and procedures presented in the *Standard Operating Procedures (SOP) for Remote Jurisdictional Determinations and Classification of Freshwater Wetlands Pursuant to 6 NYCRR Part 664, Freshwater Wetlands Jurisdiction and Classification* (a). Attention was given to the size of the wetland (including portions that may extend outside the solar panel array), evidence of disturbance, and the identification of potential hydrologic connections between other waters, as these factors could influence jurisdictional status. Wetland boundaries were defined in the field with sequentially numbered pink surveyor's flagging and mapped using a GPS unit with reported sub-meter accuracy.

Delineated features were characterized according to the wetlands and deepwater habitats classification system used in NWI mapping (Cowardin et al., 1979). Data were collected from sample plots in representative wetland cover types and recorded on USACE Routine Wetland Determination forms (Appendix B). The data collected at each delineated wetland included dominant vegetation. No hydrological indicators were observed, and soils samples were not obtained due to the presence of underground electrical utilities within the array. Data to confirm upland areas were also collected adjacent to wetland boundaries and in areas where aerial photograph signatures or existing wetland mapping suggested potential wet conditions. Upland data were also documented and recorded on USACE Routine Wetland Determination forms (Appendix B).

Wetland hydrology, which was not observed, was evaluated based on the presence of primary and secondary indicators. The Regional Supplement lists the following primary indicators of wetland hydrology: (A1) surface water, (A2) high water table, (A3) saturation, (B1) water marks, (B2) sediment deposits, (B3) drift deposits, (B4) algal mat or crust, (B5) iron deposits, (B7) inundation visible on aerial imagery, (B8) sparsely vegetated concave surface, (B9) water-stained leaves, (B13) aquatic fauna, (B15) marl deposits, (C1) hydrogen sulfide odor, (C3) oxidized rhizospheres on living roots, (C4) presence of reduced iron, (C6) recent iron reduction in tilled soils, and (C7) thick muck surface. Per the Regional Supplement, the presence of any one of these primary indicators is sufficient evidence that wetland hydrology is present. In addition, the Regional Supplement identifies the following secondary indicators, which were also used by EDR to determine wetland hydrology: (B6) surface soil cracks, (B10) drainage patterns, (B16) moss trim lines, (C2) dry-season water table, (C8) crayfish burrows, (C9) saturation visible on aerial imagery, (D1) stunted or

stressed plants, (D2) geomorphic position, (D3) shallow aquitard, (D4) microtopographic relief, and (D5) results of the FAC-neutral test. In accordance with the Regional Supplement, in the absence of a primary indicator, the presence of any two secondary indicators is considered a suitable indication of wetland hydrology.

Wetland vegetation is indicated by a dominance of hydrophytic plant species, or species that have adapted to grow in areas of inundation and soil saturation. Assessment of vegetation focused on the identification of dominant plant species in four categories: trees (greater than or equal to 3 inches diameter at breast height), saplings/shrubs (less than 3 inches diameter at breast height and greater than 3.2 feet tall), herbs (all vegetation less than 3.2 feet tall), and woody vines. Dominance was determined by visually estimating those species having the greatest absolute percent cover within each stratum. Vascular plant nomenclature and wetland indicator status for dominant plant species were determined by the Wildnote field data collection application, which refers to the USDA PLANTS Database (USDA NRCS, 2021) and the National Wetland Plant List, an interagency effort compiled by the USACE (2022). The indicator status represents a plant's likelihood of occurring in wetlands. The five indicator statuses and their probability of being observed in a wetland are as follows:

- Obligate (OBL): Plants occur within wetlands more than 99% of the time
- Facultative Wetland (FACW): Plants occur within wetlands 67 to 99% of the time
- Facultative (FAC): Plants occur within wetlands 33 to 67% of the time
- Facultative Upland (FACU): Plants occur within wetlands 1 to 33% of the time
- Upland (UPL): Plants occur within wetlands less than 1% of the time

Those plant species that are not assigned an indicator status in the National Wetland Plant List are assumed to always be found in uplands and assigned an indicator status of UPL. Wetlands are indicated by a dominance and/or prevalence of hydrophytic plant species (i.e., those assigned an indicator status of OBL, FACW, or FAC).

Lastly, hydric soil data is typically collected during wetland delineations, including color, texture, and matrix and redoximorphic feature color. However, as previously stated, soil samples were not able to be obtained due to the presence of existing underground electric utilities and, therefore, no soil data was collected.

FINDINGS

EDR identified three wetlands (05-W007, 05-W008, and 05-W009) within the solar panel array (Figure 3) based on the methodology described in the *New York State Freshwater Wetland Delineation Manual* (NYSDEC, 1995). The data collected at each delineated wetland and the rational for federal jurisdiction is summarized in Table 2. The rationale for state jurisdiction of wetlands is summarized in Table 3. In accordance with the Cowardin et al. (1979) classification system, the features delineated within the solar panel array consist of the following community type: palustrine emergent wetland (PEM). No TNWs or state navigable waters were identified within the solar panel array.

Table 2. Delineated Wetlands

Wetland Delineation ID[1]	Wetland Acreage Within Study Area by Type[2]					Stream Contiguous with Wetland[3]	Anticipated NYSDEC Wetland Class[4]	Latitude of Centroid	Longitude of Centroid	Anticipated Federal Jurisdiction[5]	Rationale for Federal Jurisdiction[6]	Anticipated State Jurisdiction[7]
	PEM	PSS	PFO	POW	Total							
05-W007	0.18	--	--	--	0.18	N/A	N/A	43.20275	-76.20921	No	Isolated	No
05-W008	0.01	--	--	--	0.01	N/A	N/A	43.20326	-76.20878	No	Isolated	No
06-W009	0.02	--	--	--	0.02	N/A	N/A	43.20195	-76.20882	No	Isolated	No

[1] Field ID assigned by EDR.
[2] Wetland community types are based upon the Cowardin et al. (1979) classification system: palustrine emergent wetland (PEM).
[3] Field ID for stream features assigned by EDR.
[4] Based on EDR's analysis using the *Standard Operating Procedures (SOP) for Remote Jurisdictional Determinations and Classification of Freshwater Wetlands Pursuant to 6 NYCRR Part 664, Freshwater Wetlands Jurisdiction and Classification* (NYSDEC, 2025a).
[5] Based on visual observation of hydrologic connectivity in the field and review of available spatial data. Final jurisdictional determination to be made by the USACE.
[6] Based on the September 8, 2023, *Revised Definition of "Waters of the United States"; Conforming*. See Table 1 and Table 2 for more additional information.
[7] Based on estimated wetland size in excess of 12.4 acres and/or existing NYSDEC mapping of freshwater wetlands, as discussed in the *New York State Freshwater Wetland Delineation Manual* (NYSDEC, 1995). See Sections 2.2 and 3.2.1 for additional information. Final jurisdictional determination to be made by the NYSDEC.

Table 3. Rational for State Jurisdiction

Wetland Delineation ID	12.4 Acres in Size or Larger[1]	Significant Flooding[2]	Urban Areas[2]	Rare Plants[2,3]	Rare Animals[2,3]	Class I Wetland	Unusual Local Importance[2]	Vernal Pools[2,4]	Floodways[2]	Previously Mapped Wetlands[2]	Local/ Regional Significance[2]	Important for Water Quality[2]
05-W007	No	No	No	No	No	No	No	No	No	No	No	No
05-W008	No	No	No	No	No	No	No	No	No	No	No	No
06-W009	No	No	No	No	No	No	No	No	No	No	No	No

[1]Based on wetland acreage within the Study Area and anticipated continuation outside.
[2]Based on the methodology described in the NYSDEC Standard Operating Procedures for Remote Jurisdictional Determinations and Classification of Freshwater Wetlands Pursuant to 6 NYCRR Part 664 (NYSDEC, 2025a).
[3]Has the potential to include essential habitat for rare animals and/or support rare plant species, including those classified by the NYSDEC as threatened, endangered, or species of special concern (NYSDEC, 2025b).
[4]There are currently no vernal pools documented by the NYSDEC that are publicly available.

Wetlands

Within the solar panel array, EDR identified three wetlands totaling 0.21 acre. Descriptions of each wetland is presented herein.

Wetland 05-W007

Wetland 05-W007 is an approximately 0.18-acre isolated, emergent wetland located in a depressional area where sheet flow run-off precipitation from the solar panel array accumulates. Herbaceous vegetation was dominated by common reed (*Phragmites australis*), curly dock (*Rumex crispus*), purple loosestrife *(Lythrum salicaria*), white bedstraw (*Galium album*), false nutsedge (*Cyperus strigosus*), dogbane (*Apocynum cannabinum*), and creeping bentgrass (*Agrostis stolonifera*).

Indicators of wetland hydrology at the time of the site visit were limited to the results of a FAC-neutral test (D5). Soil samples could not be collected due to the presence of underground electric lines associated with the solar panels. There were no hydrologic connections observed between Wetland 05-W007 and other wetlands within the solar panel array, larger Study Area, and/or off-site wetlands.

The wetland-upland transition was abrupt, with the adjacent upland dominated by white bedstraw, lance selfheal (*Prunella vulgaris*), red clover (*Trifolium pratense*), marsh bedstraw (*Galium palustre*), and narrowleaf plantain (*Plantago lanceolata*). No hydrologic indicators were observed in the upland. Additionally, no soil samples were collected due to the presence of underground electric cables.

Wetland 05-W008

Wetland 05-W008 is an approximately 0.01-acre isolated, emergent wetland located in a depressional area where sheet flow run-off precipitation from the solar panel array accumulates. Herbaceous vegetation was dominated by marsh bedstraw and purple loosestrife.

Indicators of wetland hydrology at the time of the site visit were limited to the results of a FAC-neutral test (D5). Soil samples could not be collected due to the presence of underground electric lines associated with the solar panels There were no hydrologic connections observed between Wetland 05-W008 and other wetlands within the solar panel array, larger Study Area, and/or off-site wetlands.

The wetland-upland transition was abrupt, with the adjacent upland dominated by European dewberry (*Rubus caesius*). No hydrologic indicators were observed in the upland. Additionally, no soil samples were collected due to the presence of underground electric cables.

Wetland 05-W009

Wetland 05-W009 is an approximately 0.02-acre isolated, emergent wetland located in a depressional area where sheet flow run-off precipitation from the solar panel array accumulates. Herbaceous vegetation was dominated by smartweed (*Persicaria pensylvanica*), marsh bedstraw, fox sedge (*Carex vulpinoidea*), and common spike-rush (*Eleocharis palustris*).

Indicators of wetland hydrology at the time of the site visit were limited to the results of a FAC-neutral test (D5). Soil samples could not be collected due to the presence of underground electric lines associated with

solar panels. There were no hydrologic connections observed between Wetland 05-W009 and other wetlands within the solar panel array, larger Study Area, and/or off-site wetlands.

The wetland-upland transition was abrupt, with the adjacent upland dominated by white bedstraw, bitter dock (*Rumex obtusifolius*), and narrowleaf plantain. No hydrologic indicators were observed in the upland. Additionally, no soil samples were collected due to the presence of underground electric cables.

CONCLUSIONS

Within the solar panel array, EDR identified three wetlands totaling approximately 0.21 acres. The solar panel array does not include any TNWs; therefore, Section 10 of the Rivers and Harbor Act is not applicable to the proposed Project. Additionally, the solar panel array does not include any state navigable waters, and therefore, Article 15 regulations related to navigable waters do not apply to the proposed Project.

Of the delineated wetlands within the solar panel array, none are anticipated to be considered jurisdictional by the USACE under Section 404 of the Clean Water Act (CWA), because they do not meet all three wetland criteria (hydrophytic vegetation, hydrology, and hydric soils) based on the methodology set forth in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). Rationales for the anticipated federal jurisdictional status of each delineated wetland are presented in Table 2. It should be noted that EDR has made a presumption of CWA jurisdiction for delineated wetlands onsite based on the current understanding of the 2023 Rule, as amended.

None of the three delineated wetlands are expected to fall under state jurisdiction pursuant to Article 24 of the Environmental Conservation Law (ECL) because they do not exceed 12.4 acres and are not considered a wetland of "Unusual Importance". Rationales for the anticipated state jurisdictional status of each delineated wetland are presented in Table 3. Final jurisdictional status of all waters delineated within the solar panel array will be subject to determination by the NYSDEC and USACE.

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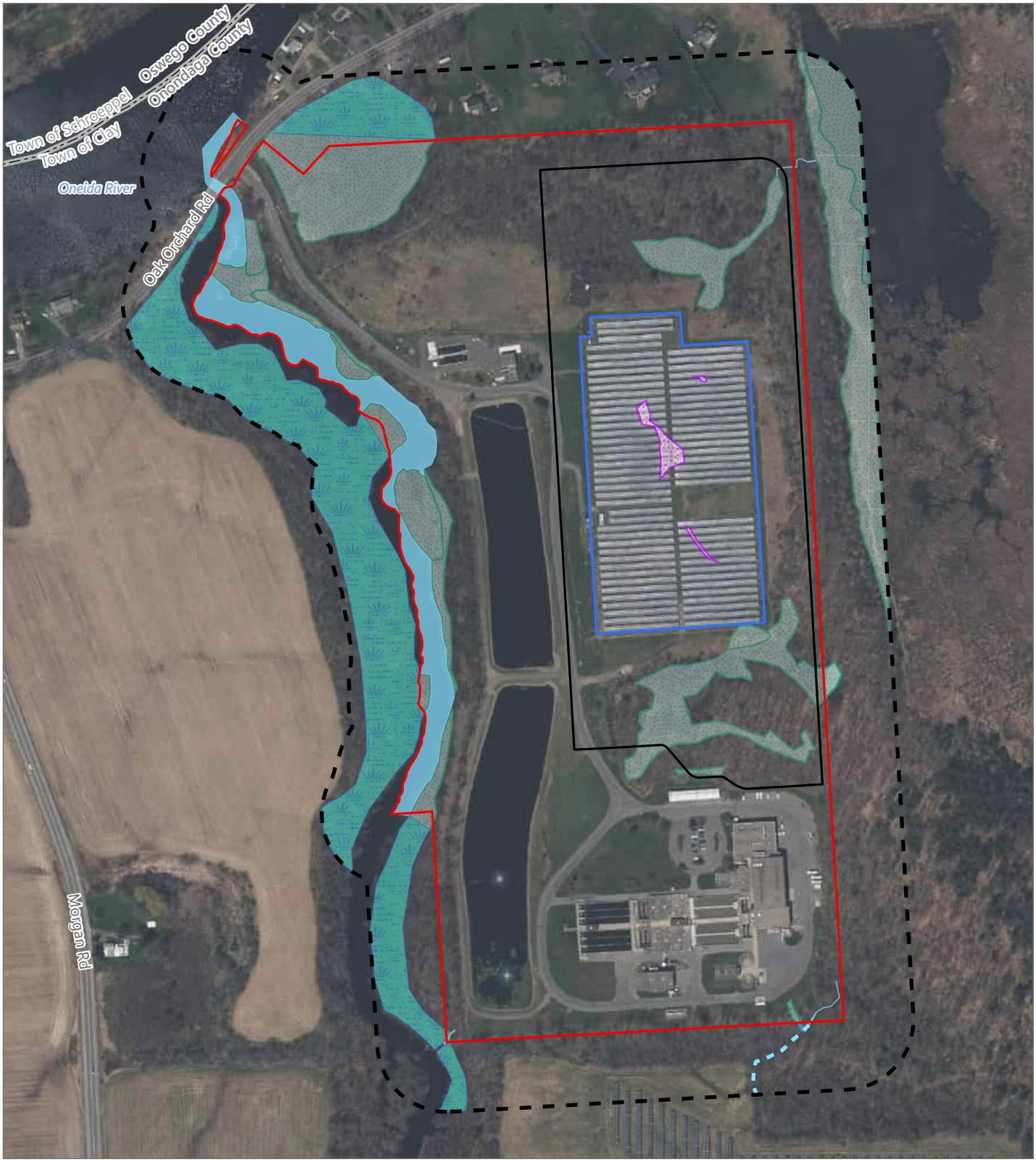
Appendix A

Figures

Figure 1. Project Site



Onondaga County Industrial Wastewater Treatment Plant

Town of Clay, Onondaga County
New York

NYSDEC Wetland Memorandum

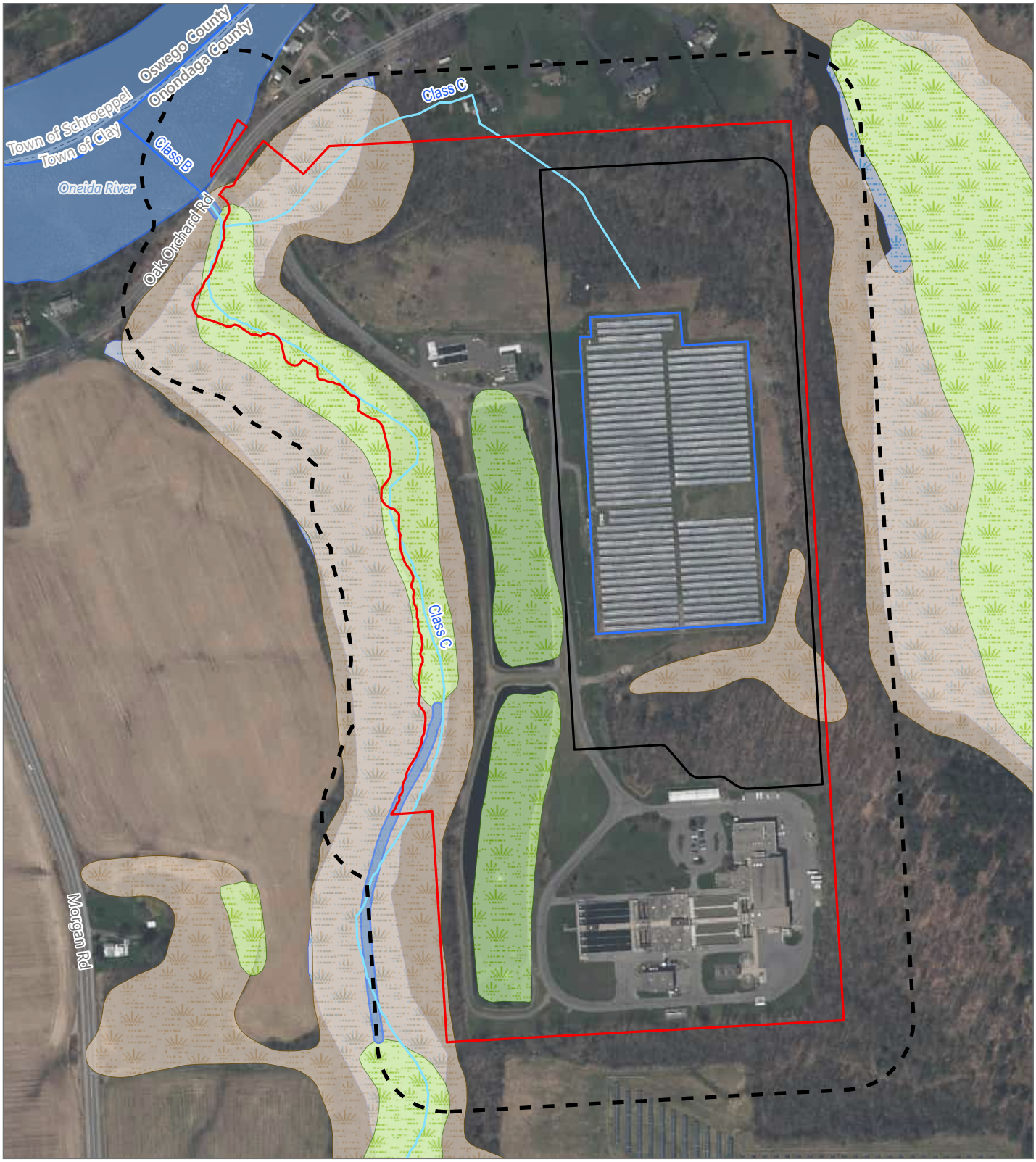
EDR

- Approximate Stream
- Approximate Wetlands
- Solar Panel Array Wetlands
- Delineated Stream
- Delineated Wetland
- Solar Panel Array
- 2024 Study Area
- Study Area 200-foot Buffer
- Proposed Industrial Waste Water Treatment Plant

0 100 200 400
Feet

Prepared September 18, 2025
Basemap: NYSDOP "2022" orthoimagery map service

Figure 2. Mapped Wetlands and Streams



Onondaga County Industrial Wastewater Treatment Plant

Town of Clay, Onondaga County
New York

NYSDEC Wetland Memorandum

EDR

NYSDEC Stream Classification
- Class A, B, C(TS), or C(T) Stream
- Class C Stream
- NWI Mapped Wetland
- NWI Mapped Lake/Riverine
- NYDEC Mapped Informational Freshwater Wetland
- NYSDEC Previously Mapped Wetland
- Solar Panel Array
- 2024 Study Area
- Study Area 200-foot Buffer
- Proposed Industrial Waste Water Treatment Plant

0 100 200 400
Feet

Prepared September 18, 2025
Basemap: NYSDOP "2022" orthoimagery map service

Figure 3. Solar Panel Array Wetlands

Onondaga County Industrial Wastewater Treatment Plant

Town of Clay, Onondaga County
New York

NYSDEC Wetland Memorandum

EDR

NYSDEC Site Visit Wetland Flag
Solar Panel Array Wetlands
Solar Panel Array
Proposed Industrial Waste Water Treatment Plant

0 25 50 100
Feet

Prepared September 18, 2025
Basemap: NYSDOP "2022" orthoimagery map service

Appendix B

Routine Wetland Determination Data Sheets

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: White Pine IWWTP City/County: Clay/Onondaga County Sampling Date: 9/03/2025

Applicant/Owner: Onondaga County State: NY Sampling Point: 05-W007-1U

Investigator(s): Josh Marchner, Joseph Knight Section, Township, Range: Clay

Landform (hillside, terrace, etc.): Mound Local relief (concave, convex, none): convex Slope %: 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.202939819 Long: -76.209309447 Datum: WGS 1984

Soil Map Unit Name: Collamer Silt Loam NWI classification: None

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

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

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

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Upland point associated with wetland 05-W007. Could not dig soil pit in soil array, Soil Mapping Unit indicates that the soils are not hydric and surface soil sampling did not reveal any hydric soils

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
EDR did not observe any hydrology indicators indicative of a wetland

VEGETATION – Use scientific names of plants.

Sampling Point: 05-W007-1U

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Galium Album*	20	Yes	FACU
2. *plantago major*	5	No	FACU
3. *phragmites australis*	5	No	FACW
4. *prunella vulgaris*	10	Yes	FAC
5. *lythrum salicaria*	5	No	OBL
6. *ranunculus acris*	5	No	FAC
7. *trifolium pratense*	10	Yes	FACU
8. *galium palustre*	10	Yes	OBL
9. *taraxacum officinale*	2	No	FACU
10. *plantago lanceolata*	10	Yes	FACU
11.			
12.			
	82 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	5	x 2 =	10
FAC species	15	x 3 =	45
FACU species	47	x 4 =	188
UPL species	0	x 5 =	0
Column Totals:	82 (A)		258 (B)

Prevalence Index = B/A = 3.15

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 05-W007-1U

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

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

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Could not dig soil bits in the solar array due to burried electric lines but 0-2 soil were scuffed back to observe surface coloring.

VEGETATION Continued – Use scientific names of plants.

Sampling Point: 05-W007-1U

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Sapling/Shrub Stratum			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Herb Stratum			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
	82 =Total Cover		
Woody Vine Stratum			
5.			
6.			
7.			
8.			
	=Total Cover		

Definitions of Vegetation Strata:

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

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

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

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

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

AGENCY DISCLOSURE NOTIFICATION

The public reporting burden for this collection of information, OMB Control Number 0710-0024, is estimated to average 30 minutes per response, including the timefor reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services,at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR REQUEST TO THE ABOVE EMAIL.**

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: White Pine IWWTP City/County: Clay/Onondaga County Sampling Date: 9/03/2025

Applicant/Owner: Onondaga County State: NY Sampling Point: 05-W007-1W

Investigator(s): Josh Marchner, Joseph Knight Section, Township, Range: Clay

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

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.202937781 Long: -76.209387281 Datum: WGS 1984

Soil Map Unit Name: Collamer Silt Loam NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes	No	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID: 05-W007

Remarks: (Explain alternative procedures here or in a separate report.)
Could not dig soil pit in soil array, Soil Mapping Unit indicates that the soils are not hydric and surface soil sampling did not reveal any hydric soils.This area was designated as a wetland by NYSDEC based on the presence of wetland vegetation though EDR did not observe all three wetlands charactieristics required to classify an area as wetland according to USACE.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
EDR did not find any primary indicators of wetland hydrology.

VEGETATION – Use scientific names of plants.

Sampling Point: 05-W007-1W

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phragmites Australis*	10	Yes	FACW
2. *Rumex Crispus*	15	Yes	FAC
3. *Lythrum Salicaria*	10	Yes	OBL
4. *galium album*	10	Yes	FACU
5. *vitis riparia*	2	No	FAC
6. *cyperus strigosus*	15	Yes	FACW
7. *Apocynum cannabinum*	10	Yes	FAC
8. *trifolium pratense*	2	No	FACU
9. *lycopus americanus*	2	No	OBL
10. *agrostis stolonifera*	10	Yes	FACW
11. *toxicodendron radicans*	5	No	FAC
12. *persicaria pensylvanica*	1	No	FACW
	94 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	12	x 1 =	12
FACW species	36	x 2 =	72
FAC species	32	x 3 =	96
FACU species	14	x 4 =	56
UPL species	0	x 5 =	0
Column Totals:	94 (A)		236 (B)

Prevalence Index = B/A = 2.51

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 05-W007-1W

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

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

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Could not dig soil pits in the solar array due to buried electric lines but 0-2 inches of soil were scuffed back to observe surface coloring.

VEGETATION Continued – Use scientific names of plants.

Sampling Point: 05-W007-1W

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Sapling/Shrub Stratum			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Herb Stratum			
13. *plantago major*	2	No	FACU
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
	94 =Total Cover		
Woody Vine Stratum			
5.			
6.			
7.			
8.			
	=Total Cover		

Definitions of Vegetation Strata:

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

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

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

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

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

AGENCY DISCLOSURE NOTIFICATION

The public reporting burden for this collection of information, OMB Control Number 0710-0024, is estimated to average 30 minutes per response, including the timefor reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services,at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR REQUEST TO THE ABOVE EMAIL.**

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: White Pine IWWTP City/County: Clay/Onondaga County Sampling Date: 9/03/2025

Applicant/Owner: Onondaga County State: NY Sampling Point: 05-W008-1U

Investigator(s): Josh Marchner, Joseph Knight Section, Township, Range: Clay

Landform (hillside, terrace, etc.): Toe Slope Local relief (concave, convex, none): Concave Slope %: 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2033083 Long: -76.208736 Datum: WGS 1984

Soil Map Unit Name: Collamer Silt Loam NWI classification: None

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

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

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

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Upland point for Wetland 05-W008. Wetland does not connect to culvert. Could not dig soil pit in soil array, Soil Mapping Unit indicates that the soils are not hydric and surface soil sampling did not reveal any hydric soils

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
EDR did not observe any hydrology indicators indicative of a wetland

VEGETATION – Use scientific names of plants.

Sampling Point: 05-W008-1U

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Galium Album*	20	Yes	FACU
2. *persicaria pensylvanica*	5	No	FACW
3. *galium palustre*	15	Yes	OBL
4. *plantago major*	2	No	FACU
5. *Calystegia sepium*	5	No	FAC
6. *lythrum salicaria*	5	No	OBL
7. *trifolium pratense*	20	Yes	FACU
8. *elymus repens*	18	Yes	FACU
9. *Daucus Carota*	1	No	UPL
10. *lotus corniculatus*	10	No	FACU
11. *plantago lanceolata*	10	No	FACU
12. *prunella vulgaris*	10	No	FAC
	149 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	6	x 2 =	12
FAC species	23	x 3 =	69
FACU species	97	x 4 =	388
UPL species	3	x 5 =	15
Column Totals:	149 (A)		504 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 05-W008-1U

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

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

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Could not dig soil bits in the solar array due to burried electric lines but 0-4 soil were scuffed back to observe surface coloring.

VEGETATION Continued – Use scientific names of plants.

Sampling Point: 05-W008-1U

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Sapling/Shrub Stratum			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Herb Stratum			
13. *rumex crispus*	5	No	FAC
14. *Alliaria petiolata*	2	No	FACU
15. *pilosella caespitosa*	2	No	UPL
16. *rubus caesius*	15	Yes	FACU
17. *fraxinus pennsylvanica*	1	No	FACW
18. *ranunculus acris*	2	No	FAC
19. *apocynum cannabinum*	1	No	FAC
20.			
21.			
22.			
23.			
24.			
	149 =Total Cover		
Woody Vine Stratum			
5.			
6.			
7.			
8.			
	=Total Cover		

Definitions of Vegetation Strata:

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

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

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

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

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

AGENCY DISCLOSURE NOTIFICATION

The public reporting burden for this collection of information, OMB Control Number 0710-0024, is estimated to average 30 minutes per response, including the timefor reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services,at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR REQUEST TO THE ABOVE EMAIL.**

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: White Pine IWWTP City/County: Clay/Onondaga County Sampling Date: 9/03/2025

Applicant/Owner: Onondaga County State: NY Sampling Point: 05-W008-1W

Investigator(s): Josh Marchner, Joseph Knight Section, Township, Range: Clay

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

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.203633°↑ Long: -76.208773°↑ Datum: WGS 1984

Soil Map Unit Name: Collamer Silt Loam NWI classification: None

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

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

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

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Could not dig soil pit in soil array, Soil Mapping Unit indicates that the soils are not hydric and surface soil sampling did not reveal any hydric soils.This area was designated as a wetland by NYSDEC based on the presence of wetland vegetation though EDR did not observe all three wetlands charactieristics required to classify an area as wetland according to USACE.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 05-W008-1W

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Galium palustre*	50	Yes	OBL
2. *Onoclea sensibilis*	15	No	FACW
3. *Persicaria pensylvanica*	10	No	FACW
4. *Lythrum salicaria*	20	Yes	OBL
5. *Symphyotrichum Sp.*	15	No	
6. *Oxalis stricta*	2	No	FACU
7. *Prunella vulgaris*	5	No	FAC
8. *juncus effusus*	2	No	OBL
9. *Trifolium pratense*	5	No	FACU
10. *Plantago major*	5	No	FACU
11.			
12.			
	129 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	72	x 1 =	72
FACW species	25	x 2 =	50
FAC species	5	x 3 =	15
FACU species	12	x 4 =	48
UPL species	0	x 5 =	0
Column Totals:	114 (A)		185 (B)

Prevalence Index = B/A = 1.62

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 05-W008-1W

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

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

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Could not dig soil pits in the solar array due to buried electric lines but 0-2 inches of soil were scuffed back to observe surface coloring.

VEGETATION Continued – Use scientific names of plants.

Sampling Point: 05-W008-1W

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Sapling/Shrub Stratum			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Herb Stratum			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
	129 =Total Cover		
Woody Vine Stratum			
5.			
6.			
7.			
8.			
	=Total Cover		

Definitions of Vegetation Strata:

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

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

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

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

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

AGENCY DISCLOSURE NOTIFICATION

The public reporting burden for this collection of information, OMB Control Number 0710-0024, is estimated to average 30 minutes per response, including the timefor reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services,at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR REQUEST TO THE ABOVE EMAIL.**

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: White Pine IWWTP City/County: Clay/Onondaga County Sampling Date: 9/03/2025

Applicant/Owner: Onondaga County State: NY Sampling Point: 05-W009-1U

Investigator(s): Josh Marchner, Joseph Knight Section, Township, Range: Clay

Landform (hillside, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope %: 0-2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.201967020 Long: -76.208882303 Datum: WGS 1984

Soil Map Unit Name: Collamer Silt Loam NWI classification: None

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

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

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

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Could not dig soil pit in soil array, Soil Mapping Unit indicates that the soils are not hydric and surface soil sampling did not reveal any hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 05-W009-1U

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *galium album*	40	Yes	FACU
2. *galium palustre*	10	No	OBL
3. *rumex obtusifolius*	20	Yes	FAC
4. *rumex crispus*	10	No	FAC
5. *toxicodendron radicans*	10	No	FAC
6. *plantago lanceolata*	20	Yes	FACU
7. *lythrum salicaria*	3	No	OBL
8. *ranunculus acris*	2	No	FAC
9. *taraxacum officinale*	2	No	FACU
10.			
11.			
12.			
	117 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	13	x 1 =	13
FACW species	0	x 2 =	0
FAC species	42	x 3 =	126
FACU species	62	x 4 =	248
UPL species	0	x 5 =	0
Column Totals:	117 (A)		387 (B)

Prevalence Index = B/A = 3.31

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 05-W009-1U

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

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

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Cannot dig soils pits in the solar array but soils from 0-2 inches were scraped away and there was no evidence of hydric soils.

VEGETATION Continued – Use scientific names of plants.

Sampling Point: 05-W009-1U

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Sapling/Shrub Stratum			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Herb Stratum			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
	117 =Total Cover		
Woody Vine Stratum			
5.			
6.			
7.			
8.			
	=Total Cover		

Definitions of Vegetation Strata:

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

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

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

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

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

AGENCY DISCLOSURE NOTIFICATION

The public reporting burden for this collection of information, OMB Control Number 0710-0024, is estimated to average 30 minutes per response, including the timefor reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services,at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR REQUEST TO THE ABOVE EMAIL.**

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: White Pine IWWTP City/County: Clay/Onondaga County Sampling Date: 9/03/2025

Applicant/Owner: Onondaga County State: NY Sampling Point: 05-W009-1W

Investigator(s): Josh Marchner, Joseph Knight Section, Township, Range: Clay

Landform (hillside, terrace, etc.): Bowl Shaped Depression Local relief (concave, convex, none): Concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.202136 Long: -76.208479 Datum: WGS 1984

Soil Map Unit Name: Collamer Silt Loam NWI classification: None

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

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

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

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Could not dig soil pit in soil array, Soil Mapping Unit indicates that the soils are not hydric and surface soil sampling did not reveal any hydric soils.This area was designated as a wetland by NYSDEC based on the presence of wetland vegetation though EDR did not observe all three wetlands charactieristics required to classify an area as wetland according to USACE.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 05-W009-1W

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Persicaria pensylvanica*	20	Yes	FACW
2. *Galium palustre*	20	Yes	OBL
3. *Symphyotrichum Sp.*	10	No	
4. *Carex vulpinoidea*	15	Yes	OBL
5. *Phragmites australis*	10	No	FACW
6. *Onoclea sensibilis*	8	No	FACW
7. *Eleocharis palustris*	15	Yes	OBL
8.			
9.			
10.			
11.			
12.			
	98 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	38	x 2 =	76
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	88 (A)		126 (B)

Prevalence Index = B/A = 1.43

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point 05-W009-1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Could not dig soil pits in the solar array due to buried electric lines but 0-3 inches of soil were scuffed back to observe surface coloring.

VEGETATION Continued – Use scientific names of plants.

Sampling Point: 05-W009-1W

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Sapling/Shrub Stratum			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Herb Stratum			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
	98 =Total Cover		
Woody Vine Stratum			
5.			
6.			
7.			
8.			
	=Total Cover		

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Remarks: (Include photo numbers here or on a separate sheet.)

AGENCY DISCLOSURE NOTIFICATION

The public reporting burden for this collection of information, OMB Control Number 0710-0024, is estimated to average 30 minutes per response, including the timefor reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services,at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR REQUEST TO THE ABOVE EMAIL.**

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: White Pine IWWTP City/County: Clay/Onondaga County Sampling Date: 9/03/2025

Applicant/Owner: Onondaga County State: NY Sampling Point: Upland Points

Investigator(s): Josh Marchner, Joseph Knight Section, Township, Range: Clay

Landform (hillside, terrace, etc.): mound Local relief (concave, convex, none): convex Slope %: 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2033814 Long: -76.2087058 Datum: WGS 1984

Soil Map Unit Name: Collamer Silt Loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No ____	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Upland point taken on the northern side of the culvert near Wetland 05-W008 to demonstrate that there is no hydrologic flow through the culvert. Could not dig soil pit in soil array, Soil Mapping Unit indicates that the soils are not hydric and surface soil sampling did not reveal any hydric soils

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
EDR did not observe any hydrology indicators indicative of a wetland

VEGETATION – Use scientific names of plants.

Sampling Point: Upland Points

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Galium Album*	5	No	FACU
2. *trifolium repens*	15	Yes	FACU
3. *juncus effusus*	1	No	OBL
4. *epilobium ciliatum*	1	No	FACW
5. *toxicodendron radicans*	2	No	FAC
6. *ranunculus acris*	1	No	FAC
7. *trifolium pratense*	15	Yes	FACU
8. *Glechoma hederacea*	15	Yes	FACU
9. *Daucus Carota*	1	No	UPL
10. *lotus corniculatus*	5	No	FACU
11. *plantago lanceolata*	15	Yes	FACU
12. *pilosella caespitosa*	1	No	FACU
	77	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x 1 =	1
FACW species	1	x 2 =	2
FAC species	3	x 3 =	9
FACU species	71	x 4 =	284
UPL species	1	x 5 =	5
Column Totals:	77 (A)		301 (B)

Prevalence Index = B/A = 3.91

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point Upland Points

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Could not dig soil bits in the solar array due to burried electric lines but 0-3 soil were scuffed back to observe surface coloring.

VEGETATION Continued – Use scientific names of plants.

Sampling Point: Upland Points

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Sapling/Shrub Stratum			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Herb Stratum			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
	77 =Total Cover		
Woody Vine Stratum			
5.			
6.			
7.			
8.			
	=Total Cover		

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Remarks: (Include photo numbers here or on a separate sheet.)

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PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

Attachment F

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS BUFFALO DISTRICT
478 MAIN STREET
BUFFALO, NY 14202-3278

August 4, 2025

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination, Preliminary Jurisdictional Determination, and Delineation Verification for Department of the Army Processing No. LRB-2024-01037

Odean Dyer
Onondaga County Department of Water
Environment Protection
650 Hiawatha Boulevard West
Syracuse, New York 13204

Dear Mr. Dyer:

I have reviewed your request for an approved jurisdictional determination (JD) and a preliminary JD for the 76.7-acre area located at the Oak Orchard Wastewater Treatment Plant, at 4300 Oak Orchard Road, in the Town of Clay, Onondaga County, New York, and a preliminary JD for the proposed wastewater conveyance right-of-way located from the Plant to the proposed Micron facility off of Caughdenoy Road in the Town of Clay, Onondaga County, New York.

Please note that this letter contains three jurisdictional determinations. The approved JD (AJD) applies to the entire 76.7-acre site with the exception of Wetland 05-W004-PFO. The two preliminary JDs apply only to Wetland 05-W004-PFO as well as the proposed wastewater conveyance right-of-way. Please refer to the documentation below and attached for the terms, conditions, and appeal rights for each type of JD.

Approved JD

I have determined that the location and extent of all aquatic resources shown on the attached map(s) are accurately represented.

Enclosed is an approved JD which verifies the limits of waters of the U.S as depicted on Sheets 2-9 of 9, except for Wetland 05-W004-PFO which is being reviewed under a PJD. This approved JD will remain valid for a period of five (5) years from the date of this correspondence unless new information warrants revision of the approved JD before the expiration date. At the end of this period, a new aquatic resource delineation will be required to support any request for a new JD.

I have determined that the following aquatic resources are waters of the U.S. regulated under Section 404 of the Clean Water Act as noted on the attached Approved Jurisdictional Determination Form(s): Streams 05-ST003, 05-ST004, 05-ST005 and Wetlands 05-W005-PEM

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination, Preliminary Jurisdictional Determination, and Delineation Verification for Department of the Army Processing No. LRB-2024-01037

and 05-W005-PFO. Department of the Army authorization is required if you propose a discharge of dredged or fill material in these waters of the U.S.

In addition, the following aquatic resources are also navigable waters of the U.S., regulated under Section 10 of the Rivers and Harbors Act of 1899 as noted on the attached Approved Jurisdictional Determination Form and as depicted on the attached map(s): Stream 05-ST005. Department of the Army authorization is required if you propose work or installation of structures in, over, under this navigable water of the U.S.

I have determined that the following aquatic resources are not waters of the U.S. as noted on the attached Approved Jurisdictional Determination Form: Northern Lagoon, Southern Lagoon, Streams 05-ST001, 05-ST002, and Wetlands 05-W001-PEM, 05-W001-PFO, 05-W002-PEM, 05-W003-PSS and 05-W006-PFO. Therefore, these aquatic resources are not regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Department of the Army authorization is not required if you propose work, installation of structures, or a discharge of dredged or fill material in these aquatic resources.

If you object to the determination for the AJD you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find Request for Appeal (RFA) form. If you request to appeal the above AJD, you must submit a completed RFA form within 60 days of the date on this letter to the Great Lakes/Ohio River Division Office at the following address:

Suzanne Chubb
Regulatory Program Manager
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10780
Cincinnati, Ohio 45202-3222
Phone: 513-218-1243
e-mail: Suzanne.l.chubb@usace.army.mil

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **October 2, 2025**.

It is not necessary to submit an RFA to the Division office if you do not object to the AJD determination in this letter.

Preliminary JD

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination, Preliminary Jurisdictional Determination, and Delineation Verification for Department of the Army Processing No. LRB-2024-01037

I have determined that the location and extent of the aquatic resource boundaries shown on the attached map(s) for wetland 05-W004-PFO and the wastewater conveyance right-of-way are accurately represented. Please note that this is a preliminary JD. Preliminary JDs are non-binding written indications that there may be waters of the United States (WOUS) on your parcel and approximate locations of those waters. Preliminary JDs are advisory in nature and may not be appealed.

Pursuant to Regulatory Guidance Letter 16-01, any permit application made in reliance on this preliminary JD will be evaluated as though all aquatic resources are regulated by the Corps. Further, all aquatic resources will be used for purposes of assessing the extent of project related impacts and compensatory mitigation. If you require a definitive response regarding Department of the Army jurisdiction for any or all of the aquatic resources identified on the submitted drawings, you may request an approved JD from this office. If an approved JD is requested, please be aware that this is often a lengthy process and we may require the submittal of additional information.

I have enclosed the preliminary JD Forms with this letter. The forms and attached table identify the extent and specific terms and conditions of the preliminary JDs. Please sign and return a copy of the forms to my attention. If you do not respond within 15 days, I will presume concurrence and no additional follow-up is necessary.

In accordance with Regulatory Guidance Letter 05-02, “Preliminary jurisdictional determinations are not definitive determinations of areas within regulatory jurisdiction and do not have expirations dates.” However, I strongly recommend that the boundaries of all aquatic resources within the review area be re-evaluated by a qualified wetland biologist after five years of the date of this letter. This will ensure that any changes are appropriately identified, and you do not inadvertently incur a violation of Federal law while constructing your project or working within the review area.

Further, the delineation and all determinations included herein have been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the review areas identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination, Preliminary Jurisdictional Determination, and Delineation Verification for Department of the Army Processing No. LRB-2024-01037

Questions pertaining to this matter should be directed to me at (315) 255-8090 X 8077 by writing to the following address: U.S. Army Corps of Engineers Regulatory Branch 7413 County House Road, Auburn, New York 13021 or by e-mail at: Margaret.A.Crawford@usace.army.mil

Sincerely,

Margaret Crawford

Margaret Crawford
Biologist

Enclosures

U.S. Army Corps of Engineers (USACE)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

For use of this form, see Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the proponent agency is CECW-COR.

Form Approved –
OMB No. 0710-0003
Expires 2027-10-31

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority	The authorities for requesting this information are Sections 9, 10, 13, and 14, Rivers and Harbors Act of March 3, 1899; Section 404, Clean Water Act; and Section 103 Marine Protection Research and Sanctuaries Act of 1972.
Principal Purpose	This information serves as notification to affected parties regarding the USACE administrative appeal options and process, as well as to facilitate requests for appeal of USACE decisions with which they disagree.
Routine Uses	Routine uses will include: (a) To serve as notification to affected parties of the Corps administrative appeal options and process and to facilitate requests for appeal of Corps decisions with which they disagree. (b) Records may be referred to the Department of Justice for possible criminal prosecution. (c) Records may be referred to other Federal, State, and local agencies for evaluation and enforcement purposes.
Disclosure	Disclosure of this information is voluntary on your part. However, failure of individual to provide requested information could result in inability to determine all pertinent information regarding a Department of the Army permit matter.

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0003, is estimated to average 1 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PURPOSE: This form is used to facilitate the initiation of the administrative appeals process. The appeals process allows an affected party to pursue an administrative appeal of certain Corps of Engineers decisions with which they disagree.

Upon release, this form will also be available on the Corps website https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/

Applicant: Onondaga County Department of Water Environment Protection	File Number: LRB-2024-01037	Date: 8/4/2025

Documents Attached (*select all that apply*):		Form Reference Section:
☐	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
☐	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
☐	PERMIT DENIAL WITHOUT PREJUDICE	C
☐	PERMIT DENIAL WITH PREJUDICE	D
☒	APPROVED JURISDICTIONAL DETERMINATION	E
☒	PRELIMINARY JURISDICTIONAL DETERMINATION	F

SECTION I

The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/appeals/ or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C. PERMIT DENIAL WITHOUT PREJUDICE: Not appealable

You received a permit denial without prejudice because a required Federal, state, and/or local authorization and/or certification has been denied for activities which also require a Department of the Army permit before final action has been taken on the Army permit application. The permit denial without prejudice is not appealable. There is no prejudice to the right of the applicant to reinstate processing of the Army permit application if subsequent approval is received from the appropriate Federal, state, and/or local agency on a previously denied authorization and/or certification.

D: PERMIT DENIAL WITH PREJUDICE: You may appeal the permit denial

You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information for reconsideration

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

- RECONSIDERATION: You may request that the district engineer reconsider the approved JD by submitting new information or data to the district engineer within 60 days of the date of this notice. The district will determine whether the information submitted qualifies as new information or data that justifies reconsideration of the approved JD. A reconsideration request does not initiate the appeal process. You may submit a request for appeal to the division engineer to preserve your appeal rights while the district is determining whether the submitted information qualifies for a reconsideration.

F: PRELIMINARY JURISDICTIONAL DETERMINATION: Not appealable

You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to reevaluate the JD.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:	
If you have questions regarding this decision you may contact:	If you have questions regarding the appeal process, or to submit your request for appeal, you may contact:
Name: Margaret Crawford	Name: Suzanne Chubb, Regulatory Program Manager
Street Address, City, State: U.S. Army Corps of Engineer, Buffalo District 478 Main Street Buffalo, New York 14202	Street Address, City, State: USACE, Great Lakes & Ohio River Division 550 Main Street, Room 10-780, CELRD-PD-O Cincinnati, Ohio 45202-3222
Phone: 315-835-0058	Phone: (513) 218-1243
Email: Margaret.a.crawford@usace.army.mil	Email: suzanne.l.chubb@usace.army.mil

SECTION II – REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. Use additional pages as necessary. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.	
RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation and will have the opportunity to participate in all site investigations.	
Email address of appellant and/or agent	Telephone number
Signature of appellant or agent	Date

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, BUFFALO DISTRICT
478 MAIN STREET
BUFFALO, NEW YORK 14202-3278

CELRB-ORR-NA 4 August 2025

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Approved Jurisdictional Determination in accordance with the "Revised Definition of 'Waters of the United States'"; (88 FR 3004 (January 18, 2023) as amended by the "Revised Definition of 'Waters of the United States'; Conforming" (8 September 2023) ,[1] Corps File No.: LRB-2024-01037 (MFR 1 of 1)[2]

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.[3] AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.[4]

On January 18, 2023, the Environmental Protection Agency (EPA) and the Department of the Army ("the agencies") published the "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule"). On September 8, 2023, the agencies published the "Revised Definition of 'Waters of the United States'; Conforming", which amended the 2023 Rule to conform to the 2023 Supreme Court decision in *Sackett v. EPA*, 598 U.S., 143 S. Ct. 1322 (2023) ("*Sackett*").

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. For the purposes of this AJD, we have relied on Section 10 of the Rivers and Harbors Act of 1899 (RHA),[5] the 2023 Rule as amended,

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[1] While the Revised Definition of "Waters of the United States"; Conforming had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.

[2] When documenting aquatic resources within the review area that are jurisdictional under the Clean Water Act (CWA), use an additional MFR and group the aquatic resources on each MFR based on the TNW, the territorial seas, or interstate water that they are connected to. Be sure to provide an identifier to indicate when there are multiple MFRs associated with a single AJD request (i.e., number them 1, 2, 3, etc.).

[3] 33 CFR 331.2.

[4] Regulatory Guidance Letter 05-02.

[5] USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

as well as other applicable guidance, relevant case law, and longstanding practice in evaluating jurisdiction.

1. SUMMARY OF CONCLUSIONS.

    a. Provide a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).

Waters Name	Latitude	Longitude	Waters Size	Type Of Aquatic Resource	Geographic Authority
Northern lagoon	43.20198	-76.21086	2.9 ACRES	B1-EXCL-WTS	None
Southern lagoon	43.1999	-76.21094	3.8 ACRES	B1-EXCL-WTS	None
Stream 05-ST001	43.1984	-76.20761	167 FEET	NON-WOTUS-TRIB.NEGATIVE.A3	None
Stream 05-ST002	43.20481	-76.2077	94 FEET	NON-WOTUS-TRIB.NEGATIVE.A3	None
Stream 05-ST003	43.19796	-76.21154	49 FEET	A3.TRIB-404	Section 404
Stream 05-ST004	43.19998	-76.21212	2330 FEET	A3.TRIB-404	Section 404
Stream 05-ST005	43.20503	-76.21402	197 FEET	A1-1.TNW-404.10	Section 10/404
Wetland 05-W001-PEM	43.20109	-76.20806	.13 ACRES	NON-WOTUS-WET.NEGATIVE.A4	None
Wetland 05-W001-PFO	43.20037	-76.20928	1.87 ACRES	NON-WOTUS-WET.NEGATIVE.A4	None
Wetland 05-W002-PEM	43.19825	-76.20803	.02 ACRES	NON-WOTUS-WET.NEGATIVE.A4	None
Wetland 05-W003-PSS	43.20416	-76.20836	.79 ACRES	NON-WOTUS-WET.NEGATIVE.A4	None
Wetland 05-W005-PEM	43.20083	-76.21169	1.24 ACRES	A4-2.ADJ.WET.A2&A3-404	Section 404
Wetland 05-W005-PFO	43.19862	-76.21243	.92 ACRES	A4-2.ADJ.WET.A2&A3-404	Section 404
Wetland 05-W006-PFO	43.20021	-76.2088	.05 ACRES	NON-WOTUS-WET.NEGATIVE.A4	None

2. REFERENCES.

    a. "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule")

    b. "Revised Definition of 'Waters of the United States'; Conforming" 88 FR 61964 (September 8, 2023)

    c. *Sackett v. EPA*, 598 U.S. 651, 143 S. Ct. 1322 (2023)

3. REVIEW AREA. *This MFR is for the 76.7-acre study area including the Oak Orchard Wastewater Treatment Plant, located at latitude 43.198714, longitude -76.165076, at 4300 Oak Orchard Road, in the Town of Clay, Onondaga County, New York. This MFR is specific to the following features: Northern lagoon, Southern lagoon, Streams 05-ST001, 05-ST002, 05-ST003, 05-ST004, 05-ST005, and Wetlands 05-W001-PEM, 05-W001-PFO, 05-W002-PEM, 05-W003-PSS, 05-W005-PEM, 05-*

W005-PFO and 05-W006-PFO. Wetland 05-W004-PFO is being assessed via Preliminary Jurisdictional Determination (PJD).

4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), THE TERRITORIAL SEAS, OR INTERSTATE WATER TO WHICH THE AQUATIC RESOURCE IS CONNECTED. *Oneida River is within the AJD Study Area.*[6]

5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, THE TERRITORIAL SEAS, OR INTERSTATE WATER. *The Oneida River, a traditionally navigable water and it's tributary, Mud Creek, a relatively permanent water are both located on the subject parcel.*

6. SECTION 10 JURISDICTIONAL WATERS[7]: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.[8] *The Oneida River, identified as Stream 05-ST005, is located within the study area (197 linear feet). The Oneida River is a traditionally navigable water, due to its regular role transporting commerce as part of the NYS Barge Canal system.*

7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the 2023 Rule as amended, consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the 2023 Rule as amended. The rationale should also include a written description of, or reference to a map in the administrative record that shows, the lateral limits of jurisdiction for each aquatic resource,

[6] This MFR should not be used to complete a new stand-alone TNW determination. A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of the Rivers and Harbors Act of 1899 (RHA) is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established.
[7] 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.
[8] This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

a. Traditional Navigable Waters (TNWs) (a)(1)(i):

Stream 05-ST005	197 FEET	A1-1.TNW-404.10	Section 10/404

<u>Stream 05-ST005</u> is a perennial water also known as the Oneida River, part of the NYS Barge Canal system. The Oneida River is a traditionally navigable water, and a Section 10 navigable waterway, due to its regular role transporting commerce as part of the NYS Barge Canal system. The river is noted on the LRB Section 10 list posted on the website.

b. The Territorial Seas (a)(1)(ii): N/A

c. Interstate Waters (a)(1)(iii): N/A

d. Impoundments (a)(2): N/A

e. Tributaries (a)(3):

Stream 05-ST003	49 FEET	A3.TRIB-404	Section 404
Stream 05-ST004	2330 FEET	A3.TRIB-404	Section 404

<u>Stream 05-ST003</u> is 49 linear feet long and 3 feet wide. This stream is a first order stream (Strahler) starting on site and ending at its confluence with 05-ST004. According to the delineation, Stream 05-ST003 was characterized by well-developed banks, a gentle gradient, and a substrate consisting of cobble, gravel, sand, silt, and clay. As noted in the delineation report indicators used to define the OHWM included a break in slope and a change in vegetation. The delineation characterized the stream as intermittent due to the presence of water in the channel and its source at a culvert outlet from stormwater collection within the wastewater treatment plant in addition to precipitation. The delineation was conducted in July 2024, at a time of a wetter than normal condition (incipient wetness) in the dry season according to the Antecedent Precipitation Tool (APT). The stream is not identified on other in-house resources including the NHD, NWI, or streamstats. It can be seen on the hillshade 2 foot contour map dropping at least 10 feet in elevation. Based upon the delineation report, as well as aerial imagery, Stream 05-ST003 flows directly into Stream 05-ST004. Stream 05-ST003 is a relatively permanent water, connecting to and contributing flow to a downstream TNW (Oneida River), and is therefore an (a)(3) tributary and a regulated water of the US.

Stream 05-ST004 is 2,330 linear feet within the study area. Stream 05-ST004 is identified as a perennial stream (Mud Creek) on the USGS topographic map, NHD maps, and water is present within the stream in all aerial photographs examined. It flows into the navigable Stream 05-ST005 (Oneida River) within the study area. The limits of OHW of the stream were identified based upon aerial imagery, as this stream is a wide well-developed channel with abutting wetlands (Wetland 05-W005). The delineated reach included 2,330 linear feet along the western boundary of the Study Area and was bordered by a forested and emergent wetland complex on both sides of the stream. Portions of this stream were inaccessible at the time of delineation due to the deep water level in the adjacent wetlands. Stream 05-ST004 is a third order stream (Strahler). Stream 05-ST004 is an (a)(3) tributary and a regulated water of the US.

f. Adjacent Wetlands (a)(4):

Wetland 05-W005-PEM	1.24 ACRES	A4-2.ADJ.WET.A2&A3-404	Section 404
Wetland 05-W005-PFO	.92 ACRES	A4-2.ADJ.WET.A2&A3-404	Section 404

Wetland 05-W005-PEM (1.24 acres) and PFO (0.92 acres) are one wetland complex (2.16 acres) that physically abuts Stream 05-ST004 (Mud Creek) which is an (a)(3) tributary to a TNW. The stream flows through the wetland system based upon the in-house resources (NYSDEC informational wetland maps, NWI, & aerial photos). Since the wetland abuts a Relatively Permanent Water and has a continuous surface connection to a TNW, it has been determined that it is an adjacent wetland and a regulated (a)(4) wetland.

g. Additional Waters (a)(5): N/A

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

a. Describe aquatic resources and other features within the review area identified in the 2023 Rule as amended as not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5). Include the type of excluded aquatic resource or feature, the size of the aquatic resource or feature within the review area and describe how it was determined to meet one of the exclusions listed in 33 CFR 328.3(b).[9]

Northern lagoon	2.9 ACRES	B1-EXCL-WTS	None
Southern lagoon	3.8 ACRES	B1-EXCL-WTS	None

[9] 88 FR 3004 (January 18, 2023)

Northern and Southern Lagoons, measuring 2.9 acres and 3.8 acres in size respectively were constructed between 1972 and 1985 based upon historic aerial photographs in upland soil types (Dunkirk silt loam and Collamer silt loam with hydric ratings of 0). The ponds were constructed as treatment ponds / lagoons for the wastewater treatment facility. Therefore, it has been determined that these ponds meet the exclusions in (b)(1) and are not regulated waters.

b. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the 2023 Rule as amended (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).

Stream 05-ST001	167 FEET	NON-WOTUS-TRIB.NEGATIVE.A3
Stream 05-ST002	94 FEET	NON-WOTUS-TRIB.NEGATIVE.A3
Wetland 05-W001-PEM	.13 ACRES	NON-WOTUS-WET.NEGATIVE.A4
Wetland 05-W001-PFO	1.87 ACRES	NON-WOTUS-WET.NEGATIVE.A4
Wetland 05-W002-PEM	.02 ACRES	NON-WOTUS-WET.NEGATIVE.A4
Wetland 05-W003-PSS	.79 ACRES	NON-WOTUS-WET.NEGATIVE.A4
Wetland 05-W006-PFO	.05 ACRES	NON-WOTUS-WET.NEGATIVE.A4

Stream 05-ST001 is an intermittent stream that flows 167 feet within the study area and south off of the property. The stream was flowing at the time of 5/14/2025 USACE site inspection, but was not flowing and did not contain water within the channel at the time it was delineated on 7/30/2024. The delineation occurred during the dry season during a wet condition, based on the APT. The stream is not identified on the NHD, Stream Stats, USGS topography map, soil survey and not evident in aerial imagery as the ground is obscured by woody vegetation. The delineation report described the stream as averaging 4-6 feet wide with gentle gradient, with no vegetation within the stream channel, and a substrate consisting of sand, silt and clay, which was consistent with USACE observations. OHW was identified by a break in slope and a change in vegetation. The stream was flowing at the time of the USACE site inspection with evidence of considerable wracked leaf litter in the channel and erosion around roots, supporting the determination that it is an intermittent relatively permanent feature. According to the APT the USACE site inspection was conducted during wetter than normal conditions during the wet season, so the observation of flow was consistent for this period. The stream is a first order stream (Strahler). The stream flows into a wetland and stream system to the south that was delineated under LRB-2019-00832, where a Preliminary Jurisdictional Determination was issued on 3/30/2020, where a USACE site visit was conducted. While the PJD did not assess jurisdiction, it contained wetland and stream boundary maps that

identify that the areas downstream of Stream 05-ST001 is a closed system with no downstream surface water connection. The off-site receiving stream (S-T01-003) was delineated as an isolated stream. Therefore Stream 05-ST001 does not contribute flow to a TNW and is not a paragraph (a)(3) tributary and therefore does not meet the definition of a water of the United States (US).

Wetland 05-W002-PEM is a 0.02-acre emergent wetland in the southeast corner of the study area. Based upon visual assessment on site, Wetland 05-W002-PEM continues offsite and abuts Stream 05-ST001. Since ST001 has been determined to not be an (a)(3) tributary and is not a water of the US, Wetland 05-W002-PEM does not abut a water that is a water of the US in its own right and therefore does not have a continuous surface connection to a downstream water and therefore is not a water of the US.

Stream 05-ST002 is an ephemeral stream flowing 94 linear feet within the northeast corner of the study area, flowing off-site into an old sand pit to the east that is now open water. Stream 05-ST002 is not visible on aerial photos and is not evident on the in-house resources with the exception of the hillshade and 2 foot contour map. In this resource, the stream starts at the wetland edge and continues offsite where it drops over 8 feet in topography into an open water historic sand mine. Based upon the delineation, the stream width was 4 feet at OHWMs on opposing banks and the stream was characterized by a well-developed bed and banks, gentle gradient, and a substrate consisting of sand, silt, and clay. Indicators used to define the OHWM included a break in slope, a change in vegetation, and the presence of large wood in the stream channel. The delineation suggested the stream is intermittent because it receives water from Wetland 05-W003 in addition to direct precipitation, but water was absent from the stream channel at the time of the delineation survey, which was conducted during a wetter than normal condition (incipient wetness) in the dry season. According to the APT, the USACE site inspection was conducted during the wet season (5/15/2025) in wetter than normal conditions and was dry at the time of site inspection. This stream is a first order stream (Strahler), and the reach of the stream starts where it is delineated on site until it enters the open water. The portion off site was not accessible and only in-house resources could be used to assess conditions. This portion of the stream was delineated in a separate EDR delineation report (October 2024) where conditions of the stream were the same as on-site conditions. The feature was not visible in any in-house resource except for the 2 foot contour hillshade map referenced above. Since the stream was dry during both the delineation and the USACE site inspection, during wetter than normal conditions in the wet season where the site had just received a rain event earlier that morning , it has been determined to be an ephemeral feature,

and is therefore not a relatively permanent water as there was no evidence that it flows continuously during certain times of the year.

Wetland 05-W003-PSS is a 0.79-acre wetland that directly abuts/connects to ephemeral stream 05-ST002 to the east, which is not an RPW as discussed above. Since Wetland 05-W003-PSS is not adjacent to a water of the US and does not have a continuous surface connection to a downstream water of the US, and therefore it also is not a regulated water of the US.

Wetland 05-W001-PEM and 05-W001-PFO is primarily a wooded wetland located in the center of the study area. The wetland extends slightly off-site to the east, but the boundaries off-site were easily seen during site visit based upon inundation and change in topography and vegetation. The drainage within this wetland is generally to the west. A standpipe is located within the southwest corner of the wetland with its grated opening approximately 3 feet higher in elevation from the existing ground elevation of the wetland. No standing water was present at the time of the USACE site inspection at the standpipe location, although other portions of the wetland were inundated. Based upon information sent after the site visit from CHA (see map AD-1 dated March 3, 1978), this standpipe drains into a stormwater system, collecting combined stormwater from other portions of the site, and then discharging directly into Stream 05-ST003. Since this wetland does not abut a water of the US, it does not have a continuous surface connection and therefore it has been determined it does not meet the definition of a water of the US.

Wetland 05-W006-PFO is a 0.05-acre forested wetland depression that is located approximately 75 feet south of Wetland 05-W001 and about 25 feet north of a developed portion of the site. No surface connections were located extending to/from any other wetland or waterway. It is located within Niagara silt loam soils, with a hydric rating of 7. Since this wetland does not abut a water of the US, there is no continuous surface connection to another water of the US, this wetland is not a water of the US.

9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.

   a. *Corps of Engineers' site visit: 5/14/2025 (per APT, wet season, wetter than normal conditions).*

   b. *Wetland and Stream Delineation Memorandum, Oak Orchard Project.*

Prepared by EDR, dated August 16, 2024 (based upon data collected on 7/30/2024), subsequent data provided by CHA Solutions and EDR on 5/19/2025 (stormwater map AD-1 dated March 3, 1978) and additional wetland data provided on 5/27/2025.

c. *Wetland and Stream Delineation Report, White Pine Industrial Wastewater Treatment Plant, prepared by EDR, dated October 2024.*

d. *Aerial/Oblique Imagery evaluated: Google Earth Pro 7/3/2022, 4/13/2017, 3/26/1995; Connect Explorer - https://explorer.pictometry.com/ - oblique imagery dates 3/27/2024, 3/23/2021, 4/8/2021; historicaerials.com 1972 and 1985.*

e. *USGS NHD layer: accessed through the National Regulatory Viewer; accessed November 22, 2023.*

f. *USGS Streamstats - https://streamstats.usgs.gov/ss/; accessed November 22, 2023.*

g. *National wetlands inventory map(s): included in 8/16/2024 Wetland and Stream Delineation Memorandum https://www.fws.gov/program/nationalwetlands-inventory/wetlands-mapper*

h. *U.S. Geological Survey map(s). Cite scale & quad name: USGS Quad: Brewerton – NY, scale 1:24000*

i. *New York State Department of Environmental Resource Mapper - https://gisservices.dec.ny.gov/gis/erm/*

j. *U.S. Department of Agriculture, Onondaga County, New York Soil Survey 1977.*

k. *Web soil survey, accessed 10/24/2023 https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx*

l. *Antecedent Precipitation Tool (APT), version 2.0*

m. *On-site photos, provided by EDR in 8/16/2024 Wetland and Stream Delineation Memorandum*

n. *USGS National Map 3D Elevation Program (3DEP) 1/2/2025 from USACE Regulatory Viewer.*

o. *Sheets A-2 and A-3 from Preliminary Jurisdictional Determination for file no. LRB-2019-00832 issued 3/30/2020, and supporting information contained in the Wetlands and Waterbodies Report for Clay DG Solar and Energy Storage Project dated January 2020.*

p. *USACE site notes, 5/14/2025 and photolog*

10. OTHER SUPPORTING INFORMATION. N/A

11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.

U.S. Army Corps of Engineers (USACE)

PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)

For use of this form, see Sec 404 CWA, Sec 10 RHA, Sec 103 MPRSA; the proponent agency is CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires 2024-04-30

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

Principal Purpose The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the review area that may be subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice or FOIA request as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in any resulting jurisdictional determination (JD), which may be made available to the public on the District's website and/or on the Headquarters USACE website.

Disclosure Submission of requested information is voluntary; however, if information is not provided, the request for a JD cannot be evaluated nor can a PJD be issued.

The Agency Disclosure Notice (ADN)

The public reporting burden for this collection of information, 0710-0024, is estimated to average 25 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

SECTION I - BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 4 August 2025

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:
Odean Dyer
Onondaga County Department of Water
Environment Protection
650 Hiawatha Boulevard West
Syracuse, New York 13204

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Buffalo District, Onondaga County Department of Water Environment Protection; LRB-2024-01037

D. PROJECT LOCATION AND BACKGROUND INFORMATION:
(*USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES*)

State: New York County/Parish/Borough: Onondaga City: Town of Clay

Center coordinates of site (*lat/long in degree decimal format*): Latitude: 43.198714 ° Longitude: -76.16507 °

Universal Transverse Mercator: Zone 18

Name of nearest waterbody: Mud Creek and Oneida River

E. REVIEW PERFORMED FOR SITE EVALUATION (*CHECK ALL THAT APPLY*):

☒ Office (*Desk*) Determination. Date: 8/4/2025

☒ Field Determination

Date(s): 5/14/2025

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

	Site Number	Latitude (*decimal degrees*)	Longitude (*decimal degrees*)	Estimated amount of aquatic resource in review area (*acreage and linear feet, if applicable*)	Type of aquatic resource (*i.e., wetland vs. non-wetland waters*)	Geographic authority to which the aquatic resource "may be" subject (*i.e., Section 404 or Section 10/404*)

	Site Number	Latitude (*decimal degrees*)	Longitude (*decimal degrees*)	Estimated amount of aquatic resource in review area (*acreage and linear feet, if applicable*)	Type of aquatic resource (*i.e., wetland vs. non-wetland waters*)	Geographic authority to which the aquatic resource "may be" subject (*i.e., Section 404 or Section 10/404*)
	Wetland 05-W004-PFO	43.20492	-76.21305	2.45 acres	wetland	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD or no JD whatsoever, which do not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the USACE has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD or reliance on no JD whatsoever; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of USACE permit authorization based on a PJD or no JD whatsoever constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the USACE will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

F. SUPPORTING DATA. Data reviewed for PJD (*check all that apply)*
Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:

Map: Wetland and Stream Delineation Memorandum, Oak Orchard Project.Prepared by EDR, dated August 16, 2024, subsequent data provided by CHA Solutions and EDR on 5/27/2025

☒ Data sheets prepared/submitted by or on behalf of the PJD requestor.

☒ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

Rationale:

☐ Data sheets prepared by the USACE:

☐ Corps navigable waters' study:

☐ U.S. Geological Survey Hydrologic Atlas:

☒ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name:

Brewerton – NY, scale 1:24000

☒ USDA Natural Resources Conservation Service Soil Survey.

Citation: U.S. Department of Agriculture, Onondaga County, New York Soil Survey 1977.
Web soil survey, accessed 10/24/2023 - https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

☒ National Wetlands Inventory map(s).

Cite Name: included in 8/16/2024 Wetland and Stream Delineation Memorandum https://www.fws.gov/program/nationalwetlands-inventory/wetlands-mapper

☒ State/Local Wetland Inventory map(s):

New York State Department of Environmental Resource Mapper - https://gisservices.dec.ny.gov/gis/erm/

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is: _____. (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (*Name & Date*): Aerial/Oblique Imagery evaluated: Google Earth Pro 7/3/2022, 4/13/2017, 3/26/1995; Connect Explorer - https://explorer.pictometry.com/ - oblique imagery dates 3/27/2024, 3/23/2021, 4/8/2021; historicaerials.com 1972 and 1985.

or ☒ Other (*Name & Date*): On-site photos, provided by EDR in 8/16/2024 Wetland and Stream Delineation Memorandum

☒ Previous determination(s). File no. and date of response letter:

LRB-2024-01037 Approved Jurisdictional Determination being issued concurrently for the site.

☐ Other information (*please specify*):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the USACE and should not be relied upon for later jurisdictional determinations.

Name of Regulatory Staff Member Completing PJD	Date	Signature of Regulatory Staff Member Completing PJD
Margaret Crawford	8/4/2025	Margaret Crawford
Name of Person Requesting PJD	Date	Signatureof Person Requesting PJD *(REQUIRED, unless obtaining the Signature is Impracticable*

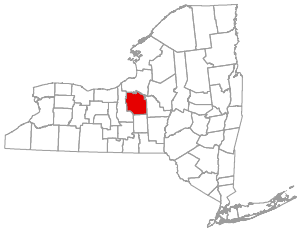
[1] Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Figure 1. Regional Project Location

Oak Orchard Project

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Memorandum



0 2.5 5 10

Miles

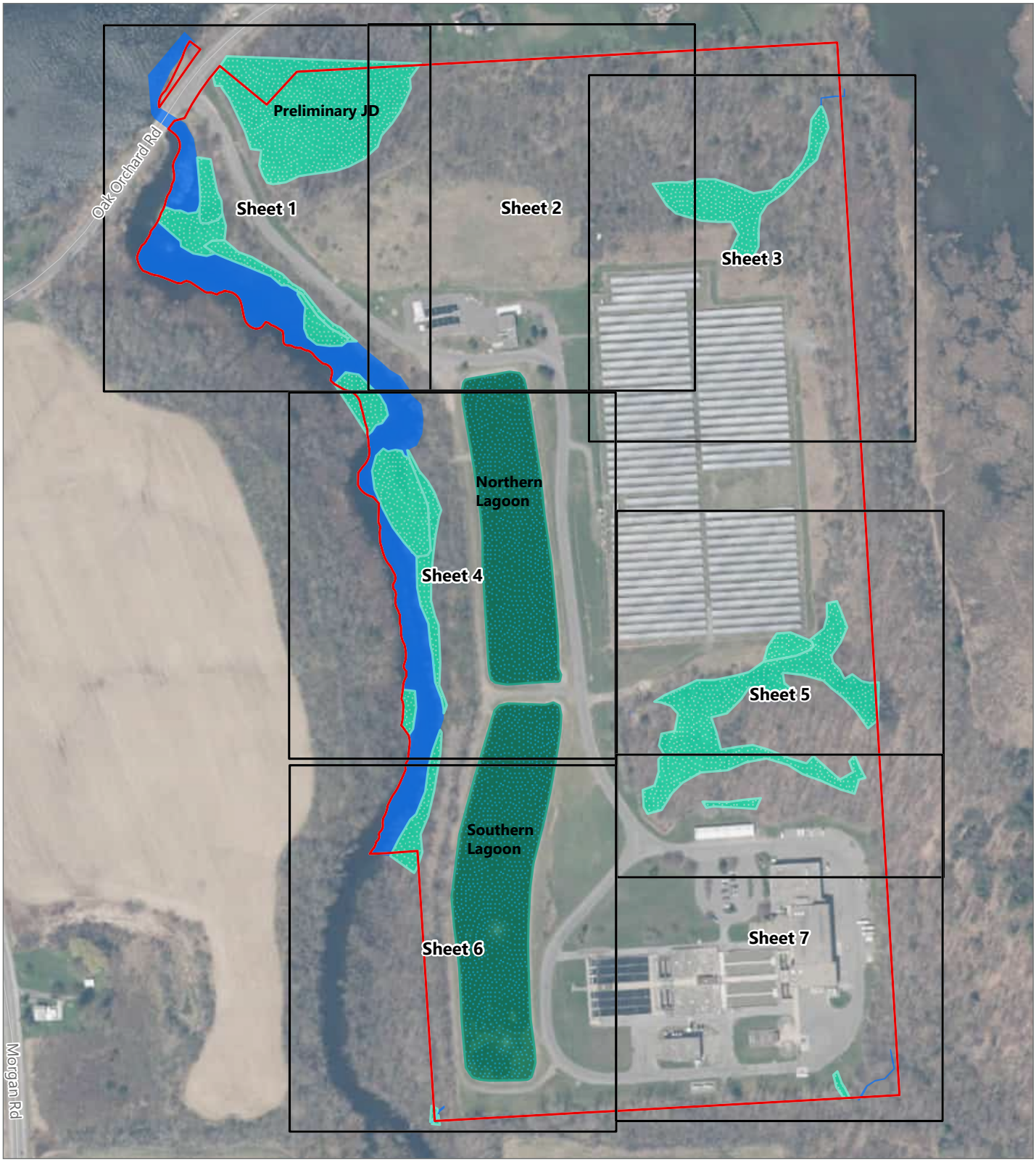
Prepared August 13, 2024

Basemap: Esri "World Street Map" map service

EDR

Figure 1. Delineated Wetland and Stream Extensions

Index



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

Delineated Stream
Delineated Wetland
Wastewater Treatment Lagoon
Study Area

0 100 200 400
Feet

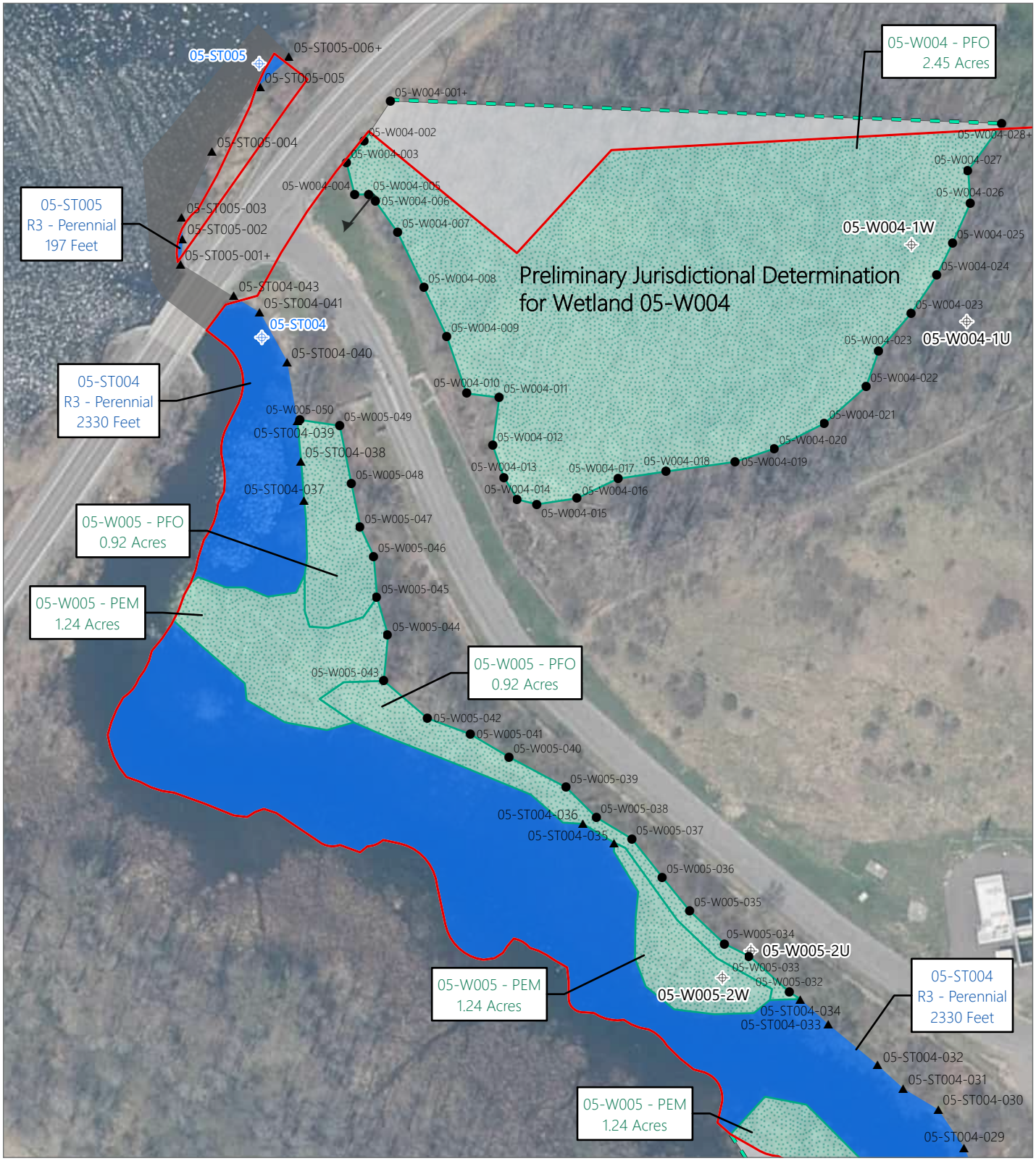
Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Note: These maps are subject to Approved Jurisdictional Determination (AJD) except for Wetland 05-W004 which is being reviewed via Preliminary JD (PJD)

Figure 1. Delineated Wetland and Stream Extensions

Sheet 1 of 7



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

- Stream Flag
- Wetland Flag
- Datapoint Stream
- Datapoint Wetland
- Culvert
- Wetland Continues
- Delineated Stream inside Study Area
- Delineated Stream outside Study Area
- Previously Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Study Area

0 25 50 100

Feet

Prepared May 27, 2025

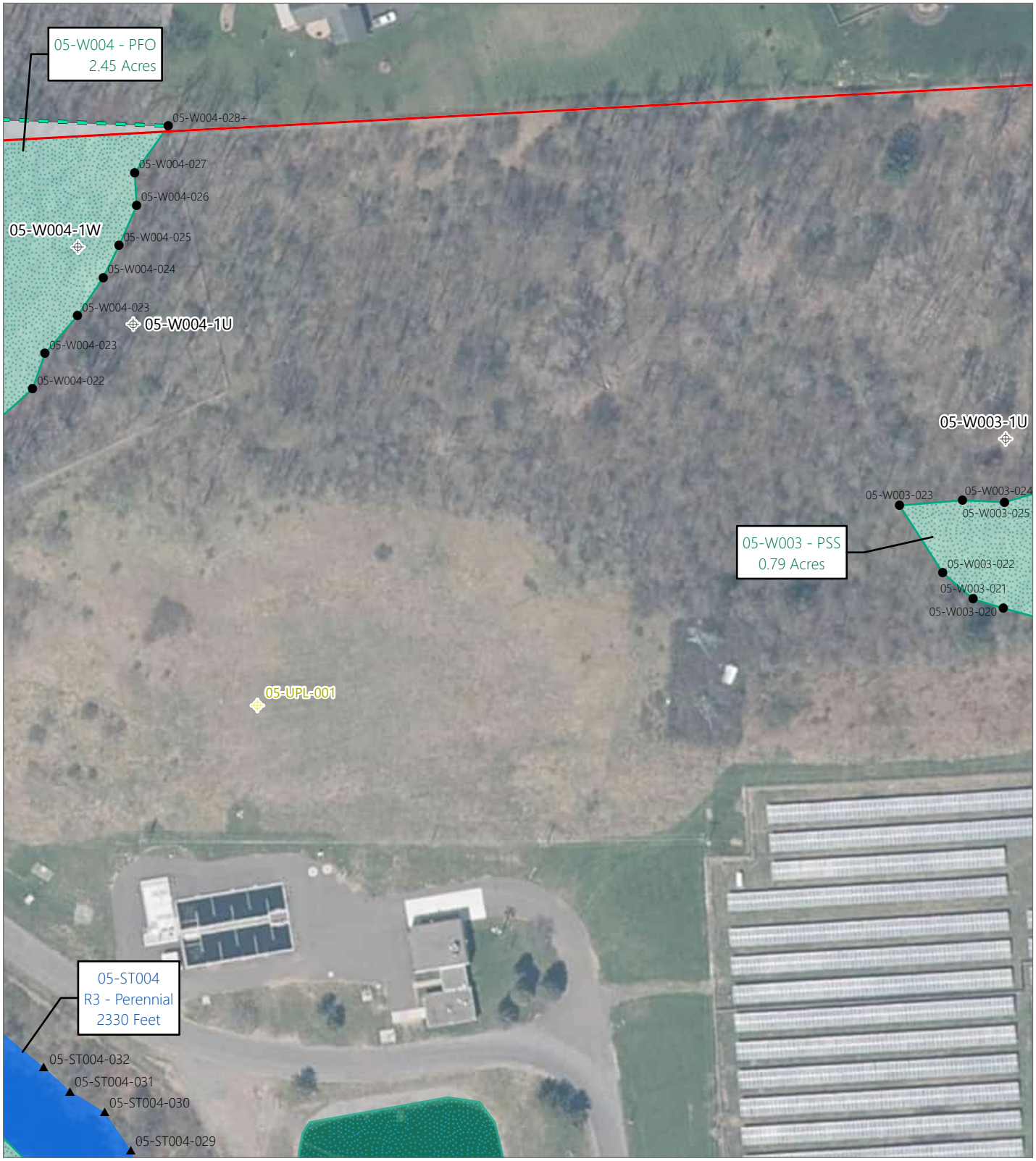
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Note: These maps are subject to Approved Jurisdictional Determination (AJD) except for Wetland 05-W004 which is being reviewed via Preliminary JD (PJD)

Figure 1. Delineated Wetland and Stream Extensions

Sheet 2 of 7



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

- Stream Flag
- Wetland Flag
- Datapoint Wetland
- Non-Wetland Verification Point
- Wetland Continues
- Delineated Stream inside Study Area
- Previously Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Wastewater Treatment Lagoon
- Study Area

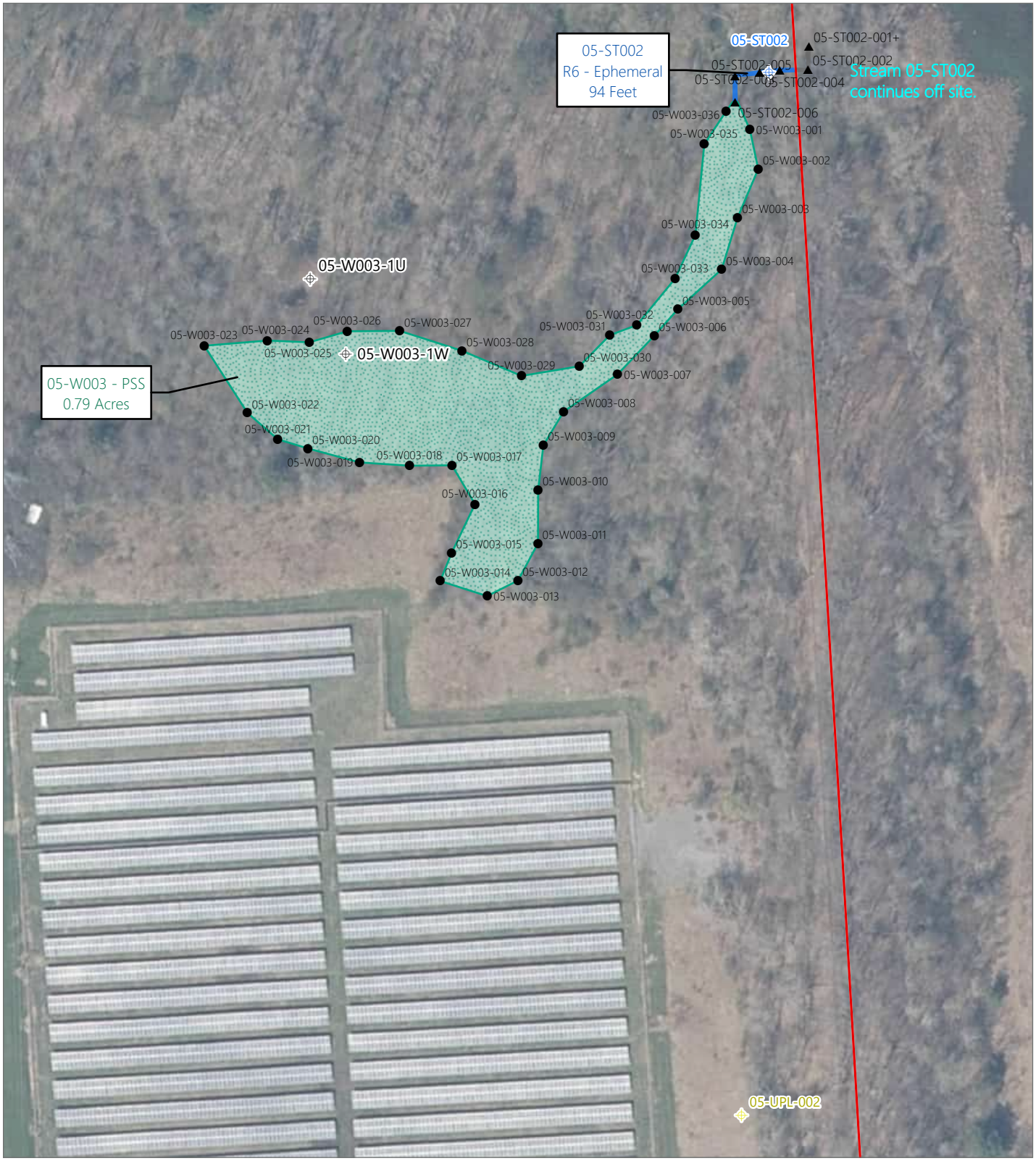
0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions

Sheet 3 of 7



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

- Stream Flag
- Wetland Flag
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- Study Area

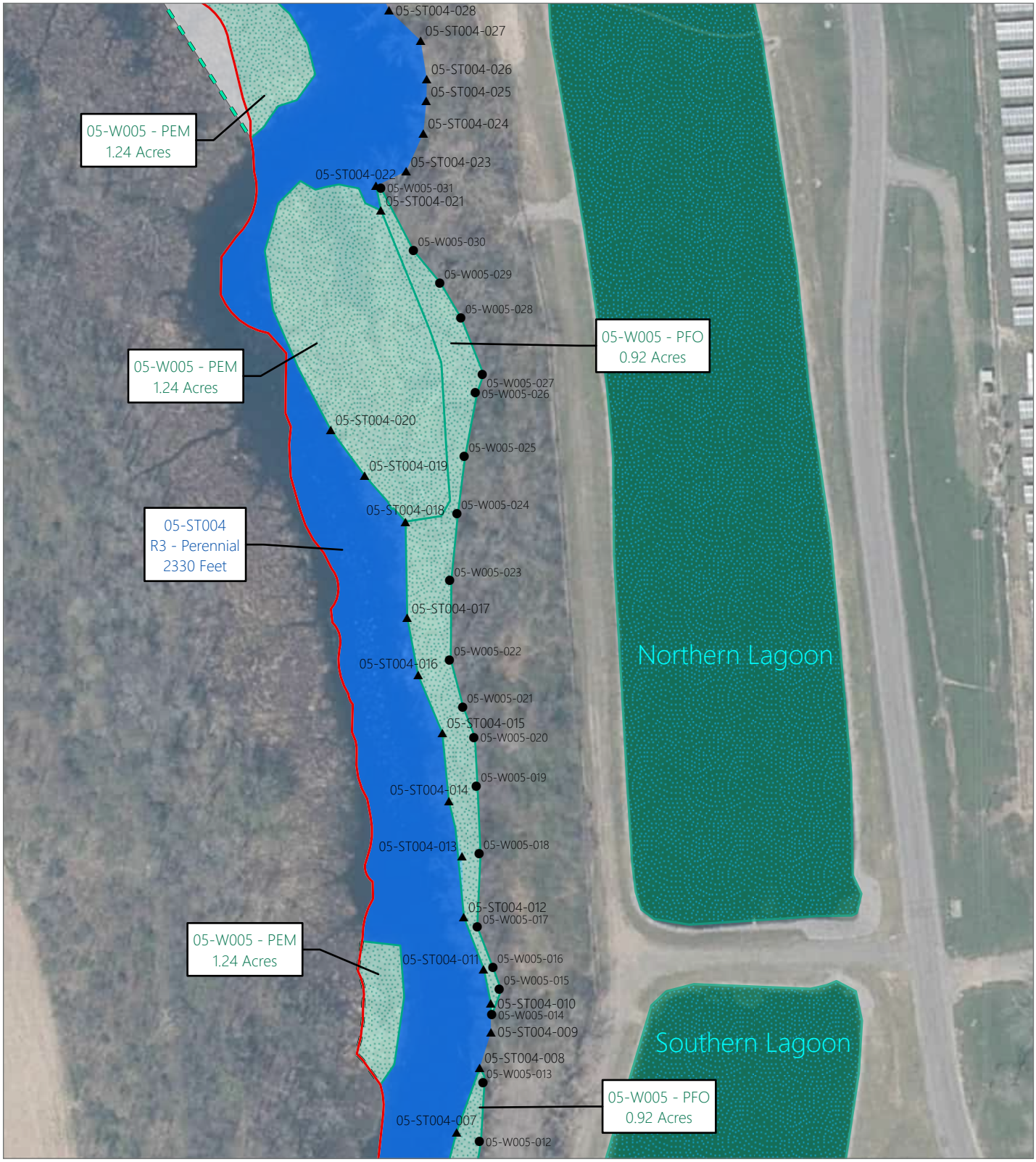
0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions

Sheet 4 of 7



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

- Stream Flag
- Wetland Flag
- Wetland Continues
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- Study Area

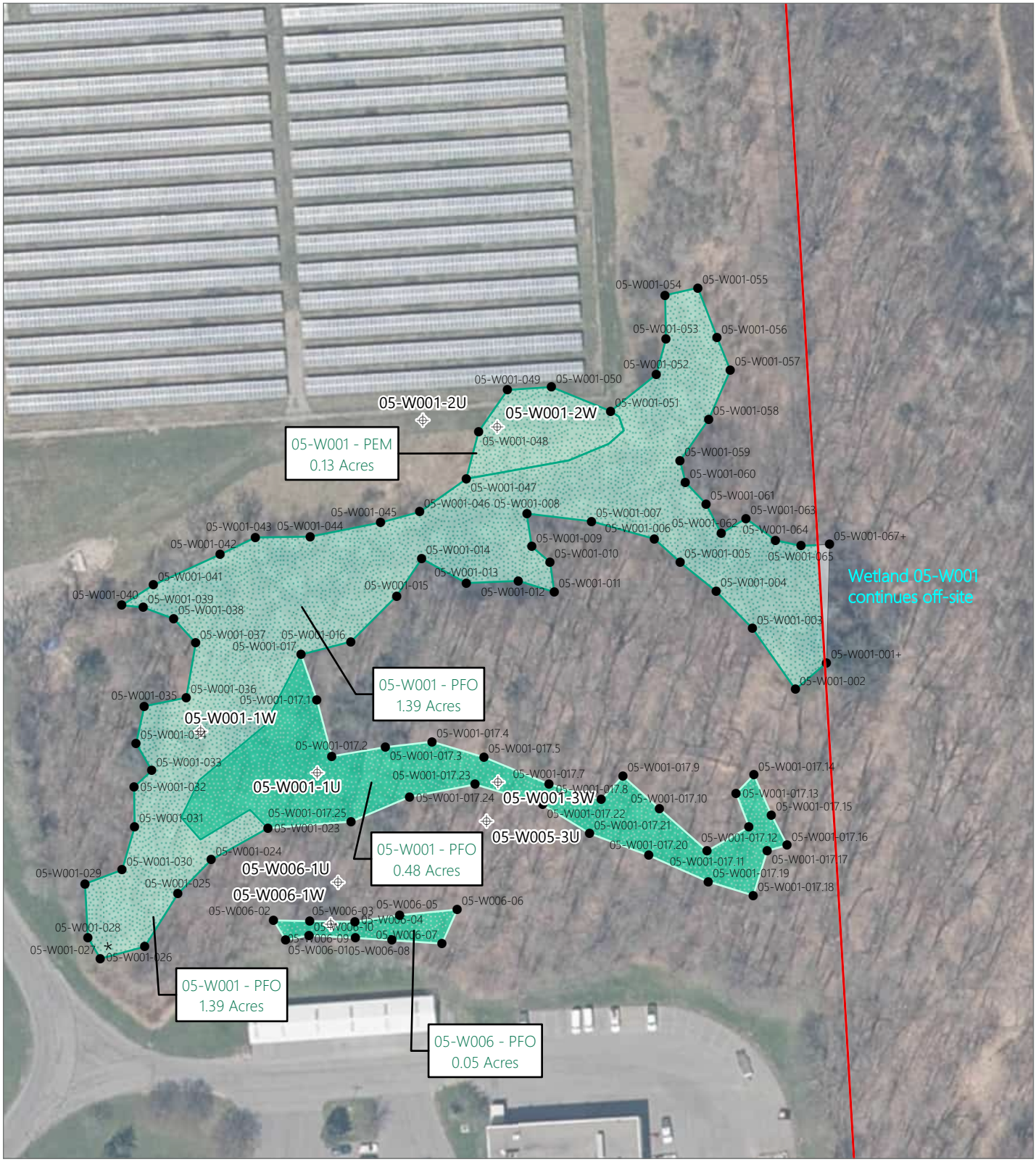
0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions

Sheet 5 of 7



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

- Wetland Flag
- Datapoint Wetland
- May 2025 Delineated Wetland inside Study Area
- Previously Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Study Area

0 25 50 100
Feet

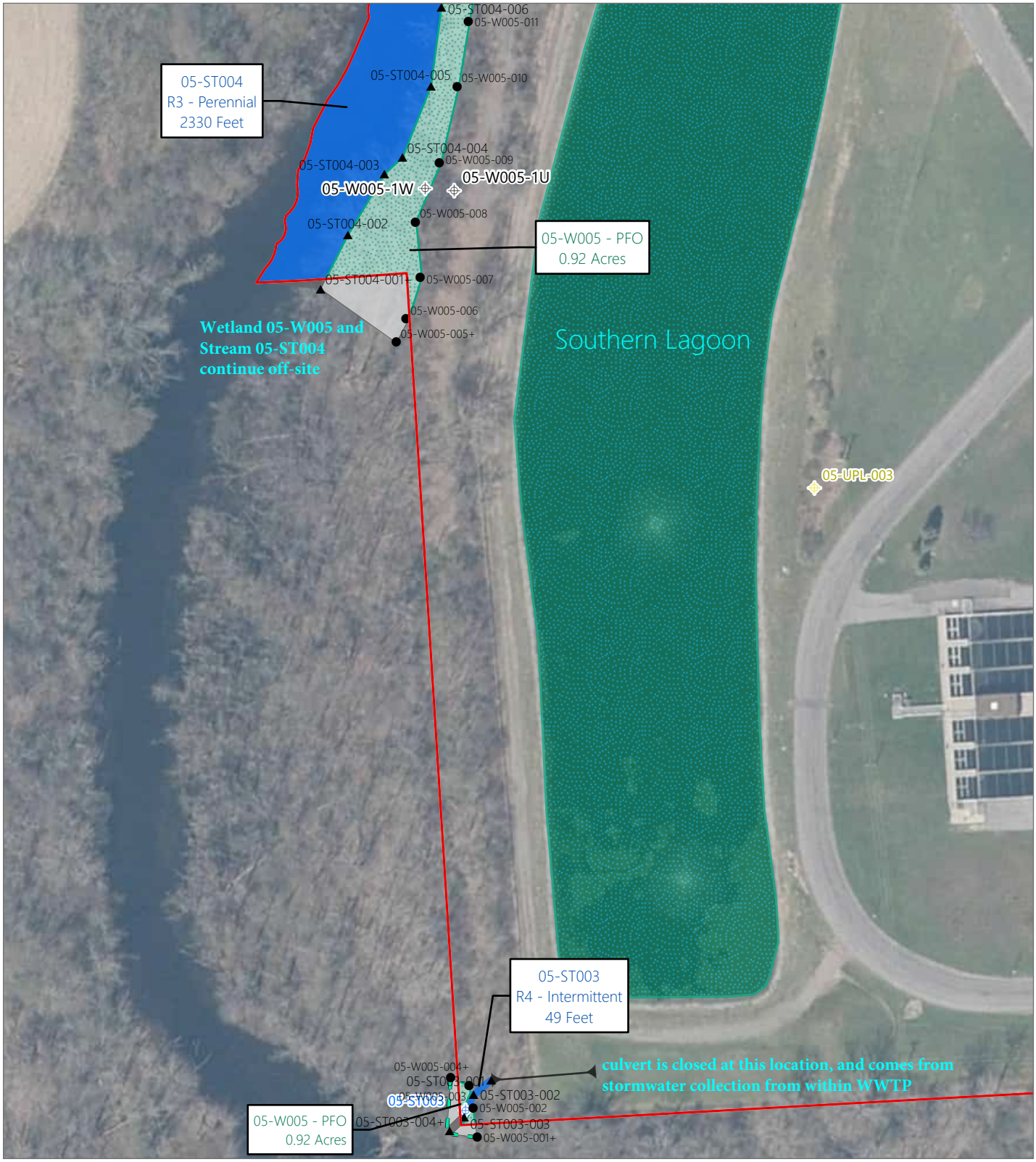
* approximate standpipe location

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions

Sheet 6 of 7



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

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- Study Area

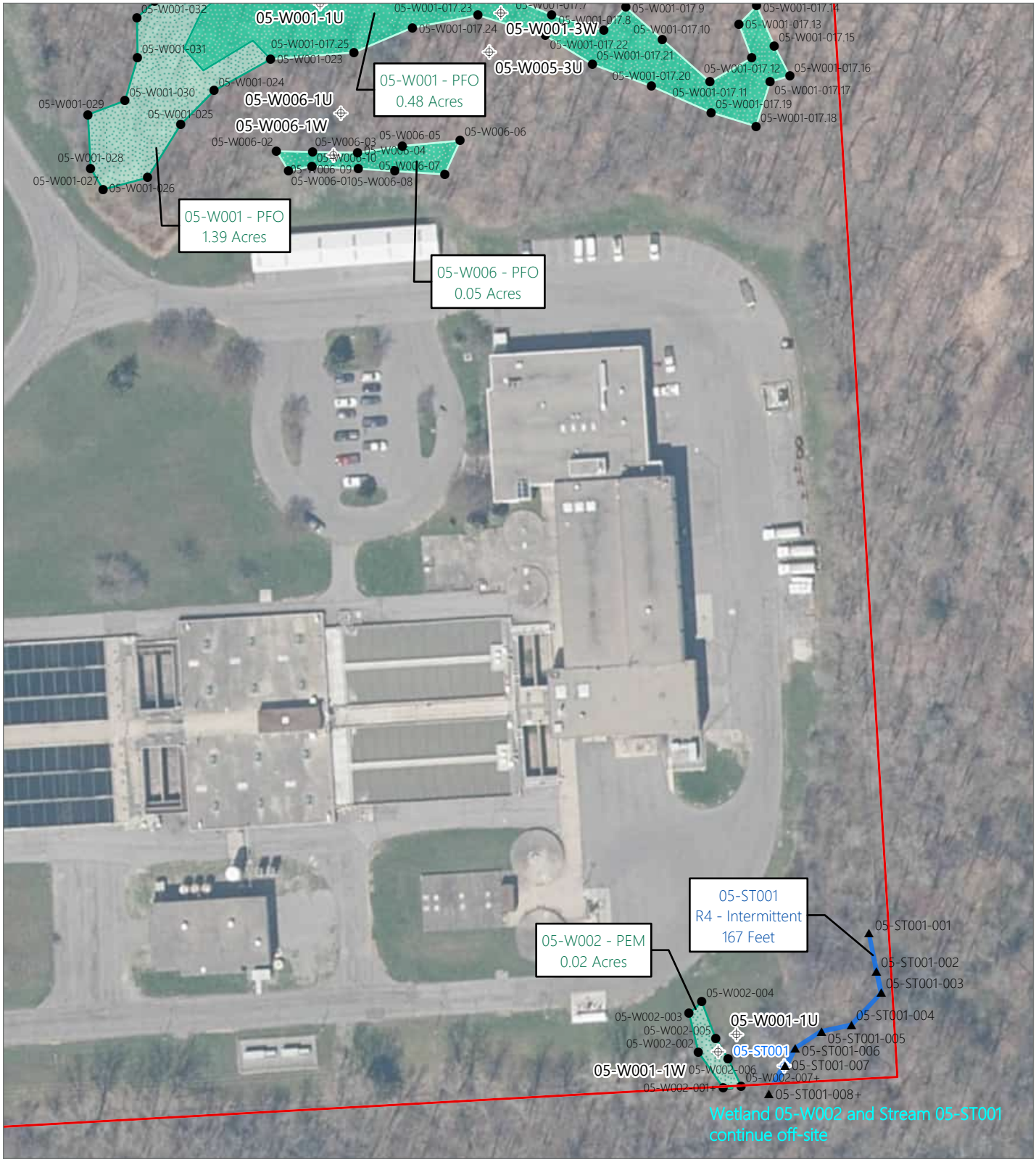
0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions

Sheet 7 of 7



Oak Orchard

Town of Clay, Onondaga County, New York

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- Study Area

0 25 50 100

Feet

Prepared May 27, 2025

Basemap: NYSDOP "2022" orthoimagery map service

EDR

U.S. Army Corps of Engineers (USACE)

PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)

For use of this form, see Sec 404 CWA, Sec 10 RHA, Sec 103 MPRSA; the proponent agency is CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires 2024-04-30

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

Principal Purpose The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the review area that may be subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice or FOIA request as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in any resulting jurisdictional determination (JD), which may be made available to the public on the District's website and/or on the Headquarters USACE website.

Disclosure Submission of requested information is voluntary; however, if information is not provided, the request for a JD cannot be evaluated nor can a PJD be issued.

The Agency Disclosure Notice (ADN)

The public reporting burden for this collection of information, 0710-0024, is estimated to average 25 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

SECTION I - BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 4 August 2025

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:
Odean Dyer
Onondaga County Department of Water
Environment Protection
650 Hiawatha Boulevard West
Syracuse, New York 13204

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Buffalo District, Onondaga County Department of Water Environment Protection; LRB-2024-01037; Wastewater Conveyance

D. PROJECT LOCATION AND BACKGROUND INFORMATION:
(*USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES*)

State: New York County/Parish/Borough: Onondaga City: Town of Clay

Center coordinates of site (*lat/long in degree decimal format*): Latitude: 43.201 ° Longitude: -76.189 °

Universal Transverse Mercator: Zone 18

Name of nearest waterbody: Shaver Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (*CHECK ALL THAT APPLY*):

☒ Office (*Desk*) Determination. Date: 8/4/2025

☒ Field Determination

Date(s): 5/14/2025

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

	Site Number	Latitude (*decimal degrees*)	Longitude (*decimal degrees*)	Estimated amount of aquatic resource in review area (*acreage and linear feet, if applicable*)	Type of aquatic resource (*i.e., wetland vs. non-wetland waters*)	Geographic authority to which the aquatic resource "may be" subject (*i.e., Section 404 or Section 10/404*)

	Site Number	Latitude (*decimal degrees*)	Longitude (*decimal degrees*)	Estimated amount of aquatic resource in review area (*acreage and linear feet, if applicable*)	Type of aquatic resource (*i.e., wetland vs. non-wetland waters*)	Geographic authority to which the aquatic resource "may be" subject (*i.e., Section 404 or Section 10/404*)
	See attached					Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD or no JD whatsoever, which do not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the USACE has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD or reliance on no JD whatsoever; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of USACE permit authorization based on a PJD or no JD whatsoever constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the USACE will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

F. SUPPORTING DATA. Data reviewed for PJD (*check all that apply)*
Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:

Map: Industrial Wastewater (IWW) Line Wetland Delineation, Micron Semiconductor Fabrication Facility, November 26, 2024, by Ramboll, and subsequent data provided by Ramboll on 5/28/2025

☒ Data sheets prepared/submitted by or on behalf of the PJD requestor.

☒ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

Rationale: _____

☐ Data sheets prepared by the USACE:

☐ Corps navigable waters' study:

☐ U.S. Geological Survey Hydrologic Atlas:

☒ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name:

Brewerton – NY, scale 1:24000

☒ USDA Natural Resources Conservation Service Soil Survey.

Citation: Web soil survey, accessed 10/28/2024 in Wetland Delineation Report

☒ National Wetlands Inventory map(s).

Cite Name: included in Wetland Delineation Report https://www.fws.gov/program/nationalwetlands-inventory/wetlands-mapper

☒ State/Local Wetland Inventory map(s):

New York State Department of Environmental Resource Mapper - https://gisservices.dec.ny.gov/gis/erm/

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is: _____. (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (*Name & Date*): Aerial/Oblique Imagery evaluated: Google Earth Pro 7/3/2022, 4/13/2017, 3/26/1995.

or ☒ Other (*Name & Date*): On-site photos, provided by Ramboll in Wetland Delineation Report

☐ Previous determination(s). File no. and date of response letter:

☐ Other information (*please specify*):

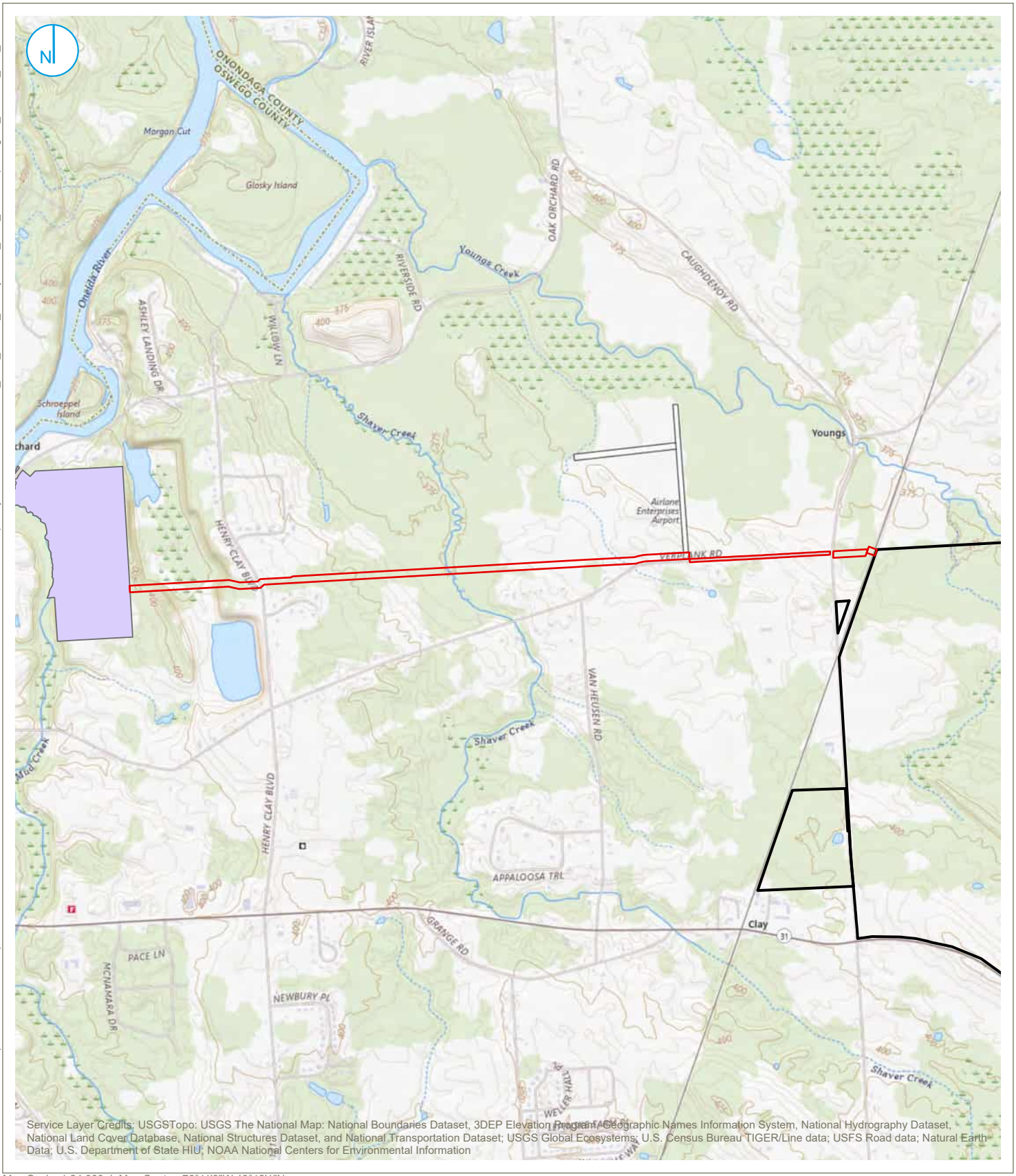
IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the USACE and should not be relied upon for later jurisdictional determinations.

Name of Regulatory Staff Member Completing PJD	Date	Signature of Regulatory Staff Member Completing PJD
Margaret Crawford	8/4/2025	Margaret Crawford
Name of Person Requesting PJD	Date	Signatureof Person Requesting PJD *(REQUIRED, unless obtaining the Signature is Impracticable*

[1] Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

PJD waters for proposed wastewater conveyance, LRB-2024-01037

Waters_Name	Latitude	Longitude	Waters Size	Type Of Aquatic Res	Geographic Authority
Driveway Ditch 1	43.20137	-76.1777	87 FEET	DELIN.PJD-404	Section 404
IWW10_PEM	43.20113	-76.1834	.36 ACRES	DELIN.PJD-404	Section 404
IWW11_PEM	43.2011	-76.1818	.04 ACRES	DELIN.PJD-404	Section 404
IWW12_PEM	43.20126	-76.1791	.84 ACRES	DELIN.PJD-404	Section 404
IWW13_PEM	43.20143	-76.1768	.36 ACRES	DELIN.PJD-404	Section 404
IWW14_PEM	43.20149	-76.1757	.04 ACRES	DELIN.PJD-404	Section 404
IWW1_PEM	43.20164	-76.1654	.2 ACRES	DELIN.PJD-404	Section 404
IWW1_PFO	43.20152	-76.1664	.99 ACRES	DELIN.PJD-404	Section 404
IWW5_PSS	43.20026	-76.2028	.01 ACRES	DELIN.PJD-404	Section 404
IWW6_PEM	43.20033	-76.2045	1.3 ACRES	DELIN.PJD-404	Section 404
IWW6_PSS	43.20039	-76.2036	.2 ACRES	DELIN.PJD-404	Section 404
IWW7_PFO	43.20088	-76.191	1.23 ACRES	DELIN.PJD-404	Section 404
IWW8_PFO	43.20094	-76.188	1.49 ACRES	DELIN.PJD-404	Section 404
IWW9_PEM	43.20102	-76.1861	.2 ACRES	DELIN.PJD-404	Section 404
Shavers Creek	43.2009	-76.1894	106 FEET	DELIN.PJD-404	Section 404
Wetland 05-W004-PFO	43.20492	-76.2131	2.45 ACRES	DELIN.PJD-404	Section 404



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PROJECT: 1950100687 | DATED: 11/7/2024 | DESIGNER: SSOULE

Map Scale: 1:24,000 | Map Center: 76°11'9"W 43°12'1"N

KEY MAP (not to scale)

- Force Main ROW
- Oak Orchard WWTP
- Micron Main Campus

0 1,000 2,000 Feet

SITE LOCATION
IWW EASEMENT

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 01

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1950100687 | DATED: 11/7/2024 | DESIGNER: SSOULE
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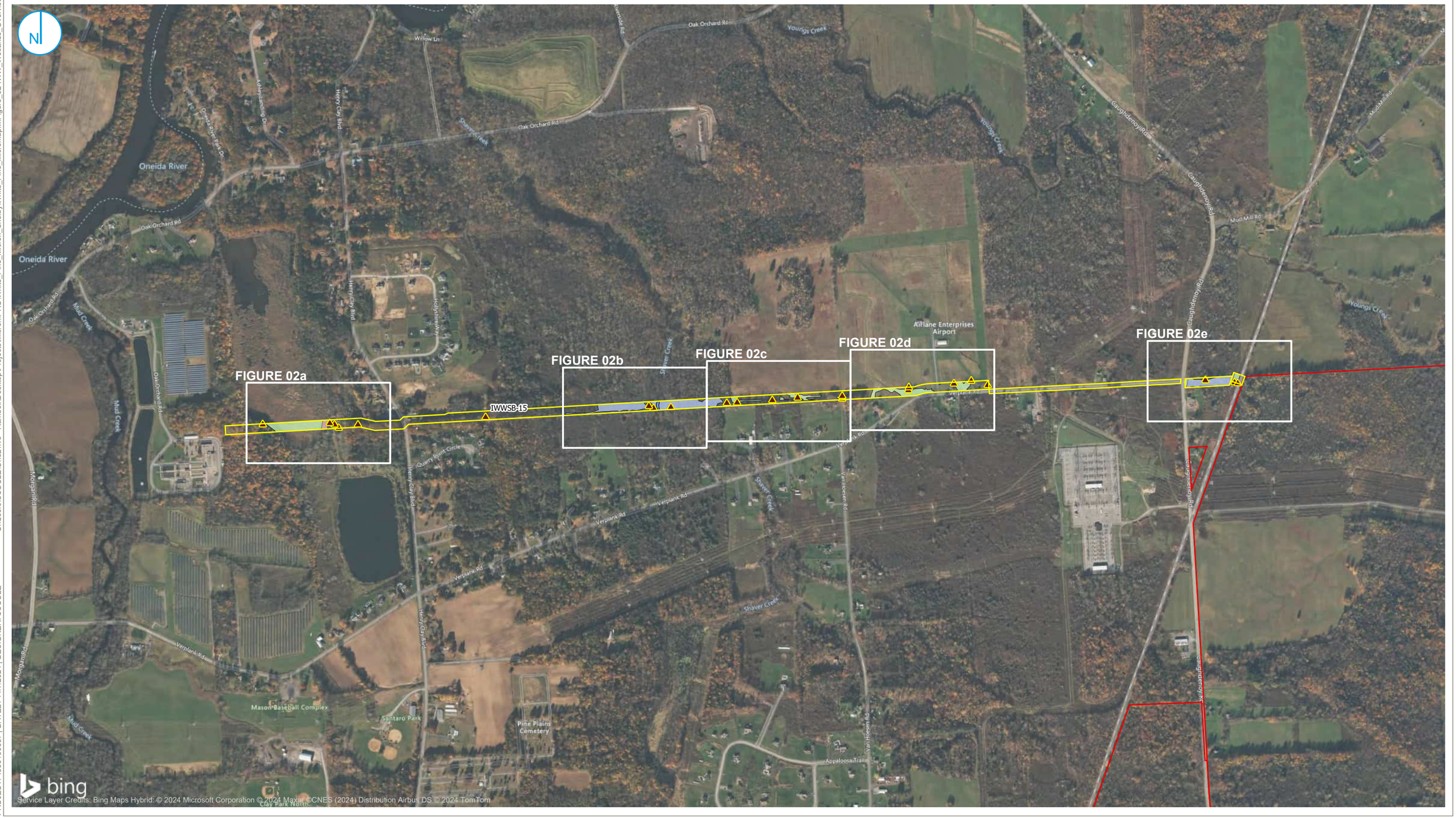

- Soil Boring
- Shavers Creek
- Force Main ROW
- Micron Main Campus

0 500 1,000 Feet

Notes
- Force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 02

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

C:\Users\SSOULE\OneDrive - Ramboll\Desktop\Projects\Micron\PRO\White_Pine_Micron_ShelbyWhite_Pine_Micron.aprx\Figure_02-IWW_Wetlands
PROJECT: 1950100687 | DATED: 11/5/2024 | DESIGNER: SSOULE

Soil Boring
Delineated Wetland
Force Main ROW
Property Line

0 50 100 Feet

Notes
- Property lines and force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 02a

RAMBOLL AMERICAS
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PROJECT: 1950100687 | DATED: 11/5/2024 | DESIGNER: SSOULE

Soil Boring
Shavers Creek Flow Direction
Delineated Wetland
Shavers Creek
Force Main ROW
Property Line

0 50 100 Feet

Notes
- Property lines and force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 02b

RAMBOLL AMERICAS
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PROJECT: 1950100687 | DATED: 11/5/2024 | DESIGNER: SSOULE

Soil Boring
Delineated Wetland
Force Main ROW
Property Line

0 50 100 Feet

Notes
- Property lines and force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 02c

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A RAMBOLL COMPANY

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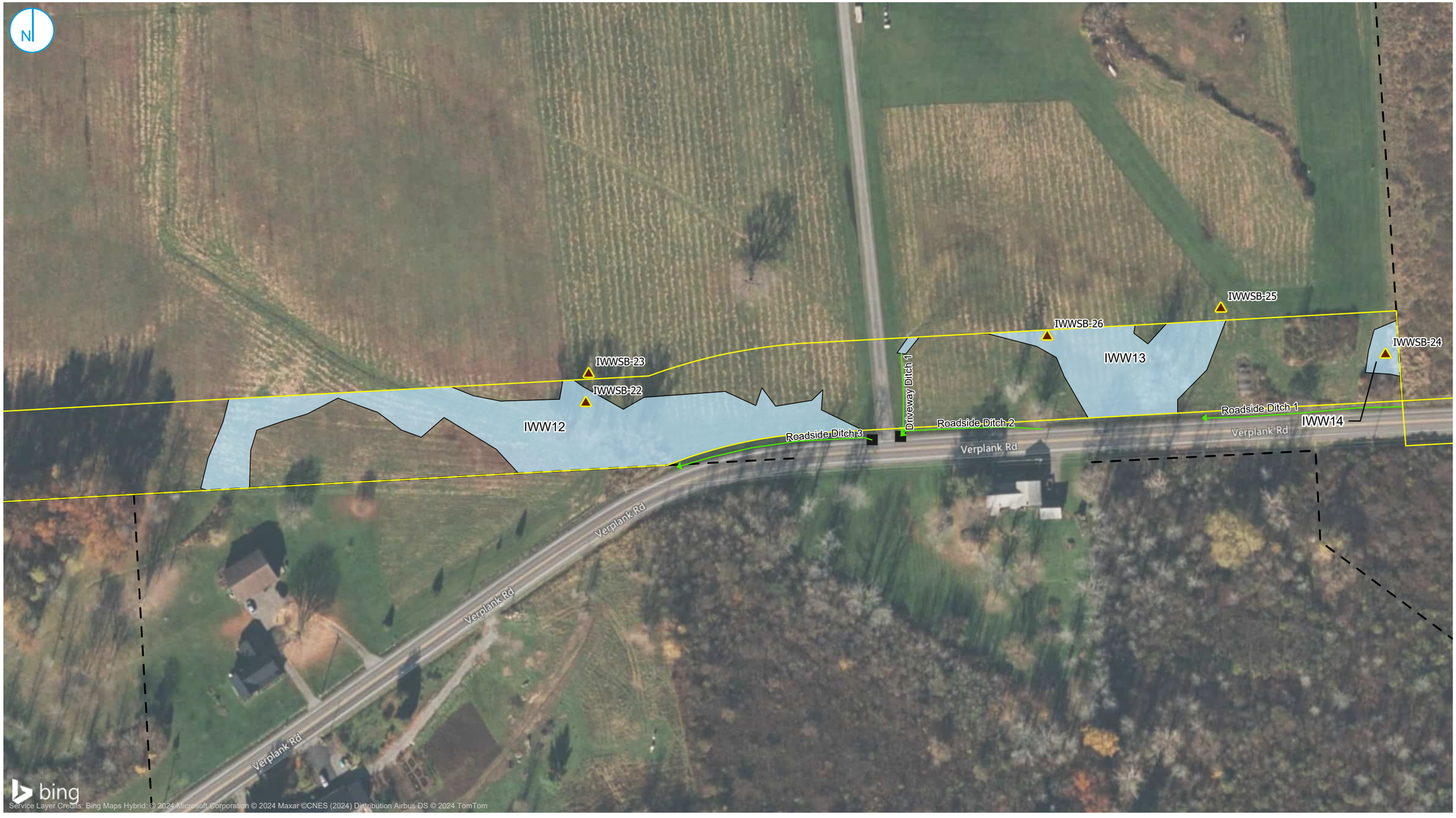
PROJECT: 1950100687 | DATED: 11/5/2024 | DESIGNER: SSOULE



Soil Boring
Culvert
Ditch Flow Direction
Delineated Wetland
Force Main ROW
Property Line

0 50 100 Feet

Notes
- Property lines and force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 02d

RAMBOLL AMERICAS
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PROJECT: 1950100687 | DATED: 11/5/2024 | DESIGNER: SSOULE

Soil Boring
Delineated Wetland
Force Main ROW
Property Line
Micron Main Campus

0 50 100 Feet

Notes
- Property lines and force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 02e

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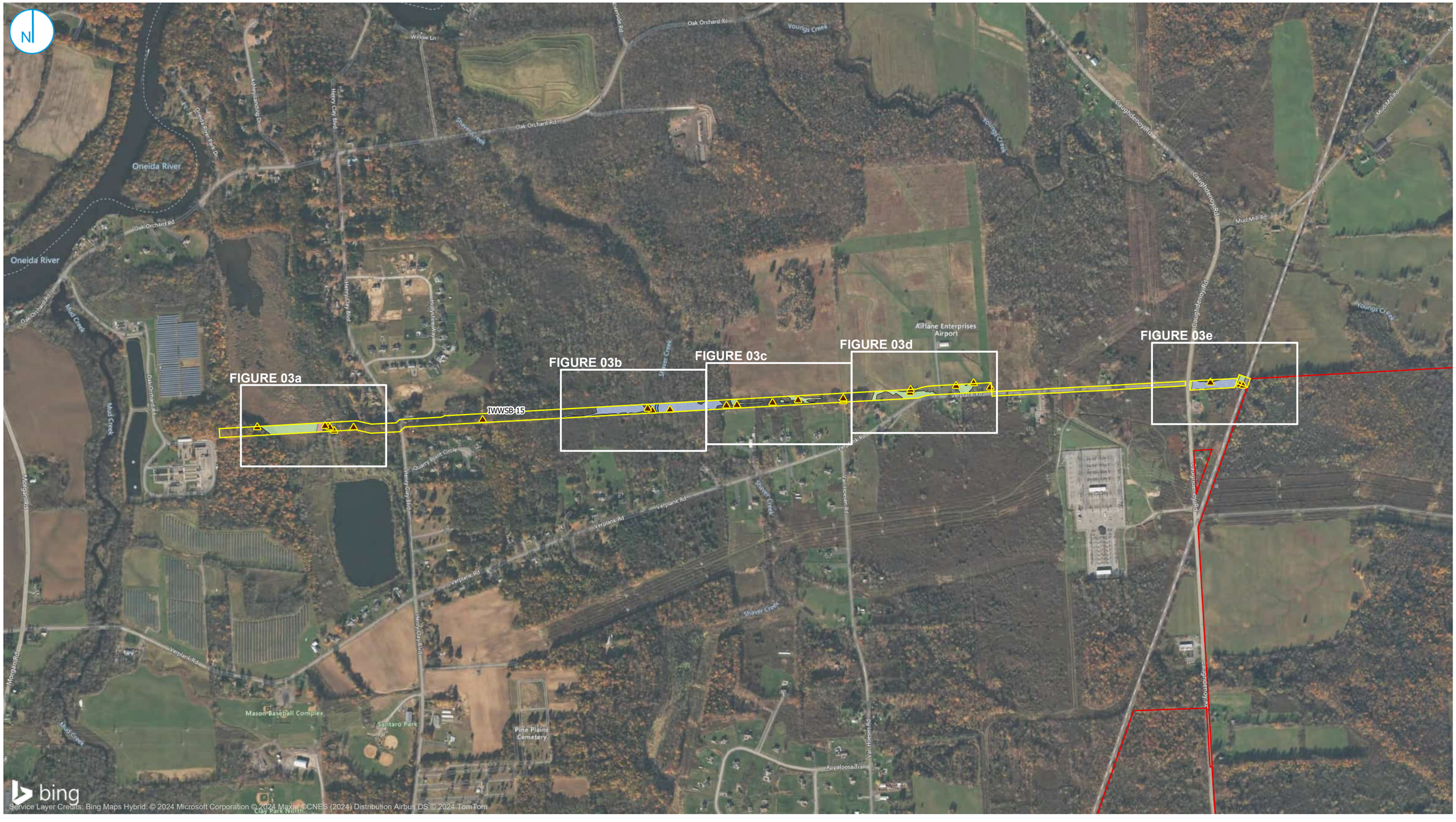

Soil Boring
Shavers Creek
Delineated Wetland Cover Type
PEM
PFO
PSS

Force Main ROW
Micron Main Campus

0 500 1,000 Feet

Notes
- Force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION
COVER TYPES

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 03

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PROJECT: 1950100687 | DATED: 11/5/2024 | DESIGNER: SSOULE

Soil Boring

Delineated Wetland Cover Type

- PEM
- PFO
- PSS

Force Main ROW

Property Line

0 50 100 Feet

Notes

- Property lines and force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION
COVER TYPES

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 03a

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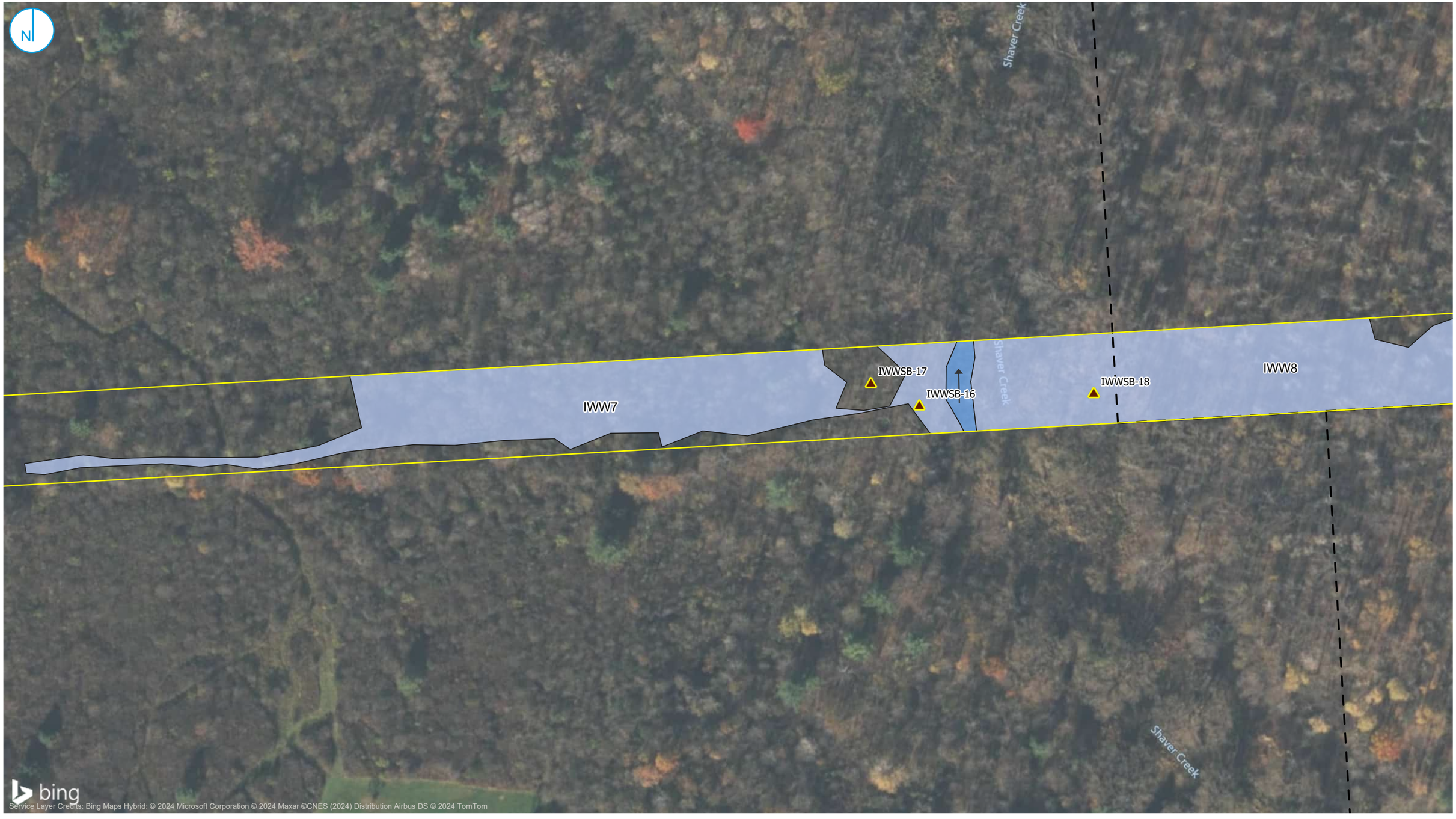

Soil Boring
Shavers Creek Flow Direction
Delineated Wetland Cover Type
PEM
PFO
PSS
0 50 100 Feet

Shavers Creek
Force Main ROW
Property Line

Notes
- Property lines and force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION
COVER TYPES

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 03b

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
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RAMBOLL

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PROJECT: 1950100687 | DATED: 11/5/2024 | DESIGNER: SSOULE

Soil Boring

Delineated Wetland Cover Type
- PEM
- PFO
- PSS

Force Main ROW

Property Line

0 50 100 Feet

Notes
- Property lines and force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION
COVER TYPES

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 03c

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

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PROJECT: 1950100687 | DATED: 11/5/2024 | DESIGNER: SSOULE

Soil Boring
Culvert
Ditch Flow Direction

Delineated Wetland Cover Type
PEM
PFO
PSS
Force Main ROW
Property Line

0 50 100 Feet

Notes
- Property lines and force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION
COVER TYPES

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 03d

RAMBOLL AMERICAS
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PROJECT: 1950100687 | DATED: 11/5/2024 | DESIGNER: SSOULE

Soil Boring

Delineated Wetland Cover Type
- PEM
- PFO
- PSS

Force Main ROW

Property Line

Micron Main Campus

0 50 100 Feet

Notes
- Property lines and force main ROW from Thew Associates Land Surveyors 10/18/2024.

IWW WETLAND DELINEATION
COVER TYPES

Micron Campus
Town of Clay
Onondaga County, New York

FIGURE 03e

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Attachment G

HABITAT ASSESSMENT RARE, THREATENED, AND ENDANGERED SPECIES REPORT

Oak Orchard Wastewater Treatment Plant Expansion
4300 Oak Orchard Road
Clay, New York 13041

CHA Project Number: 090316.000

July 2025

Prepared for:
Onondaga County Department of Water Environmental Protection
650 Hiawatha Blvd. West
Syracuse, NY 13204

Prepared by:
CHA Consulting, Inc.
3 Winners Circle
Albany, NY 12205
Phone: (518) 453-4500

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SIGNATURE PAGE

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Senior Scientist V

Report Reviewed By:

Nicole E. Frazer
Principal Scientist

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LIST OF ACRONYMS & ABBREVIATIONS

CHA	CHA Consulting, Inc.
D-key	Determinations Key
DBH	Diameter at Breast Height
IPaC	Information for Planning and Consultation
NHP	Natural Heritage Program
NYDEC	New York State Department of Environmental Conservation
OCDWEP	Onondaga County Department of Water Environment Protection
OOWWTP	Oak Orchard Wastewater Treatment Plant
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 INTRODUCTION

1.1 Project Location

The study area is located at the Oak Orchard Wastewater Treatment Plant (OOWWTP) at 4300 Oak Orchard Road in Clay, New York, and consists of developed land and natural and modified ecological communities.

The approximate center-point coordinates of the study area are latitude: 43.202629˚ N.; longitude: -76.210096˚ W. A United States Geological Survey (USGS) and aerial project location map are provided in Appendix A, Figures 1 & 2.

The purpose of this habitat assessment is to document onsite habitat suitability and potential impacts to the rare, threatened and/or endangered species that have been identified by resource agencies as potentially ocurring in the project vicinity.

2.0 PROJECT NEED & DESCRIPTION

The OOWWTP was constructed in 1981. Per the Onondaga County Department of Water Environment Protection (OCDWEP), the proposed project entails upgrading and expanding the OOWWTP to accommodate flow from planned growth in the service area while replacing aging equipment and providing an operator friendly, energy efficient facility.

The project proposes the following:

- OOWWTP liquid upgrades
  - Overhaul of the headworks facility
  - Addition of 2 primary clarifiers
  - Replacement of the high purity oxygen activated sludge secondary process with membrane bioreactor secondary process
  - Replacement of existing chlorination and dichlorination disinfection system
  - Odor control
  - New chemical storage, blower and electrical buildings, ancillary equipment and flow distribution
  - New administration building
- OOWWTP regional biosolids facility
  - Demolition of gravity thickeners
  - High strength waste (HSW) and municipal solids (MS) receiving stations
  - Blend tanks for HSW and trucked in MS.
  - Gravity thickeners for primary sludge (PSL).
  - In-line sludge screening units for PSL.
  - Gravity belt thickeners for waste activated sludge
  - Anaerobic digesters, digested sludge storage tank, and digester heating system.
  - Dewatering centrifuges
  - Sludge dryer
  - Biogas storage, waste gas flares and biogas conditioning
  - Odor control for new thickening/dewatering and dryer buildings.
  - Return pump station
  - New ancillary equipment, electrical rooms/buildings, chemical feed systems, and chemical storage
- New reuse facility

- Recycled water pump station
- Force mains
- Moving bed biofilm reactor bridging project including four storage tanks
- Substation
- Outfall work in the Oneida River

Refer to the Concept Plan in Appendix B for further details.

3.0 METHODOLOGY

3.1 Agency Consultation

The United States Fish and Wildlife Services (USFWS) Information for Planning and Consultation (IPaC) webpage, and the New York Department of Environmental Conservation (NYSDEC) Natural Heritage Program (NHP) were consulted to determine what, if any, critical habitats and/or state or federally protected species exist within the study area. The desktop analysis was used to develop a habitat assessment plan.

The USFWS IPaC Official Species List and NHP response letter are provided in Appendix C.

3.2 Habitat Inventory & Habitat Suitability Assessment

Vegetative communities were described according to Ecological Communities of New York State, Second Edition (Edinger 2014) and the New York Natural Heritage Program Online Conservation Guides.

The habitat suitability assessment was performed in accordance with applicable USFWS and NYSDEC protocols.

4.0 RESULTS

4.1 Agency Comsultation

4.1.1 United States Fish and Wildlife Service

The June 26, 2025 USFWS IPaC Official Species List (Project Code: 2025-0038158) (Appendix C) identified the following results.

4.1.1.1 Mammals

- Indiana bat (*Myotis sodalis*) – endangered
- Northern long-eared bat (*Myotis septentrionalis*) – endangered
- Tricolored bat (*Perimyotis subflavus*) – proposed endangered

4.1.1.2 Insects

- Monarch butterfly (*Danaus plexippus*) – proposed threatened

4.1.1.3 Critical Habitats

- There are no critical habitats within the study area under USFWS jurisdiction.

On July 10, 2025 the project was run through the IPaC Northeast Endangered Species Determination Key (D-key) and the Northern Long-eared Bat and Tricolored Bat Range-wide D-

key to develop Technical Assistance Letters (provided under Appendix C). The conclusions of those letters are provided below.

4.1.1.4 Mammals

- Indiana bat (*Myotis sodalis*) – May Affect
  - **Consultation with the Service is not complete**. Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of "May Affect". Please contact our New York Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats.
- Northern long-eared bat – Not Likely to Adversely Affect
  - **Consultation with the Service is necessary**. The project has a federal nexus (Federal permit), but you are not the federal action agency or its designated (in writing) non-federal representative. Therefore, the ESA consultation status is incomplete, and no project activities should occur until consultation between the Service and the Federal action agency (or designated non-federal representative), is completed. As the federal agency or designated non-federal representative deems appropriate, they should submit their determination of effects to the Service.
- Tricolored bat – Not Likely to Adversely Affect
  - **Consultation with the Service is necessary**. The project has a federal nexus (Federal permit), but you are not the federal action agency or its designated (in writing) non-federal representative. Therefore, the ESA consultation status is incomplete, and no project activities should occur until consultation between the Service and the Federal action agency (or designated non-federal representative), is completed. As the federal agency or designated non-federal representative deems appropriate, they should submit their determination of effects to the Service.

4.1.1.5 Insects

- Monarch butterfly – not evaluated/D-key not available.
  - Did not run through Step 3 (Analyze Project) because a No Jeopardy/No Effect affect is anticipated.

4.1.2 NYSDEC Natural Heritage Program

The February 21, 2025 NHP response (Appendix C) identified the following species in the project vicinity.

4.1.2.1 Mammals

- Indiana bat (*Myotis sodalis*) – endangered – maternity colony within 2.5 miles and the main impact of concern is the cutting or removal of potential roost trees.

4.1.2.2 Birds

- Pied-billed grebe (*Podilymbus podiceps*) – threatened – breeding.
- Bald eagle (*Haliaeetus leucocephalus*) – threatened – breeding.

4.1.2.3 Fish

- Lake sturgeon (*Acipenser fluvescens*) - threatened

4.1.2.4 Plants

- Hairy small-leaved tick trefoil (*Desmodium ciliare*) – threatened – documented within 200 yards northeast of the project site.

4.2 Habitat Inventory

A site visit was conducted on March 25, 2025 to inventory the ecological communities of the study area. Based on those data, we evaluated the habitats of the study area to support the listed species.

A total of eleven (11) land cover types exist within the study area. Representative photographs of the study area are presented in Appendix D.

4.2.1 Shallow Emergent Marsh (Appendix D, Photographs 1 & 10)

This community occurs along the outer edges of Mud Creek. Cattail (*Typha spp.*) and other hydrophytic grasses, rushes and sedges form relatively contiguous cover, and water depths are three feet or less.

4.2.2 Red Maple Hardwood Swamp (Appendix D, Photographs 1, 3, 5, 6, 7, 8 & 9)

Wetlands 1, 3, 4, 5 (Appendix E) are dominated by red maple hardwood swamp. These forested mineral soil wetlands vary in their successional state. Canopy dominants and co-dominants include red maple (*Acer rubrum*), cottonwood (*Populus deltoides*), oaks (*Quercus spp.*), and European buckthorn (*Rhamnus cathartica*). Tree species occurring at lower abundance include shagbark hickory (*Carya ovata*), American elm (*Ulmus americana*), gray birch (*Betula populifolia*) and eastern hemlock (*Tsuga canadensis*).

4.2.3 Vernal Pool (Appendix D, Photographs 3, 4 & 5)

Vernal pool habitat occurs within Wetland 1. This area of forested wetland was observed to have approximately eight inches of standing water at the time of the site visit. Trees and occasional shrubs are present on hummocks. No amphibian egg masses were observed during the site visit.

4.2.4 Intermittent Stream (Appendix D, Photographs 11, 12, 13 & 14)

Streams 001 (intermittent), 002 (ephemeral) and 003 (intermittent) are small intermittent to ephemeral streams that have formed because of drainage flows within or from wetlands. Flow is seasonal or in response to rainfall and runoff. These small streams have moderately defined bed and banks and bankfull depth (bfd) is less than a foot. Water depths are only a few inches. Substrates are mineral soils. These small streams are unlikely to support fish.

4.2.5 Unconfined River (Appendix D, Photographs 1, 15, 16, 17 & 18)

Stream 004 (Mud Creek) is an unconfined river on a gentle gradient with a wide, well-developed channel. Its substrate is composed of gravel, sand, silt and clay. Submerged and emergent aquatic vegetation is present within the stream and along its banks.

Stream 005 (Oneida River) is a large unconfined river with well-developed banks and a gentle gradient. Its substrate consists of cobble, gravel, silt, sand and clay. Aquatic vegetation was not observed during the site visit. Water depths at this location are unknown but were observed to be shallow at the outfall.

4.2.6 Sewage Treatment Pond (Appendix D, Photograph 26)

The onsite sewage treatment ponds are man-made features. Emergent wetland plants occur along the shallower edges of the ponds, and submerged aquatic vegetation is scattered throughout each pond.

4.2.7 Mowed Lawn with Trees (Appendix D, Photographs 10 & 31)

This community is associated with the regularly mowed areas within the wastewater treatment plant property. It is dominated by turf grasses and common forbs such as common dandelion (*Taraxacum officinale*) and English plantain (*Plantago lanceolata*).

4.2.8 Successional Old Field (Appendix D, Photograph 19 & 20)

The successional old field habitats occur between developed areas and undeveloped areas and were likely cleared in the recent past or are periodically maintained/mowed to preclude shrubs and trees from forming significant cover. Grasses and forbs are dominant, and scattered shrubs such as silky dogwood (*Cornus amomum*) and European buckthorn are present. Several areas were observed to support small patches or individual milkweed (*Asclepias spp*.) plants.

4.2.9 Successional shrubland (Appendix D, Photograph 32)

This community type generally occurs between the mowed lawn or successional old field communities and adjacent forested habitats. Shrubs are dominant and constitute at least 50 percent cover. Species typically observed include silky dogwood, gray dogwood (*Cornus racemosa*), European buckthorn, ash (*Fraxinus sp.*) and red maple (*Acer rubrum*). Herbaceous cover is limited due to the dense shrub canopy.

4.2.10 Successional Southern Hardwoods (Appendix D, Photographs 12 & 13)

The majority of the upland forests of the study area are composed of densely-vegetated successional southern hardwoods. Dominant trees include European buckthorn, red maple, black cherry (*Prunus serotina*), cottonwood (*Populus deltoides*) and oaks (*Quercus spp.*). Shrub cover is relatively dense and composed of European buckthorn, gray dogwood, silky dogwood, and young growth of the trees present. Scattered forbs are present.

4.2.11 Paved road/path (Appendix D, Photograph 31)

Paved road/path community type is associated with the paved roads and paths throughout the study area. This classification refers to habitats that are heavily modified or created by human activity, where natural ecological processes are significantly altered.

5.0 HABITAT SUITABILITY ASSESSMENT

The sections below discuss the habitat requirements and onsite habitat suitability for each species.

5.1 Indiana Bat

According to the USFWS:

> *Indiana bats require forests for foraging and roosting and are found in forested areas in the eastern half of the United States. In winter, Indiana bats hibernate in caves and mines. In spring, reproductive females migrate from hibernacula and form maternity colonies in wooded areas where each female bears a single pup that is raised within the colony. Females return to the same colony every summer. Maternity habitat ranges from areas that are completely forested to highly fragmented forest. Summer roosts are typically behind exfoliating bark of large, often dead, trees. Both males and females return to hibernacula in late summer or early fall to mate and enter hibernation.*
>
> *In summer, most reproductive females occupy roost sites in forested areas under the exfoliating bark of dead or dying trees that retain large, thick slabs of peeling bark. Primary roosts usually receive direct sunlight for more than half the day. Roost trees are often within canopy gaps in a forest, in a fenceline, or along a wooded edge. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands and upland communities. Indiana bats typically forage in semi-open to closed forested habitats with open understory, forest edges, and riparian areas. Adult males occupy similar habitats but can use a wider range of roosts compared to females.*

No caves, mines or other potential hibernating structures were observed within the study area. Therefore, the project is expected to have no effect on potential hibernacula.

Potential Indiana bat roosting habitat is present throughout the study area where deciduous trees occur. Specifically, shagbark hickories with loose exfoliating bark, snags with peeling bark and cavities, and some live trees with cracks and crevices are present scattered throughout the study area. These provide potential roosting structure for Indiana bats, and observed canopies would not greatly preclude flight to/from these areas. Tree removals will be completed in the winter between November 1 and March 31 when the bats are hibernating. A May Affect determination has been developed through the use of the USFWS D-key.. Therefore, further coordination with the USFWS will be necessary to discuss methods to avoid or minimize potential adverse effects.

5.2 Northern Long-Eared Bat

According to the USFWS:

> *The Northern long-eared bat spends the winter hibernating in caves and mines. During summer, the northern long-eared bat roosts singly or in colonies underneath exfoliating or loose bark, in cavities, and in crevices of both live and dead trees. Males and non-reproductive females may also roost in cooler places, like caves and mines. This species seems opportunistic in selecting roosts, using tree species based on suitability to retain bark or provide cavities or crevices. They have also been found, rarely, roosting in structures like barns and sheds.*
>
> *Suitable summer habitat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old*

fields, and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches diameter at breast height (dbh) that have exfoliating bark, cracks, crevices, and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1000 feet of another forested/wooded habitat. The northern long-eared bat has also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat boxes; therefore, these structures should also be considered potential summer habitat (trees found in highly developed urban areas (e.g., street trees, downtown areas) are extremely unlikely to be suitable habitat). Northern long-eared bats typically occupy their summer habitat from mid-May through mid-August each year (dates vary by location) and the species may arrive or leave some time before or after this period.

No caves, mines or other potential hibernating structures were observed within the study area. Therefore, the project is expected to have no effect on potential hibernacula.

Potential northern long-eared bat roosting habitat is present throughout the study area where deciduous trees occur. Specifically, shagbark hickories with loose exfoliating bark, snags with peeling bark and cavities, and some live trees with cracks and crevices are present scattered throughout the study area. These provide potential roosting structure for northern long-eared bats, and observed canopies would not greatly preclude flight to/from these areas. Tree removals will be completed in the winter between November 1 and March 31 when the bats are hibernating. A Not Likely to Adversely Affect determination has been developed through the use of the USFWS D-key. Upon permit application submittal, the USACE will need to coordinate with the USFWS to finalize consultation.

5.3 Tricolored Bat

According to the USFWS:

During the spring, summer and fall - collectively referred to as the non-hibernating seasons - tricolored bats primarily roost among live and dead leaf clusters of live or recently dead deciduous hardwood trees. In the southern and northern portions of the range, tricolored bats will also roost in Spanish moss (Tillandsia usneoides) and Usnea trichodea lichen, respectively. In addition, tricolored bats have been observed roosting during summer among pine needles, within artificial roosts like barns, beneath porch roofs, bridges, concrete bunkers, and rarely within caves. Female tricolored bats exhibit high site fidelity, returning year after year to the same summer roosting locations. Female tricolored bats form maternity colonies and switch roost trees regularly. Males roost singly.

During the winter, tricolored bats hibernate - which means that they reduce their metabolic rates, body temperatures and heart rate - in caves and mines; although, in the southern United States, where caves are sparse, tricolored bats often roost in road-associated culverts and trees and remain active and feed throughout winter. Tricolored bats exhibit high site fidelity with many individuals returning year after year to the same hibernaculum.

No caves, mines or other potential hibernating structures were observed within the study area. Therefore, the project is expected to have no effect on potential hibernacula.

Potential tricolored bat roosting habitat is present throughout the study area where deciduous trees occur. Tree and woody vegetation removals will be completed in the winter between

November 1 and March 31 when the bats are hibernating. A Not Likely to Adversely Affect determination has been developed through the use of the USFWS D-key. Upon permit application submittal, the USACE will need to coordinate with the USFWS to finalize consultation.

5.4 Monarch Butterfly

According to the USFWS:

> *Within the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily Asclepias spp.), and larvae emerge after two to five days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic cardenolides as a defense against predators. The larva then pupates into chrysalis before enclosing 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately two to five weeks; overwintering adults enter reproductive diapause (suspended reproduction) and live six to nine months.*

Significant concentrations of milkweed do not occur within the study area. Randomly scattered common milkweed (*Asclepias syriaca*) plants were observed in low abundance in the successional old field communities. Therefore, it is anticipated that the proposed work would have No Jeopardy/No Effect on this species. Upon permit application submittal, the USACE will need to coordinate with the USFWS to finalize consultation.

5.5 Pied-Billed grebe

According to the NHP:

> *Pied-billed Grebes inhabit quiet marshes, marshy shorelines of ponds, shallow lakes, or marshy bays and slow moving streams with sedgy banks or adjacent marshes; rarely in brackish marshes with limited tidal fluctuation. Although plant species in breeding marshes may vary, a 50/50 combination ("hemi- marsh") of emergent vegetation interspersed with open water is desirable (Andrle and Carroll 1988). Grebes avoid dense emergent vegetation, and muskrats appear to play an important role in opening up dense cattail stands and providing cut stalks for nest construction. Ideal water depths for nesting range from 25 to 50 cm (Seyler 2003). Grebes set up breeding territories more commonly in wetlands impounded by beavers or humans than in those of glacial origin, and individual pairs appear to favor wetlands of intermediate size (0.6 - 7.0 ha) over very large or small wetlands (Gibbs and Melvin 1992).*

Potential pied-billed grebe breeding/nesting habitat occurs in Mud Creek and its fringe hemi-marsh emergent wetland. The onsite sewage treatment lagoons provide foraging or transient habitat for pied-billed grebe, but the lagoons won't be used for nesting. No other habitats onsite provide pied-billed grebe habitat. An impact to pied-billed grebe is not anticipated to result from the project because the ideal nesting habitat will not be disturbed for the project. Temporary noises during construction will likely be negligible in terms of disrupting nesting if they are nesting nearby.

5.6 Lake Sturgeon

According to the NHP:

> *Lake Sturgeon live in lakes and large rivers, primarily at depths of 5-10 meters and they prefer a mud, sand, or gravel substrate. Spawning in rivers occurs at shallower depths in areas with swift current, waterfalls, or rapids where the fish cannot migrate upstream, with a range of substrate such as gravel, boulders, or hard-pan clay. Spawning in lakes occurs*

on rocky edges or shoals with wave action. For their first year, young fish form large schools over gravel and sand bar areas (Holst 2023).

The outlet structure is on the bank of the Oneida River. Water depths at this location are unknown but were observed to be shallow at the outfall. A cobble gravel substrate is present in the immediate vicinity of the outfall. The preferred habitat for spawning (rocky edges or shoals with wave action) is not present at the outfall. An impact to lake sturgeon from the project is not anticipated due to a lack of spawning habitat.

5.7 Hairy Small-Leaved Tick Trefoil

According to the NHP:

In New York, Desmodium ciliare has been found in a variety of dry, open habitats, including oak openings, openings and roadsides within pitch-pine forests, and sandy or rocky summit grasslands (New York Natural Heritage Program 2010). Dry sandy woods and clearings (Fernald 1950). Dry, often sandy soil (Gleason 1952).

Dry open habitats and sandy soils are not present. The ecological communities present are not reflective of the habitats where this species is found. Therefore it is unlikely that hairy small-leaved tick trefoil is present or would be impacted by the proposed project.

6.0 CONCLUSIONS

The proposed habitat modifications will result in a loss of potential wildlife habitat.

Regarding bats, removal of trees will not occur within 150 feet of a known occupied maternity roost tree or from within 0.25 mile of a hibernaculum, and the project schedule should allow for the time of year tree cutting restrictions. Further coordination with the USFWS will be required for the Indiana bat, northern long-eared bat and tricolored bat due to the effects determinations. Coordination can be conducted during the permitting process; however, pre-permitting coordination relating to Indiana bat is recommended to identify project limitations and additional studies that may be required.

Significant impacts to monarch butterfly, lake sturgeon and pied-billed grebe are not anticipated due to a general lack of suitable habitat within the study area. Hairy small-leaved tick trefoil habitat is not present, so impacts and species-specific surveys do not appear warranted. Further, adherance to erosion and sediment control practices will prevent indirect impacts to water quality and associated fish and wildlife within aquatic systems.

7.0 REFERENCES

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APPENDIX A

Ecological Resource Mapping Figures

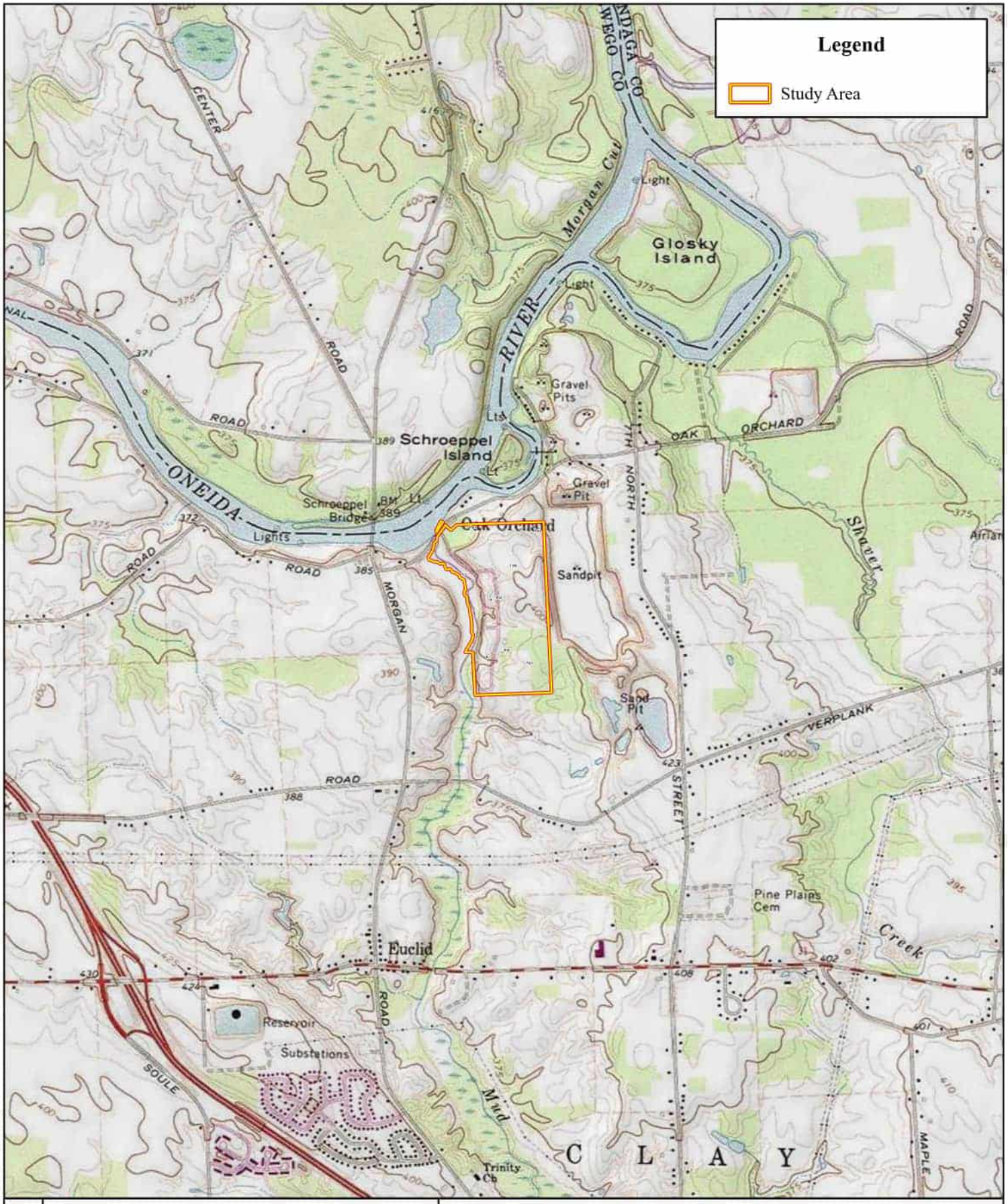

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Figure 1. USGS Project Location Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

Scale 1" = 2000'

CHA Project No. 090316.000

Copyright:© 2013 National Geographic Society, i-cubed, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS.
USGS Brewerton NY (2019) Quadrangle.

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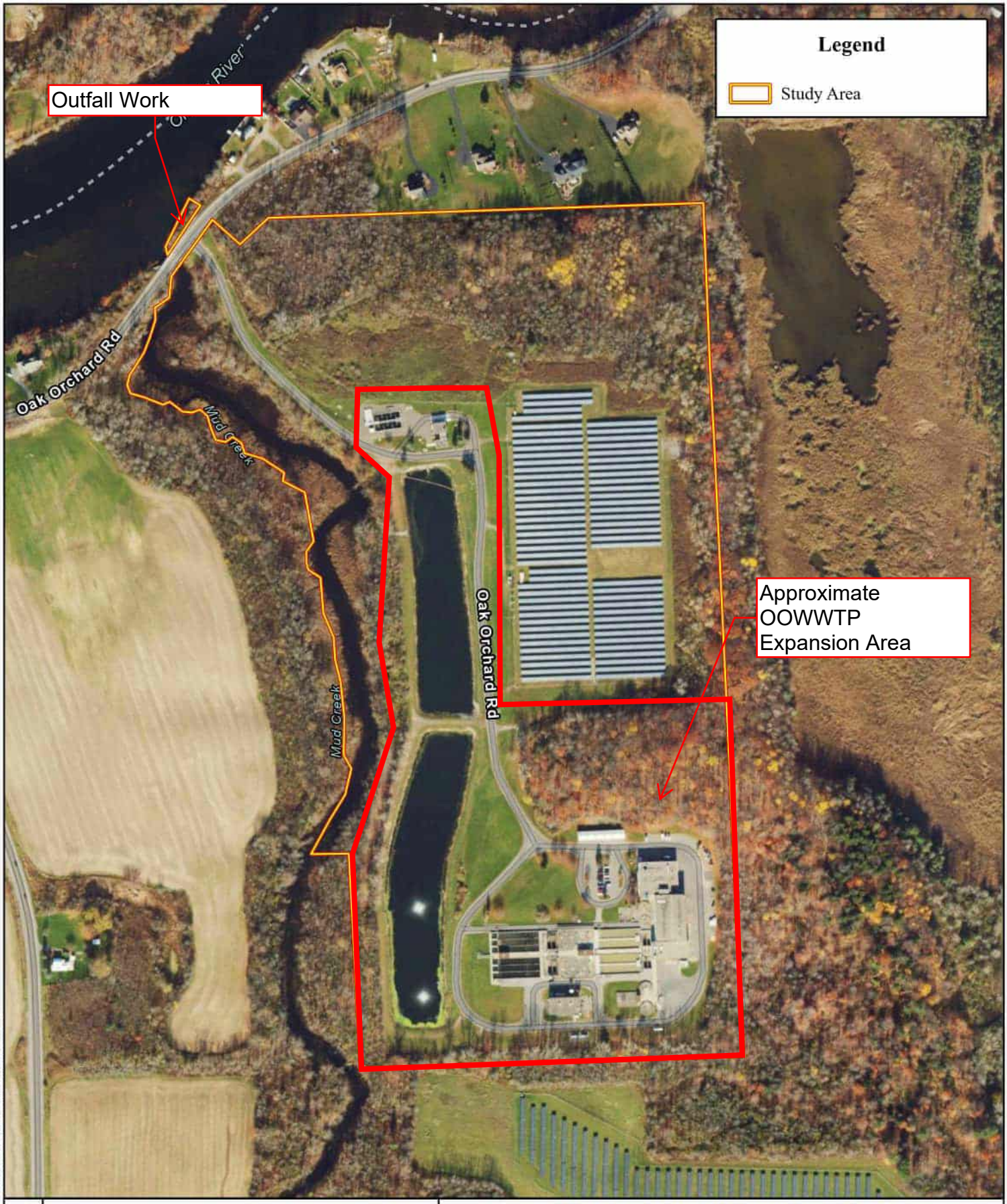

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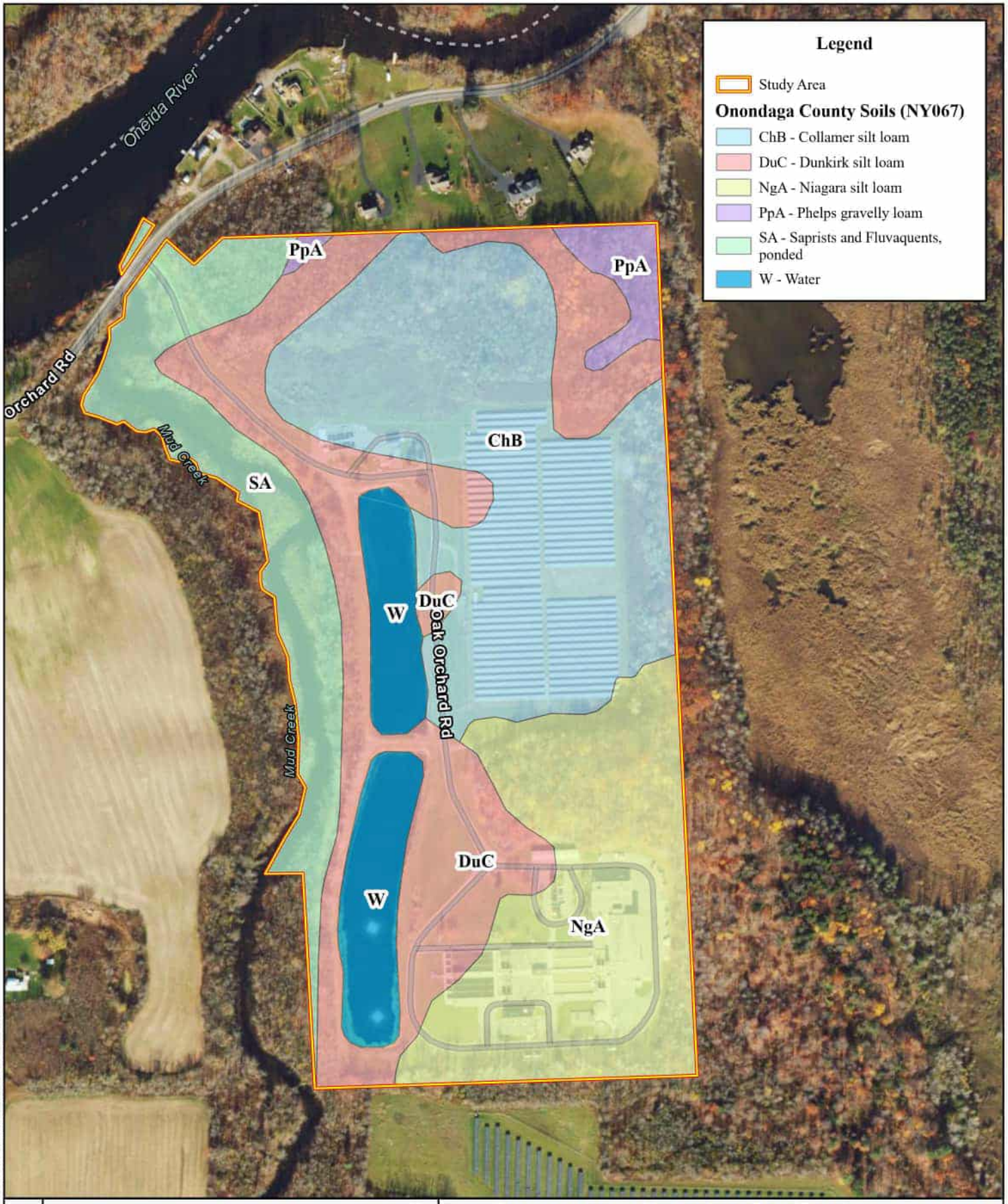
Scale 1" = 400'

CHA Project No. 090316.000

Figure 2. Aerial Location Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

Source: Esri, USDA FSA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS



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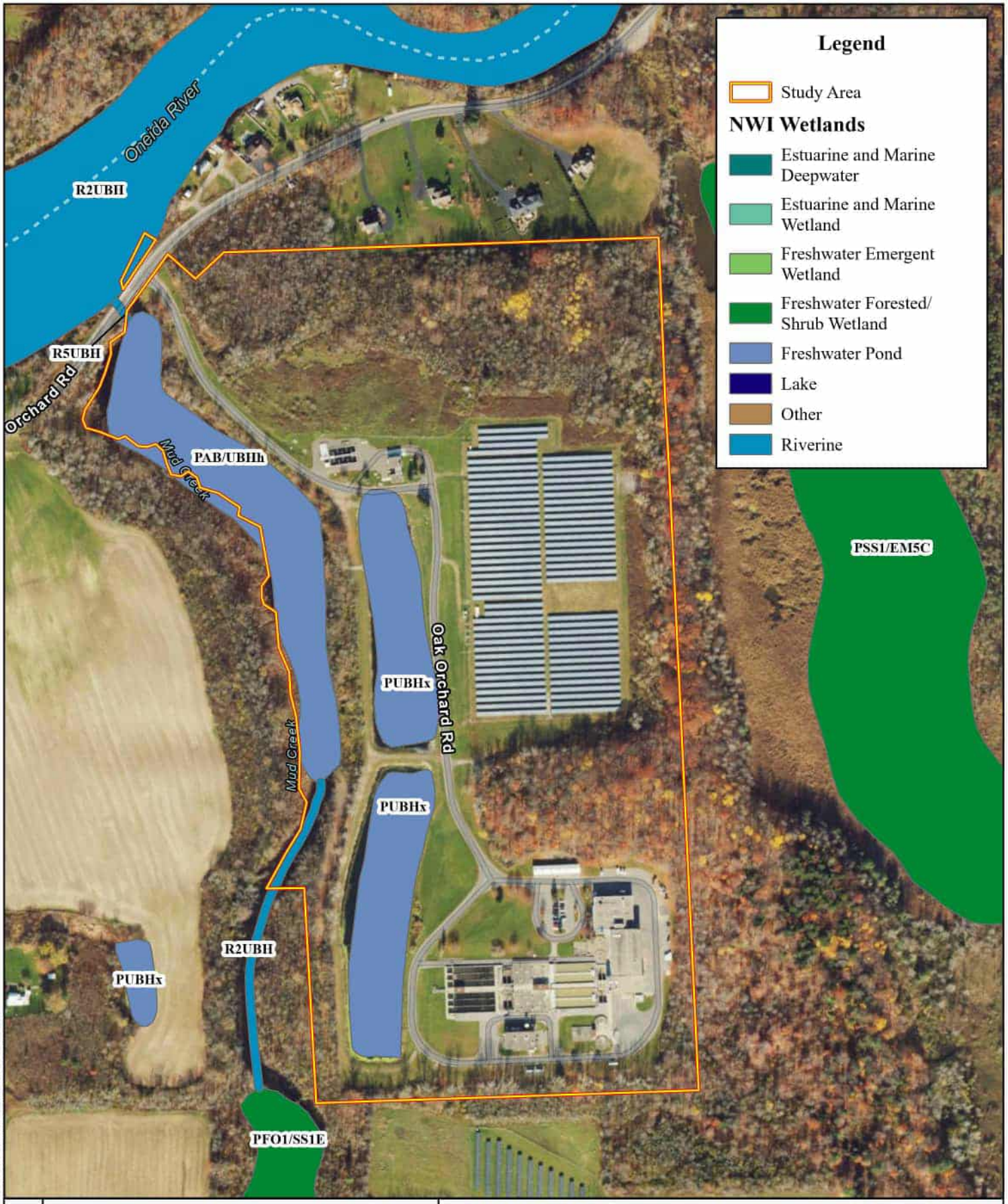
Scale 1" = 400'

CHA Project No. 090316.000

Figure 3. NRCS Soils Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

Source: Esri, USDA FSA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS. Soils courtesy of the Natural Resource Conservation Service.



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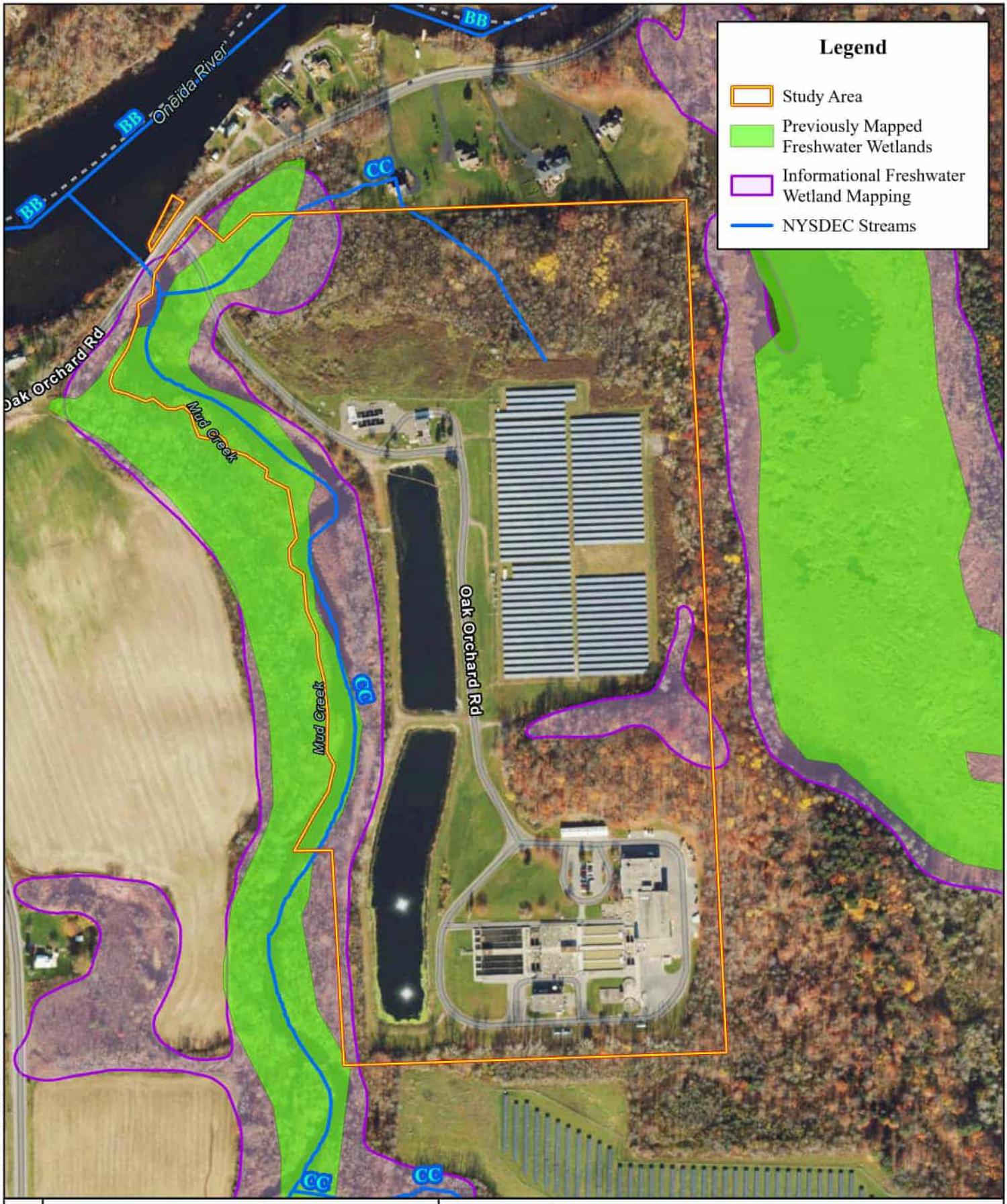
Scale 1" = 400'

CHA Project No. 090316.000

Figure 4. National Wetlands Inventory (NWI) Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

Source: Esri, USDA FSA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS. Wetlands courtesy of the USFWS NWI



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Scale 1" = 400'

CHA Project No. 090316.000

Figure 5. NYSDEC Aquatic Resources Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

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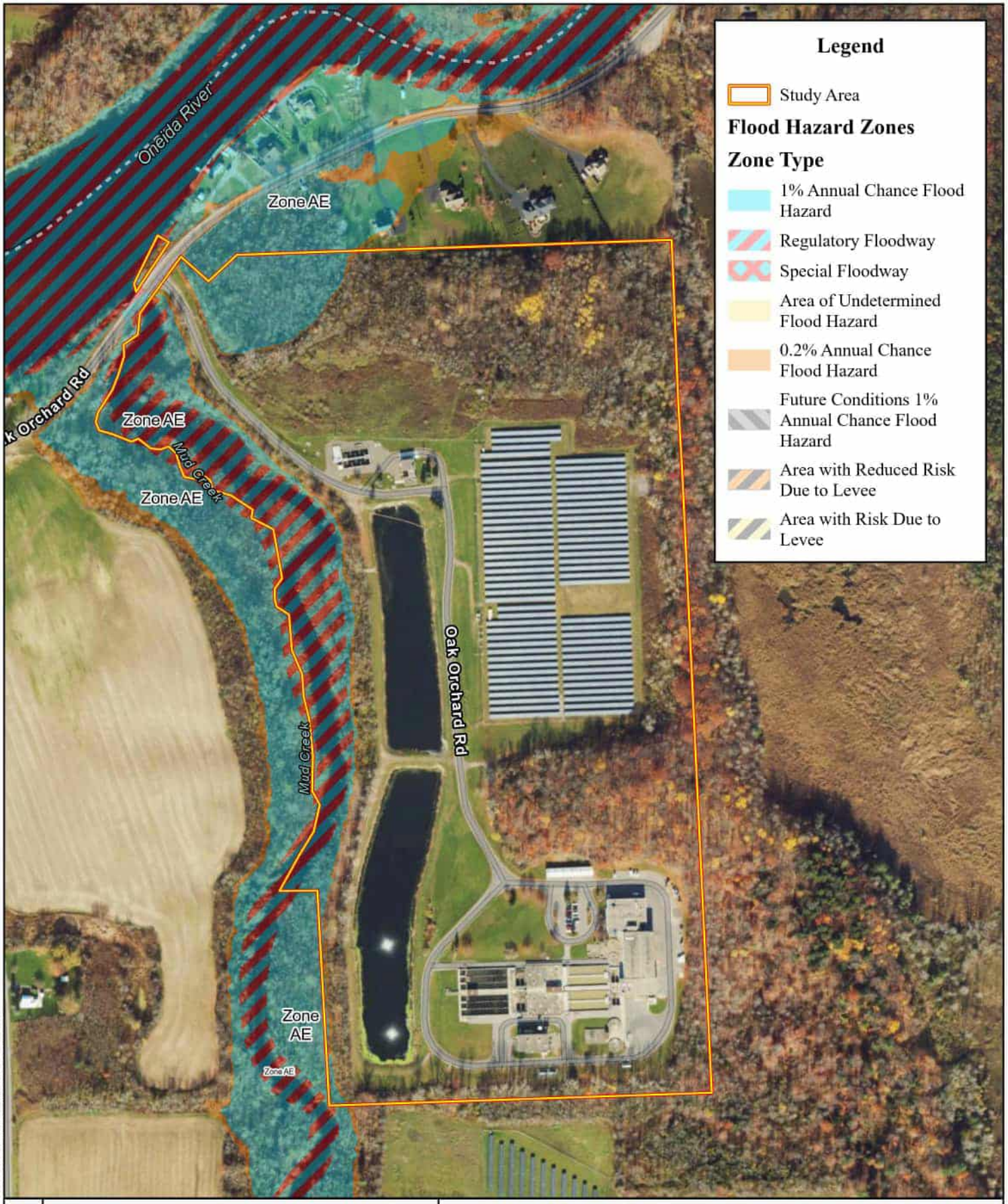

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Scale 1" = 400'

CHA Project No. 090316.000

Figure 6. FEMA Flood Zone Map

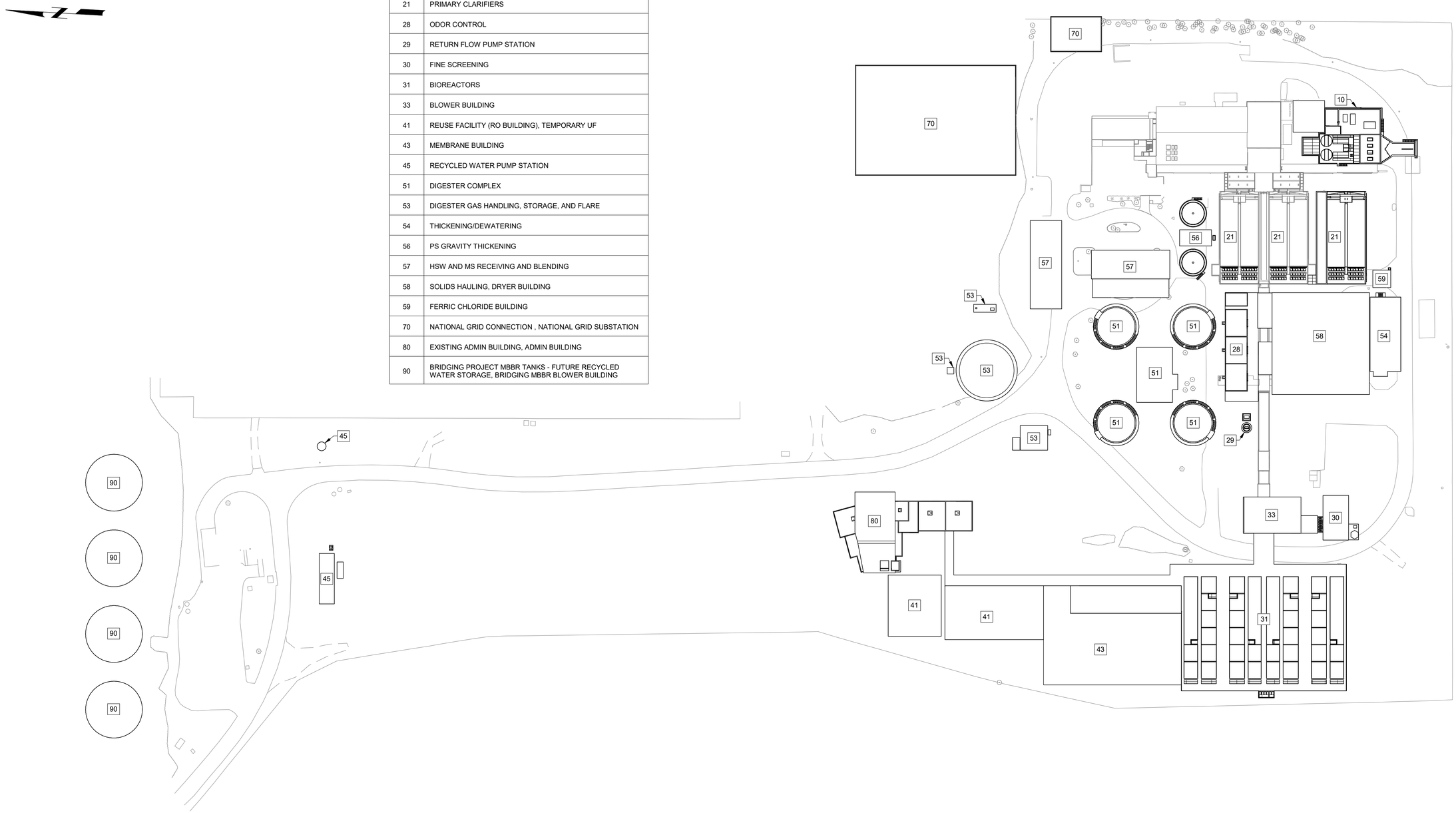
Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

Source: Esri, USDA FSA, Federal Emergency Management Agency (FEMA), Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS. Flood zones courtesy of the Federal Emergency Management Agency.

APPENDIX B

Concept Plan

AREA CODE	AREAS
10	HEADWORKS
21	PRIMARY CLARIFIERS
28	ODOR CONTROL
29	RETURN FLOW PUMP STATION
30	FINE SCREENING
31	BIOREACTORS
33	BLOWER BUILDING
41	REUSE FACILITY (RO BUILDING), TEMPORARY UF
43	MEMBRANE BUILDING
45	RECYCLED WATER PUMP STATION
51	DIGESTER COMPLEX
53	DIGESTER GAS HANDLING, STORAGE, AND FLARE
54	THICKENING/DEWATERING
56	PS GRAVITY THICKENING
57	HSW AND MS RECEIVING AND BLENDING
58	SOLIDS HAULING, DRYER BUILDING
59	FERRIC CHLORIDE BUILDING
70	NATIONAL GRID CONNECTION , NATIONAL GRID SUBSTATION
80	EXISTING ADMIN BUILDING, ADMIN BUILDING
90	BRIDGING PROJECT MBBR TANKS - FUTURE RECYCLED WATER STORAGE, BRIDGING MBBR BLOWER BUILDING



1 PLAN
SCALE: 1" = 80'-0"

REV	DATE	BY	DESCRIPTION
			25% DESIGN SUBMITTAL NOT FOR CONSTRUCTION

DESIGNED Designer
DRAWN Author
CHECKED Checker
DATE SUBMITTAL DATE

carollo®

Onondaga County Department of WATER ENVIRONMENT PROTECTION

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION
OOWWTP EXPANSION PROGRAM - UPGRADES AND BIOSOLIDS FACILITY
GENERAL
SITE PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 203580
DRAWING NO. 00G07
SHEET NO. OF XX

PLOT DATE: 6/10/2025 9:51:21 PM

FILE NAME: Autodesk Docs://OCDWEP 203580/00-G-3D-101.rvt

APPENDIX C

Rare, Threatened, and Endangered Species Consultation

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: 07/10/2025 12:07:57 UTC
Project code: 2025-0038158
Project Name: Oak Orchard WWTP

Federal Nexus: yes
Federal Action Agency (if applicable): Army Corps of Engineers

Subject: Technical assistance for 'Oak Orchard WWTP'

Dear John Greaves:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 10, 2025, for “Oak Orchard WWTP” (here forward, Project). This project has been assigned Project Code 2025-0038158 and all future correspondence should clearly reference this number.

The Service developed the IPaC system and associated species’ determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northeast Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative effect(s)), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17). Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no further consultation with, or concurrence from, the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical

habitat, formal consultation is required (except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect (NLAA)" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13]).

The IPaC results indicated the following species is (are) potentially present in your project area and, based on your responses to the Service's Northeast DKey, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Indiana Bat (*Myotis sodalis*)	Endangered	May affect

Consultation with the Service is not complete. Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of "May Affect". Please contact our New York Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference the Project Code associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Oak Orchard WWTP

2. Description

The following description was provided for the project 'Oak Orchard WWTP':

> Upgrades to an existing wastewater treatment facility.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.2015549,-76.20989018622964,14z

QUALIFICATION INTERVIEW

1. As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully?

   Yes

2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

   Note: This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

   No

3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project?

   No

5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

   Note: If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

   Yes

6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

   No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

   No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

9. Is the lead federal action agency the Natural Resources Conservation Service?

   No

10. Will the proposed project involve the use of herbicide where listed species are present?

    No

11. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

    No

12. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **birds** (e.g., plane-based surveys, land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

    Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

    No

13. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **bats** (e.g., plane-based surveys, land-based or offshore wind turbines)?

    Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

    No

14. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

    For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

    No

15. Will the proposed project affect wetlands where listed species are present?

    This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

    No

16. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

    Yes

17. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?

    Yes

18. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

    No

19. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

    No

20. Will the proposed project involve the removal of excess sediment or debris, dredging or in-stream gravel mining where listed species may be present?

    Yes

21. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

    Note New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

    No

22. Will the proposed project involve perennial stream loss, in a stream of tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

    No

23. Will the proposed project involve blasting where listed species may be present?

    No

24. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

    No

25. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

    Note: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream.

    No

26. Will the proposed project impact streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography?

    No

27. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

    No

28. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

    Yes

29. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

    No

30. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?

    Automatically answered
    No

31. [Semantic] Does the project intersect the Indiana bat AOI?

    Automatically answered
    Yes

32. Is the action area within 0.5 mile radius of any known hibernacula (caves or mines) openings or underground features?

    Note: If you are unsure, contact the appropriate Ecological Services Field Office before continuing through the key.

    No

33. Are trees present within the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter), answer "Yes". If you are unsure, answer “Yes.” Or refer to Appendix A of the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines for definitions and an assessment form that will assist you in determining if suitable habitat is present within your project's action area. Suitable summer habitat for Indiana bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter) that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat

    Yes

34. Is the action area within known occupied Indiana bat habitat? Known occupied Indiana bat habitat includes established conservation buffers (10-mile buffer around Phase 1 or Phase 2 hibernacula, 5-mile buffer around Phase 3 or Phase 4 hibernacula; 5-mile buffer around Indiana bat captures or detections; 2.5-mile buffer around known roosts).

    Yes

35. [Semantic] Does the project intersect the Indiana bat critical habitat?

    Automatically answered
    No

36. [Semantic] Does the project intersect the candy darter critical habitat?

    Automatically answered
    No

37. [Semantic] Does the project intersect the diamond darter critical habitat?

    Automatically answered
    No

38. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?

    Automatically answered
    No

39. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

    Automatically answered
    No

40. Do you have any other documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

1. Approximately how many acres of trees would the proposed project remove?

   2.7

2. Approximately how many total acres of disturbance are within the disturbance/ construction limits of the proposed project?

   20

3. Briefly describe the habitat within the construction/disturbance limits of the project site.

   A mixture of mowed lawn/developed areas, wastewater treatment lagoons, red maple hardwood swamp with vernal pool habitats, and edge habitats composed of successional shrubland, successional northern hardwoods, and thin bands of successional old field.

IPAC USER CONTACT INFORMATION

Agency: County of Onondaga
Name: John Greaves
Address: III Winners Circle
City: Albany
State: NY
Zip: 12205
Email jgreaves@chacompanies.com
Phone: 5184538251

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

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: 07/10/2025 12:22:38 UTC
Project code: 2025-0038158
Project Name: Oak Orchard WWTP

Federal Nexus: yes
Federal Action Agency (if applicable): Army Corps of Engineers

Subject: Technical assistance for 'Oak Orchard WWTP'

Dear John Greaves:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 10, 2025, for 'Oak Orchard WWTP' (here forward, Project). This project has been assigned Project Code 2025-0038158 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements may not be complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid. Note that conservation measures for northern long-eared bat and tricolored bat may differ. If both bat species are present in the action area and the key suggests more conservative measures for one of the species for your project, the Project may need to apply the most conservative measures in order to avoid adverse effects. If unsure which conservation measures should be applied, please contact the appropriate Ecological Services Field Office***

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based upon your IPaC submission and a standing analysis completed by the Service, your project has reached the following effect determination(s):

Species	Listing Status	Determination
Northern Long-eared Bat (*Myotis septentrionalis*)	Endangered	NLAA
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered	NLAA

Federal agencies must consult with U.S. Fish and Wildlife Service under section 7(a)(2) of the Endangered Species Act (ESA) when an action *may affect* a listed species. Tricolored bat is proposed for listing as endangered under the ESA, but not yet listed. For actions that may affect a proposed species, agencies cannot consult, but they can *confer* under the authority of section 7(a)(4) of the ESA. Such conferences can follow the procedures for a consultation and be adopted as such if and when the proposed species is listed. Should the tricolored bat be listed, agencies must review projects that are not yet complete, or projects with ongoing effects within the tricolored bat range that previously received a NE or NLAA determination from the key to confirm that the determination is still accurate.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Indiana Bat *Myotis sodalis* Endangered
- Monarch Butterfly *Danaus plexippus* Proposed Threatened

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Steps

Consultation with the Service is necessary. The project has a federal nexus (e.g., Federal funds, permit, etc.), but you are not the federal action agency or its designated (in writing) non-federal representative. Therefore, the ESA consultation status is incomplete and no project activities should occur until consultation between the Service and the Federal action agency (or designated non-federal representative), is completed.

As the federal agency or designated non-federal representative deems appropriate, they should submit their determination of effects to the Service by doing the following.

1. Log into IPaC using an agency email account and click on My Projects, click "Search by record locator" to find this Project using **142-164691299**. (Alternatively, the originator of the project in IPaC can add the agency representative to the project by using the Add Member button on the project home page.)

2. Review the answers to the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key to ensure that they are accurate.
3. Click on Review/ Finalize to convert the ‘not likely to adversely affect’ technical assistance letter to a concurrence letter. Download the concurrence letter for your files if needed.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference Project Code 2025-0038158 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Oak Orchard WWTP

2. Description

The following description was provided for the project 'Oak Orchard WWTP':

> Upgrades to an existing wastewater treatment facility.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.2015549,-76.20989018622964,14z

DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered

    No

11. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

    No

12. Will the action cause effects to a bridge?

    Note: Covered bridges should be considered as bridges in this question.

    No

13. Will the action result in effects to a culvert or tunnel at any time of year?

    No

14. Are trees present within 1000 feet of the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

15. Does the action include the intentional exclusion of bats from a building or structure?

    Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

    No

16. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats?**

    No

17. Will the action cause construction of one or more new roads open to the public?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

18. Will the action include or cause any construction or other activity that is reasonably certain to increase average night-time traffic permanently or temporarily on one or more existing roads? **Note:** For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

    No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

20. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

    Note: For information regarding NSF/ANSI 60 please visit https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects

    No

21. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

    No

22. Will the proposed action involve blasting or drilling?

    No

23. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

    No

24. Will the proposed action involve the use of herbicides or other pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

    No

25. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

    Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

26. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

27. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

    Yes

28. Will the proposed action occur exclusively in an already established and currently maintained utility right-of-way?

    No

29. Does the action include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property? See hazard tree note at the bottom of the key for text that will be added to response letters

    Note: A "hazard tree" is a tree that is an immediate threat to lives, public health and safety, or improved property.

    No

30. Does the project intersect with the 0- 9.9% forest density category?

    Automatically answered
    No

31. Does the project intersect with the 10.0- 19.9% forest density category map?

    Automatically answered
    No

32. Does the project intersect with the 20.0- 29.9% forest density category map?

    Automatically answered
    No

33. Does the project intersect with the 30.0- 100% forest density category map?

    Automatically answered
    Yes

34. Will the action cause trees to be cut, knocked down, or otherwise brought down across an area greater than 100 acres in total extent?

    No

35. Will the proposed action result in the use of prescribed fire?

    Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

    No

36. Does the action area intersect the northern long-eared bat species list area?

    Automatically answered
    Yes

37. [Semantic] Is the action area located within 0.5 miles of radius of an entrance/opening to any known NLEB hibernacula? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

38. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

39. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

    Automatically answered
    No

40. [Semantic] Is the action area located within 150 feet of a documented northern long-eared bat roost site?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.Have you contacted the appropriate agency to determine if your action is within 150 feet of any documented northern long-eared bat roosts?

    Note: A document with links to Natural Heritage Inventory databases and other state-specific sources of information on the locations of northern long-eared bat roosts is available here. Location information for northern long-eared bat roosts is generally kept in state natural heritage inventory databases – the availability of this data varies by state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited.

    Automatically answered
    No

41. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?
    If unsure, answer "Yes."

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

42. Are any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming suitable for northern long-eared bat roosting (i.e., live trees and/or snags ≥3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities)?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

43. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Fall Swarming season** for northern long-eared bats in the action area?

    Note: Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines

    No

44. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Spring Staging** season for northern long-eared bats in the action area?

    Note: Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

    No

45. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Summer Occupancy season** for northern long-eared bats in the action area? **Note:** Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

    No

46. Does the action area intersect the tricolored bat species list area?

    Automatically answered
    Yes

47. [Semantic] Is the action area located within 0.5 miles of radius of an entrance/opening to any known tricolored bat hibernacula? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

48. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

49. Is suitable summer habitat for the tricolored bat present within 1000 feet of project activities?
(If unsure, answer ""Yes."")

    Note: If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (Tillandsia usneoides), clusters of dead pine needles of large live pines) answer ""Yes."" For a complete definition of suitable summer habitat for the tricolored bat, please see Appendix A in the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

    Yes

50. Do any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pine trees)?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

51. Will any tree cutting/trimming or other knocking or bringing down of trees be conducted during the Pup Season for tricolored bat?
    Note: Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

    No

52. Do you have any documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

2.7

IPAC USER CONTACT INFORMATION

Agency: County of Onondaga
Name: John Greaves
Address: III Winners Circle
City: Albany
State: NY
Zip: 12205
Email jgreaves@chacompanies.com
Phone: 5184538251

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

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: 06/26/2025 17:10:22 UTC
Project Code: 2025-0038158
Project Name: Oak Orchard WWTP

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 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.

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: 2025-0038158
Project Name: Oak Orchard WWTP
Project Type: Wastewater Facility - Maintenance / Modification
Project Description: Upgrades to an existing wastewater treatment facility.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.2015549,-76.20989018622964,14z

Counties: Onondaga County, New York

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 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.

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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
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	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: County of Onondaga
Name: John Greaves
Address: III Winners Circle
City: Albany
State: NY
Zip: 12205
Email jgreaves@chacompanies.com
Phone: 5184538251

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

February 21, 2025

John Greaves
CHA Consulting
3 Winners Circle
Albany, NY 12205

Re: Oak Orchard wastewater treatment plant
County: Onondaga Town/City: Clay

Dear John Greaves:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 7 Office, Division of Environmental Permits, at dep.r7@dec.ny.gov.

Sincerely,

Heidi Krahling
Environmental Review Specialist
New York Natural Heritage Program

The following state-listed animals have been documented in the vicinity of the project site.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed.

For information about any permit considerations for the project, contact the NYSDEC Region 7 Office, Division of Environmental Permits, at dep.r7@dec.ny.gov, 315-426-7438.

The following species have been documented in the vicinity of the project site.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Birds				
Pied-billed Grebe *Breeding*	*Podilymbus podiceps*	Threatened		12551
Bald Eagle *Breeding*	*Haliaeetus leucocephalus*	Threatened		14908
Fish				
Lake Sturgeon	*Acipenser fulvescens*	Threatened		11143

The following species have been documented within 2.5 miles of the project site. Individual animals may travel 2.5 miles from documented locations. The main impact of concern is the cutting or removal of potential roost trees.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Mammals				
Indiana Bat *Maternity colony*	*Myotis sodalis*	Endangered	Endangered	13852

This report only includes records from the NY Natural Heritage database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.

The following rare plants, rare animals, and significant natural communities have been documented at the project site, or in its vicinity.

We recommend that potential impacts of the proposed project on these species or communities be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process, such as reviews conducted under SEQR. Field surveys of the project site may be necessary to determine the status of a species at the site, particularly for sites that are currently undeveloped and may contain suitable habitat. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The following plants are listed as Endangered or Threatened by New York State, and/or are considered rare by the New York Natural Heritage Program, and are a vulnerable natural resource of conservation concern.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Vascular Plants			
Hairy Small-leaved Tick Trefoil	*Desmodium ciliare*	Threatened	Imperiled in NYS

Documented within 200 yards northeast of the project site. 1991-06-27: A small sand hill next to Oak Orchard Road. Isolated with trails throughout with some trash piles. 6828

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org.

APPENDIX D

Photographic Documentation

Photo 1 – View of Mud Creek (delineated Stream 4) (unconfined river) and its fringe shallow emergent marsh (part of delineated Wetland 5).

Photo 2 – Wetland 1 red maple hardwood swamp community.

CHA	**SITE PHOTOGRAPHS**
	Oak Orchard Wastewater Treatment Plant **Clay, Onondaga Co., NY**
Sheet 1	**CHA File No. 090316**

Photo 3 – Wetland 1 red maple hardwood swamp community. Large shagbark hickories scattered throughout this wetland and is adjacent upland.

Photo 4 – Wetland 1 vernal pool community.

	SITE PHOTOGRAPHS
	Oak Orchard Wastewater Treatment Plant **Clay, Onondaga Co., NY**
Sheet 2	**CHA File No. 090316**

Photo 5 - Wetland 1 vernal pool and red maple hardwood swamp communities.

Photo 6 – Wetland 3 red maple hardwood swamp community.

	SITE PHOTOGRAPHS
	Oak Orchard Wastewater Treatment Plant **Clay, Onondaga Co., NY**
Sheet 3	**CHA File No. 090316**

Photo 7 - Wetland 4 red maple hardwood swamp community.

Photo 8 - Wetland 4 red maple hardwood swamp community.

SITE PHOTOGRAPHS

Oak Orchard Wastewater Treatment Plant
Clay, Onondaga Co., NY

Photo 9 – Red maple hardwood swamp portion of Wetland 5.

Photo 10 – Wetland 2 – shallow emergent marsh on a mowed lawn.

	SITE PHOTOGRAPHS
	Oak Orchard Wastewater Treatment Plant **Clay, Onondaga Co., NY**
Sheet 5	**CHA File No. 090316**

Photo 11 – Intermittent stream (Stream 1), looking upstream.

**Photo 12 - Intermittent stream (Stream 1), looking upstream.
Fringe successional southern hardwoods.**

**Photo 13 - Ephemeral stream (Stream 2), looking downstream.
Stream 003 is very similar.**

Photo 14 - Ephemeral stream (Stream 2), looking downstream.

Photo 15 – Mud Creek (delineated Stream 004). Unconfined river.

Photo 16 – Oneida River (Stream 005). Unconfined river community.

	SITE PHOTOGRAPHS
	Oak Orchard Wastewater Treatment Plant **Clay, Onondaga Co., NY**
Sheet 8	**CHA File No. 090316**

Photo 17 – Existing outfall within the Oneida River.

Photo 18 – Oneida River substrate at the outfall location.

Photo 19 - Typical view of successional old field community with monarch habitat.

Photo 20 – Typical view of successional old field community with monarch habitat.

Photo 21 – Representative photo of onsite potential NLEB/IBAT roosting structure.

Photo 22 - Representative photo of onsite potential NLEB/IBAT roosting structure.

Photo 23 - Representative photo of onsite potential NLEB/IBAT roosting structure.

Photo 24 – Bat roosting habitat (large shagbark hickories) in and adjacent to Wetland 001 with somewhat open canopy for flight.

Photo 25 – Potential pied-billed grebe nesting habitat in the hemi-marsh along Mud creek.

Photo 26 – Onsite sewage treatment lagoon that may support pied-billed grebe, but not critical or ideal habitat.

Photo 27 – Representative photo of the larger trees onsite that could potentially support bald eagle nesting.

Photo 28 – Oneida River at the outfall location.

Photo 29 – Oneida River substrate at the outfall structure.

Photo 30 – Mud Creek where it flows under the bridge into Oneida River.

Photo 31 – Typical view of mowed lawn with trees habitat.

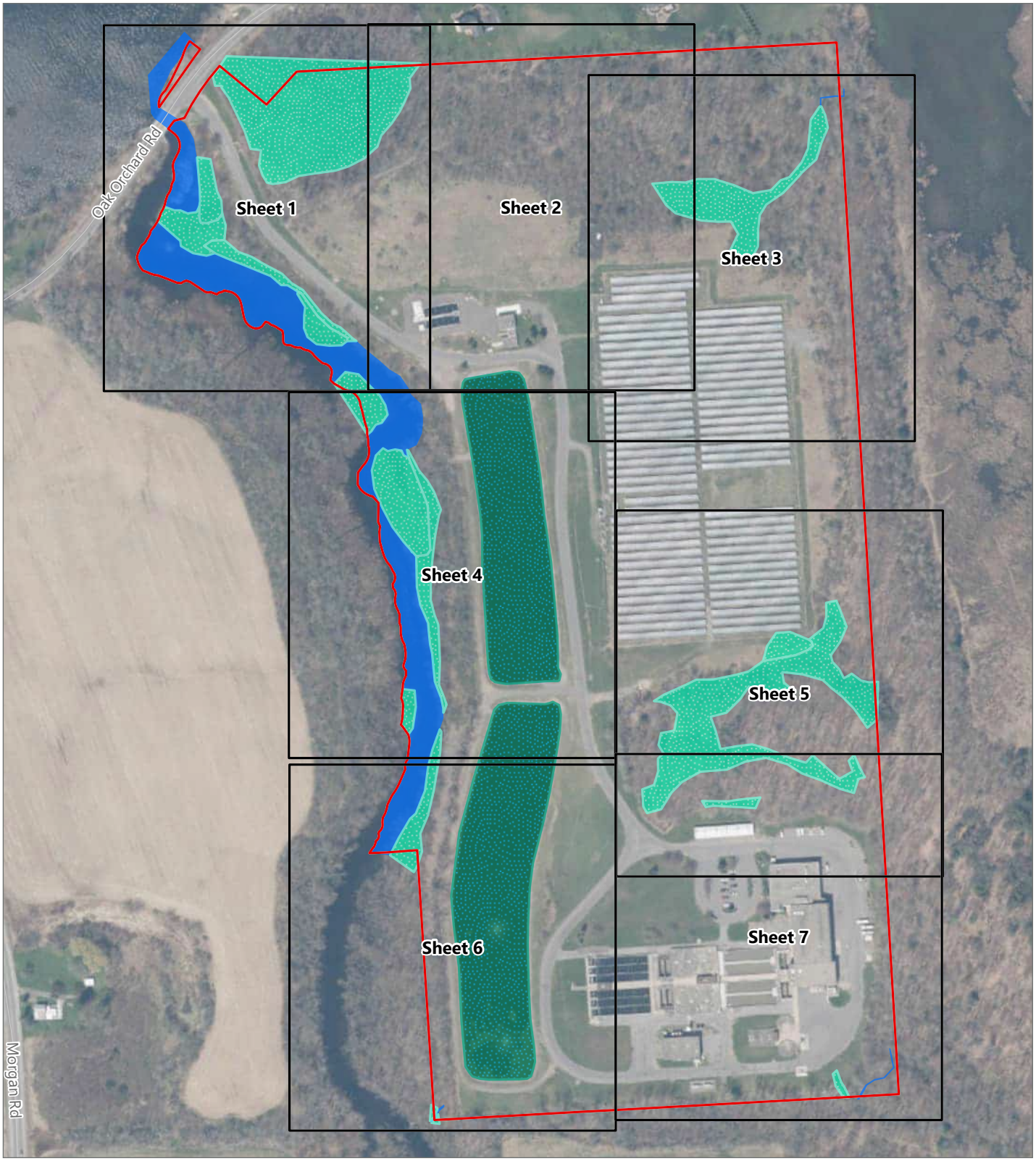
Photo 32 – Successional shrubland habitat.

APPENDIX E

Wetland Delineation Map

Figure 1. Delineated Wetland and Stream Extensions

Index



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

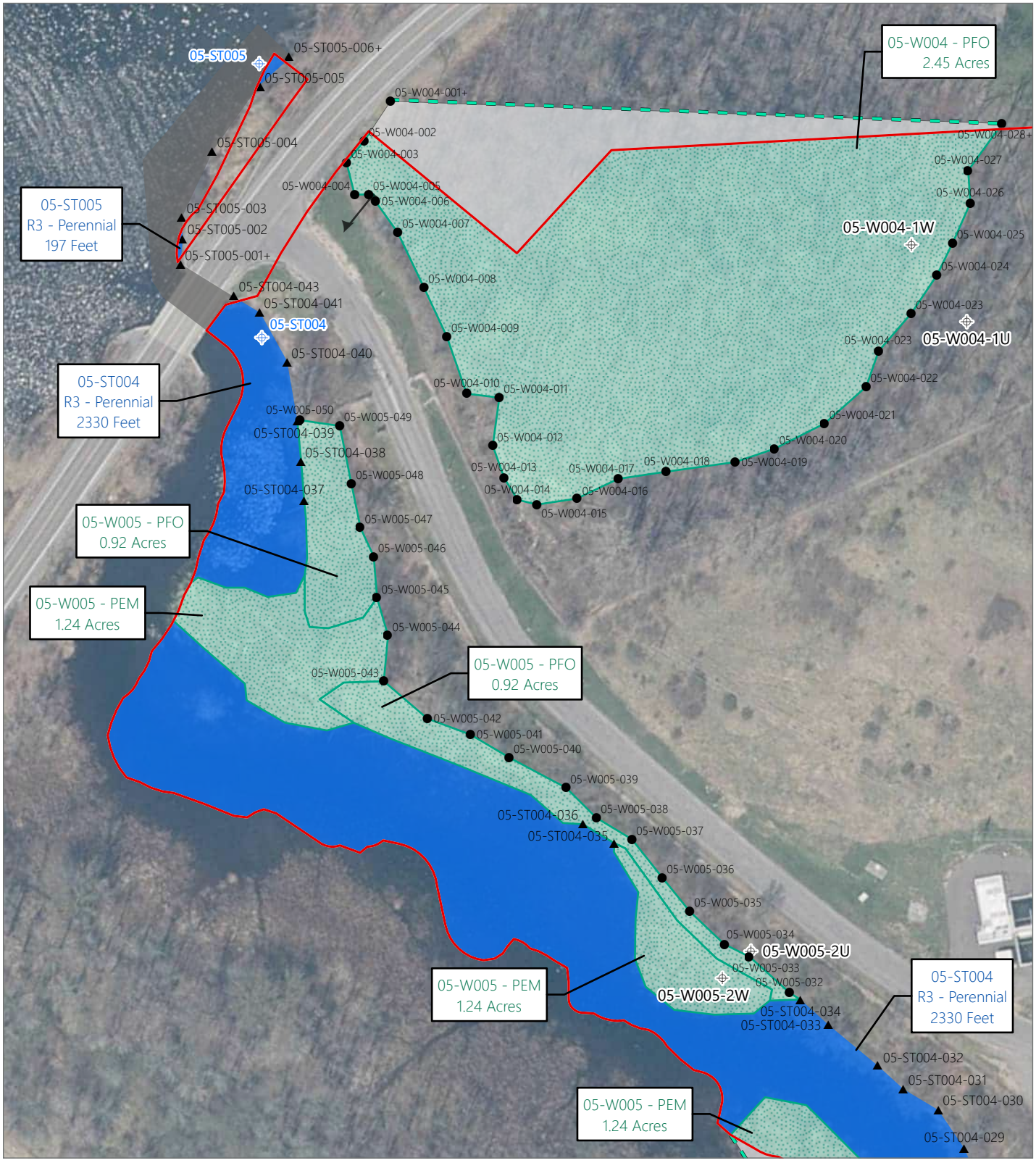
Delineated Stream
Delineated Wetland
Wastewater Treatment Lagoon
Study Area

0 100 200 400
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions



Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

- Stream Flag
- Wetland Flag
- Datapoint Stream
- Datapoint Wetland
- Culvert
- Wetland Continues
- Delineated Stream inside Study Area
- Delineated Stream outside Study Area
- Previously Delineated Wetland inside Study Area
- Delineated Wetland outside Study Area
- Study Area

0 25 50 100
Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

Figure 1. Delineated Wetland and Stream Extensions

Oak Orchard

Town of Clay, Onondaga County, New York

Wetland and Stream Delineation Addendum

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- Wetland Flag
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Prepared May 27, 2025
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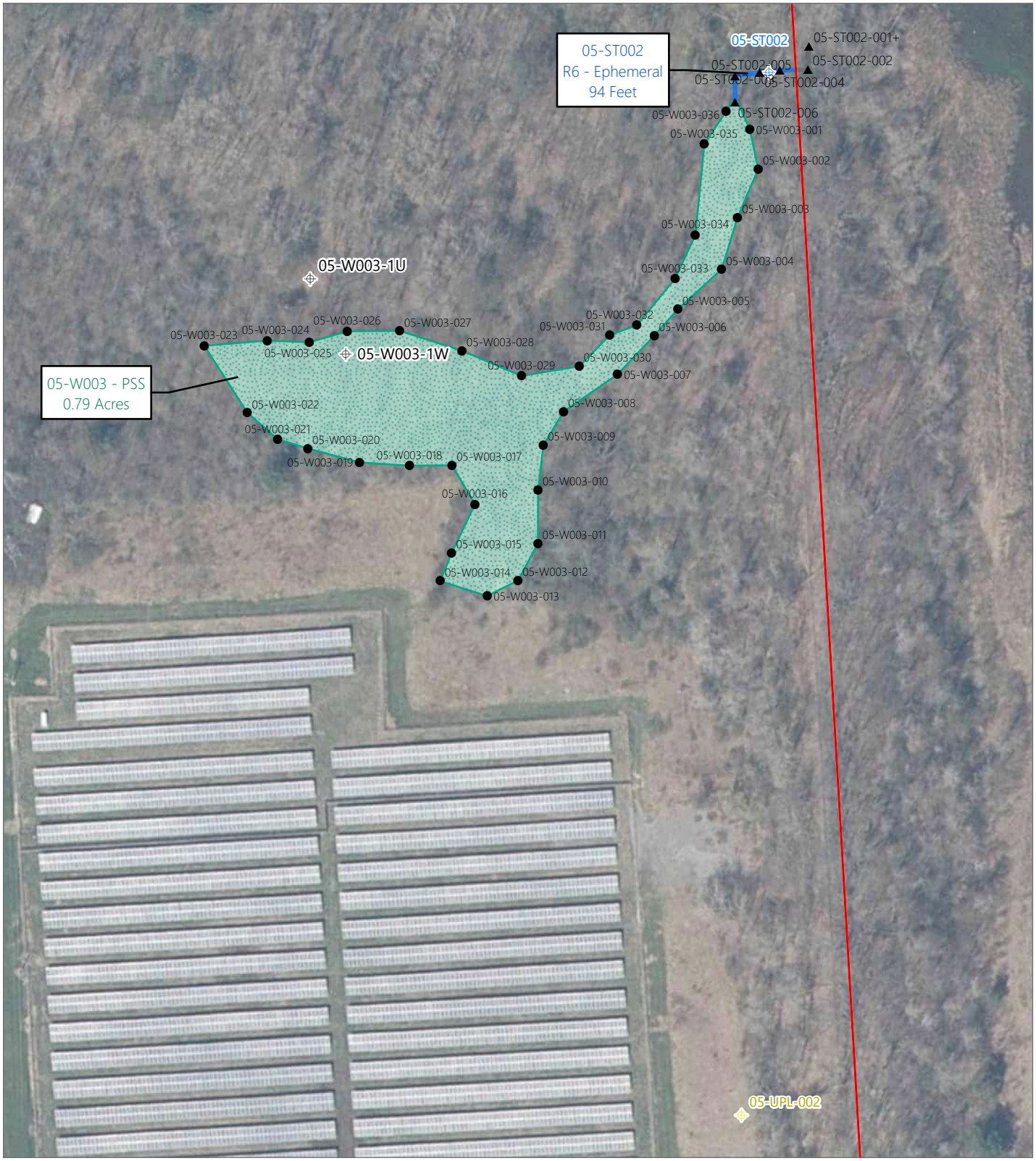

Oak Orchard

Town of Clay, Onondaga County, New York

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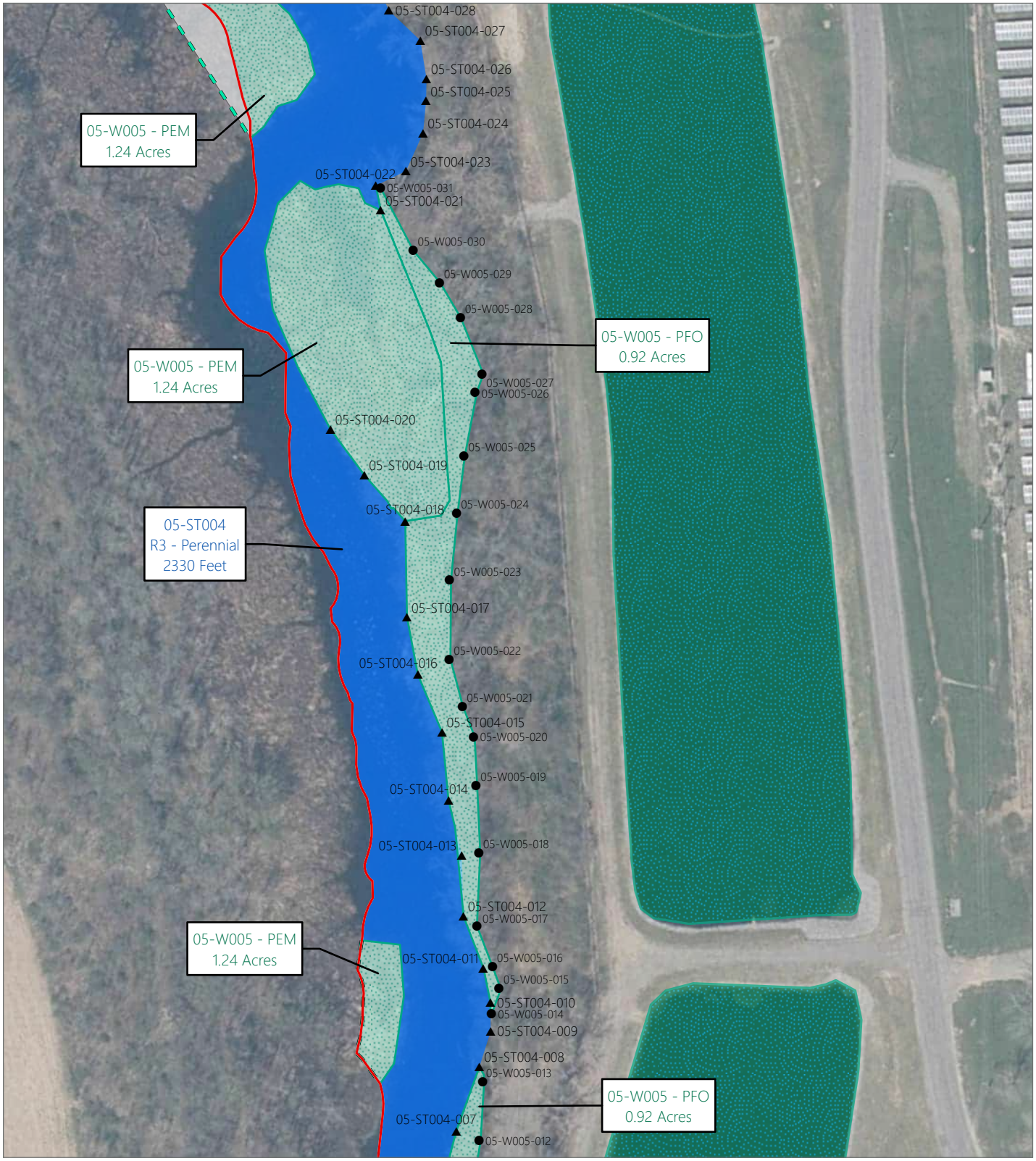

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Town of Clay, Onondaga County, New York

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Feet

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EDR

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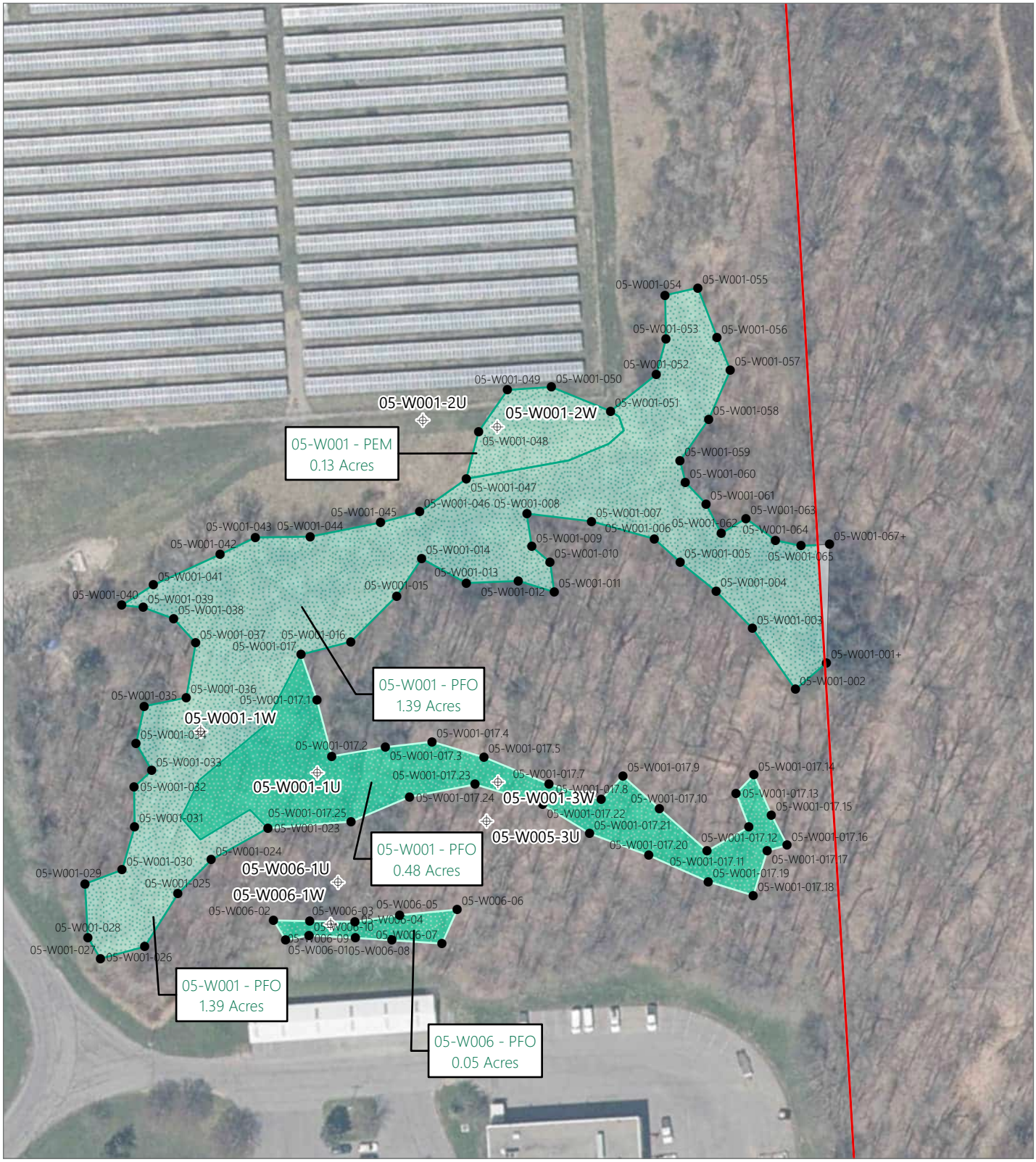

Oak Orchard

Town of Clay, Onondaga County, New York

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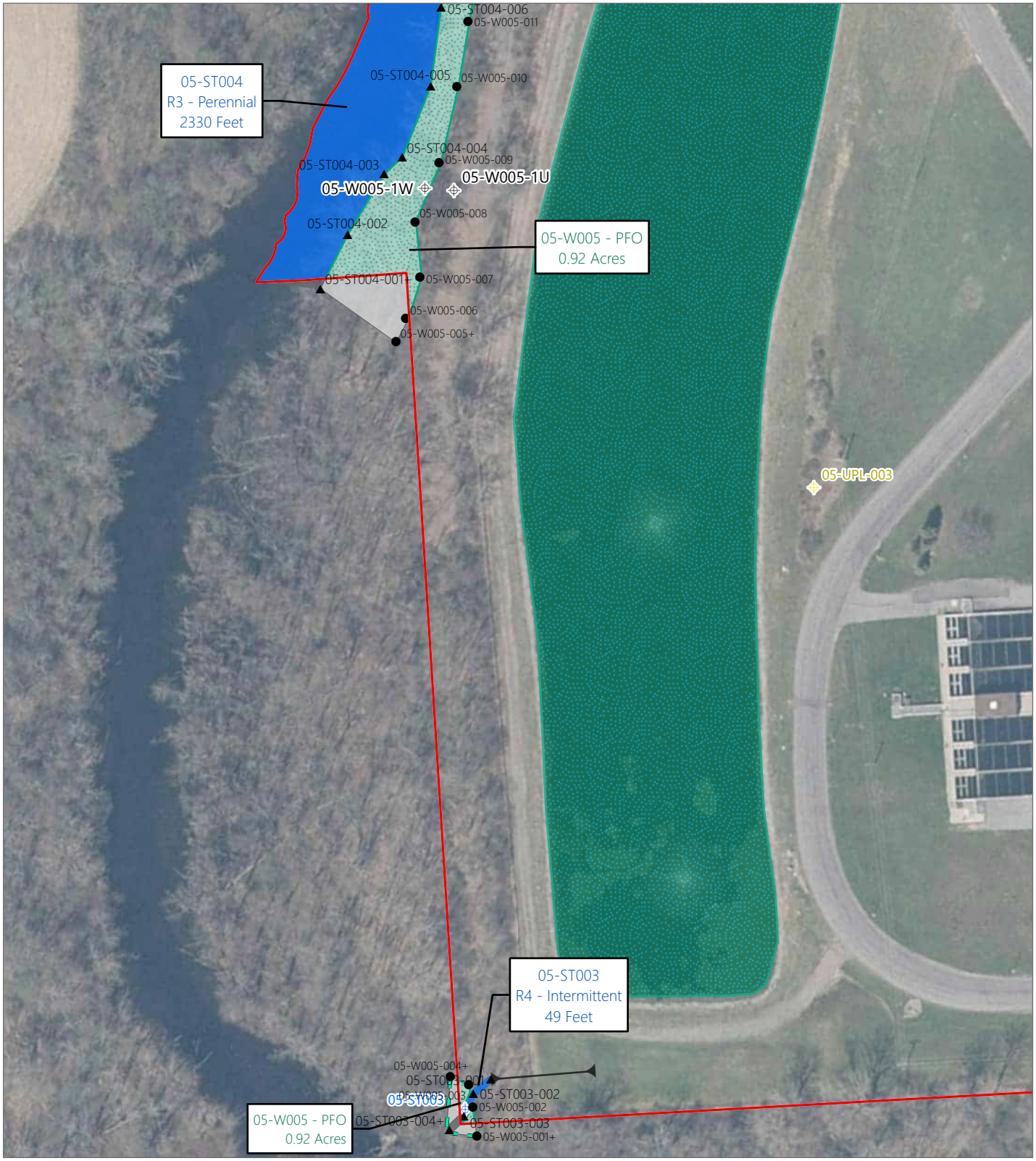

Oak Orchard

Town of Clay, Onondaga County, New York

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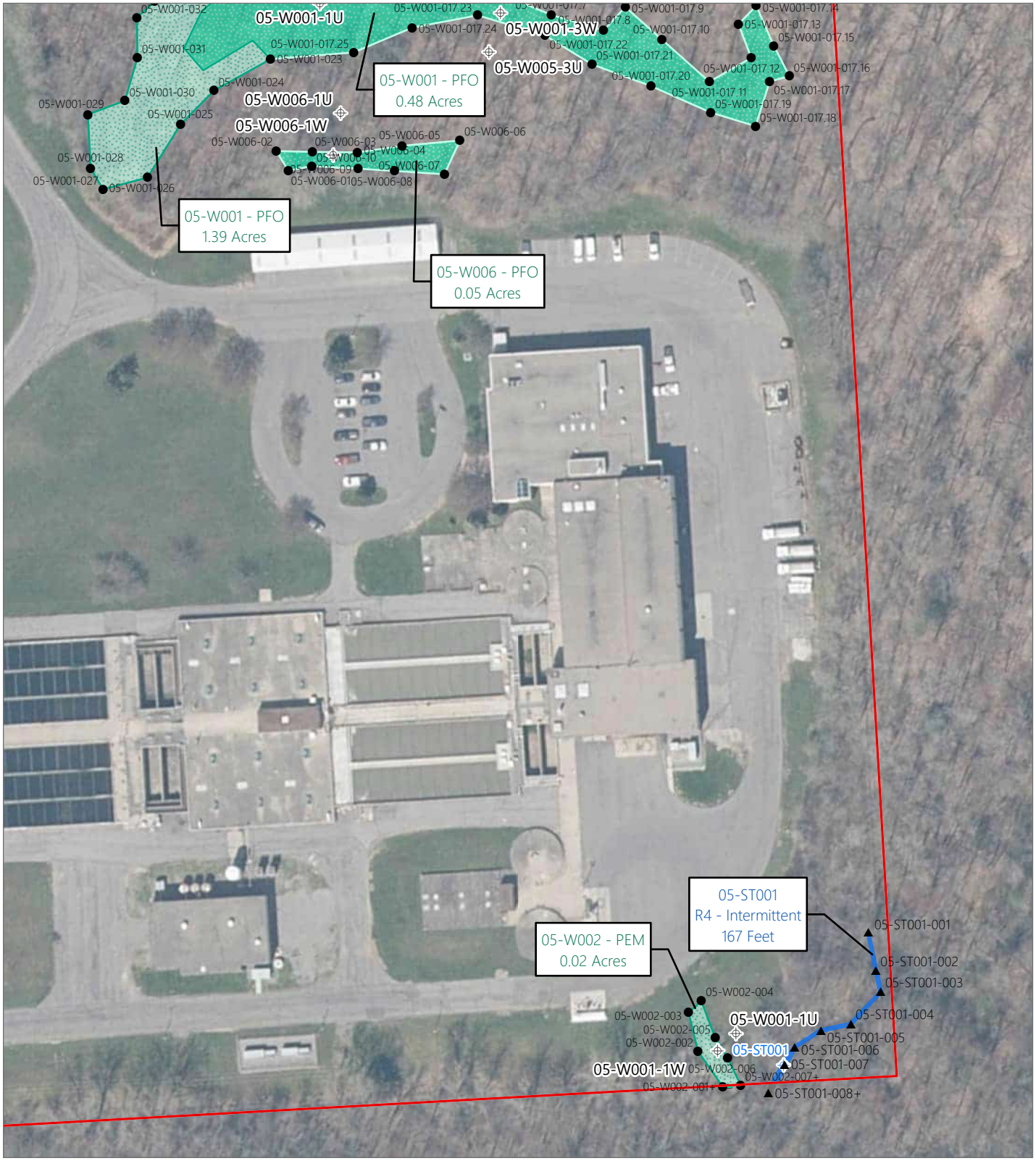

Oak Orchard

Town of Clay, Onondaga County, New York

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Feet

Prepared May 27, 2025
Basemap: NYSDOP "2022" orthoimagery map service

EDR

www.chasolutions.com

Attachment H

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

August 01, 2025

Nicole Frazer
CHA
III Winners Circle
Albany, NY 12205

Re: USACE
Oak Orchard Wastewater Treatment Plant (OOWWTP) Expansion
4300 Oak Orchard Rd, Clay, NY 13041
25PR06691

Dear Nicole Frazer:

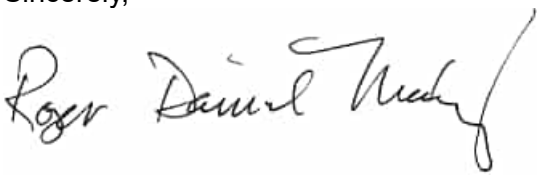
Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include 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 Erin Czernecki at the following email address:

Erin.Czernecki@parks.ny.gov

Sincerely,



R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

Attachment I

Date Saved: 6/26/2025 5:18 PM Author: Cole Scrivner

N

Scale 1" = 400'

CHA Project No. 090316.000

Figure 6. FEMA Flood Zone Map

Oak Orchard Wastewater Treatment Plant Expansion
Clay, Onondaga County, NY

Source: Esri, USDA FSA, Federal Emergency Management Agency (FEMA), Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS. Flood zones courtesy of the Federal Emergency Management Agency.

Attachment J

Brown AND Caldwell

200 Brickstone Square
Suite 403
Andover, MA 01810

T: 978.794.0336

Technical Memorandum

Prepared for: Onondaga County Department of Water Environment Protection (OCDWEP)

Project Title: OCDWEP Industrial Wastewater Treatment and Water Reclamation Facility Plant (IWWTP-WRF) and Oak Orchard Wastewater Treatment Plant (OOWWTP)

Project No.:

Technical Memorandum

Subject: Air Permitting Strategy

Date: July 31, 2025

To: David Snyder, PE, Deputy Commissioner, Regulatory Compliance, OCDWEP

From: Paul Pepler, Managing Principal, Brown and Caldwell

Copy to: Cydney Johnson, Deputy County Executive for Physical Services

Mike Tamblin, EDR

Prepared by: _____
Paul Pepler
Jeff Caputi, PE

Reviewed by: _____
John Hinckley, Managing Principal
Jennifer Border, Principal

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List of Acronyms

AGC	Annual guidance concentration
ASF	Permit Air Facility State Permit
BACT	Best Available Control Technology
CO_2	Carbon dioxide
CO	carbon monoxide
CLCPA	Climate Leadership and Community Protection Act
CO_2e	Carbon dioxide equivalent
DAR	Department of Air Resources
DAC	Disadvantaged communities
NYSDEC	New York State Department of Environmental Conservation
FAB	Fabrication
GHG	Greenhouse Gas
HAP	Hazardous Air Pollutant
HTAC	High Toxicity Air Contaminant
IWWTP	Wastewater Treatment Plant
MBR	membrane bioreactor
MMBtu/hr	Million British thermal units per hour
MGD	Million gallons per day
Mwe	Megawatts of electricity
NESHAP	National Emission Standards for Hazardous Air Pollutants
NAAQS	National Ambient Air Quality Standard
NSPS	New Source Performance Standard
NSR	New Source Review
CRR-NY	New York Codes, Rules and Regulations
NOx	oxides of nitrogen
OOWWTP	Oak Orchard Wastewater Treatment Plant
OCDWEP	Onondaga County Department of Water Environment Protection
OSHA	Occupational Safety and Health Administration
OTR	Ozone Transport Region
PBT	Persistent, bioaccumulative or toxic
PM	Particulate Matter
PSD	Prevention of Significant Deterioration
PTE	Potential to emit
PSL	Primary sludge
RMP	Risk Management Plan
RO	Reverse osmosis
SGC	Short-term guidance concentration
SO_2	Sulfur Dioxide
TIA	Toxic Impact Assessment
UF	ultra filtration
UV	ultraviolet disinfection
VOC	volatile organic compounds
WRF	Water Reclamation Facility
WAS	Waste activated sludge

Introduction

This Technical Memorandum describes (1) the proposed modification to the Oak Orchard Wastewater Treatment Plant (OOWWTP) and the proposed construction of a collocated Industrial Wastewater Treatment Plant (IWWTP) and Water Reclamation Facility (WRF) and (2) the proposed plan for air permitting in accordance with the Official Compilation of Codes, Rules and Regulations of the State of New York, Title 6, Chapter III. The existing OOWWTP (including upgrades) and the proposed IWWTP comprise the Facility. Brown and Caldwell, EDR, and Carollo met with the New York Department of Environmental Conservation (NYS-DES) on April 28, 2025 to discuss the following:

1. The proposed project (defined below) and the intent to permit the facility as a minor or synthetic minor source of air emissions.
2. The following project design, construction, and permitting schedule:
    a. Conceptual design reports for the IWWTP and basis of design report for the OOWWTP complete in June 2025.
    b. This permitting strategy memorandum completed late July 2025, is based on the two basis of design reports.
    c. Preliminary design for IWWTP and OOWWTP will be completed around October 2025.
    d. Air permit application (based on the July 2025 Permit Strategy Memorandum and informed by the design for the IWWTP and OOWWTP to be completed in October 2025) will be submitted around November / December 2025.
    e. Tree clearing for the IWWTP beginning in November 2025.
    f. As necessary, as design progresses for both IWWTP and OOWWTP, air permit modification applications will be submitted to refine the permit content.
3. The permit duration can be up to ten years, and the application will include construction and modifications that will occur within this ten-year period.

This memorandum is being submitted to NYS-DES for review, comment, and approval.

1.1 Site Description and Permitting Status

Onondaga County owns and operates the OOWWTP located at 4200 Oak Orchard Road, in Clay New York. The existing OOWWTP was constructed in 1981, has a design flow of 10 million gallons per day (MGD), and provides advanced secondary treatment of wastewater using an activated sludge process. The OOWWTP operates under Air Facility Certificate ID N0. 7-3124-00018/02000 (OOWWTP Registration) that includes sources of odor and associated controls (i.e., odor control covers, ductwork, and a wet scrubbing packed tower).

1.2 Proposed Project

Micron Technology, Inc. (Micron) is proposing to construct a semiconductor manufacturing campus in the Town of Clay, New York, at the White Pine Commerce Park. The campus will include a total of four Fabrication Facilities: Fabrication 1 (FAB1), Fabrication 2 (FAB2), Fabrication 3 (FAB3), and Fabrication 4 (FAB4), built in two phases. FAB1 and FAB2 will be constructed in Phase 1, while FAB3 and FAB4 will be constructed in Phase 2. The Micron Campus will be constructed over an approximate 20-year period. FAB1 through FAB4 are expected to be fully constructed and operating by July 2030, July 2035, July 2040, and July 2045, respectively.

Onondaga County through OCDWEP is working with Micron to provide industrial process wastewater treatment and provide reclaimed water for ultrapure water and cooling. For industrial process wastewater and reclaim wastewater for cooling water, OCDWEP is proposing to construct and operate a greenfield IWWTP and WRF co-located at the OOWWTP site.

OCDWEP is concurrently upgrading the OOWWTP liquid treatment train and adding new biosolids management processes. The scope of this memorandum is limited to air permitting considerations for the initial permitting action (i.e., the Project) that includes the IWWTP receiving industrial discharges from Micron's first phase, Fab 1 and Fab 2, and upgrades to the OOWWTP liquid train and solids management process that are proposed for construction over the next ten years. Process flow diagrams for the proposed IWWTP and the OOWWTP upgrades are included in Attachment A.

Note: IWWTP modifications to accommodate Phase 2 (i.e., Fabs 3 and 4) and associated emissions will occur outside the initial ten-year window and will therefore be addressed within subsequent, future permitting actions (i.e., permit applications) and are not included in this Project.

1.2.1 Industrial Wastewater Treatment Plant

The IWWTP / WRF component of Phase 1 will ultimately consist of a 16.5 million gallons per day (MGD) industrial wastewater treatment facility, 2-4 MGD advanced treatment water reuse facility, solids handling facilities and a river outfall combined with OOWWTP's existing outfall. The IWWTP-WRF will be designed and built to primarily treat industrial wastewater from the Micron Semiconductor Fabrication project in Clay, New York at the White Pine Industrial Complex as well as other industries that could be located at the White Pines Industrial Park adjacent to the Micron-Campus.

Based on a review of the proposed discharge from Micron, two HAPs and certain VOC constituents were identified but no High Toxicity Air Contaminants (HTACs) were identified. Possible emissions of VOC and HAP from the IWWTP are summarized below in Table 1, are not expected to be appreciable, and will be quantified and included in the air permit application. Incoming industrial wastewater from FAB1 will flow through the following unit processes in sequence as summarized in Table 1: Equalization, screens, biological treatment (anoxic and aerobic reactors), membrane bioreactor (MBR), and ultraviolet disinfection (UV). During anoxic treatment, the nitrates in the wastewater will be denitrified. The effluent from the anoxic tank will flow by gravity to the aerobic tank where organics will be degraded and ammonia will be nitrified. Emissions of ammonia-nitrogen are expected to be negligible given the near neutral pH and low aeration rate. Steam for process heat will be generated by natural gas-fired boilers. Specifications sheets for the natural gas-fired boilers and an emergency generator are included in Attachment A.

Table 1. Industrial Wastewater Treatment Plant Source Inventory

Source	FAB	Proposed Construction Start	Pollutants Emitted	Exempt or Trivial?
Equalization	FAB 1	December 2026	Negligible	No
Screens	FAB 1	December 2026	Negligible	No
Anoxic biotreatment (nitrification)	FAB 1	December 2026	Possible VOC (but likely negligible)	No
Aerobic biotreatment (denitrification)	FAB 1	December 2026	Nitrous Oxide N2O, possible VOC	No
Membrane bioreactor	FAB 1	December 2026	Negligible	No
UV disinfection	FAB 1	December 2026	NA	NA, no emissions
Solids handling	FAB 1	December 2026	Odorous compounds including H2S	No
NG-fired emergency engine (4.5 MW)	FAB 1	December 2026	Criteria	Yes, 201-3.2(c)(6)

Table 1. Industrial Wastewater Treatment Plant Source Inventory				
Source	FAB	Proposed Construction Start	Pollutants Emitted	Exempt or Trivial?
Roof top building heat - natural gas	FAB 1	December 2026	Criteria	Yes, 201-3.2(c)(1)(i)
Ion Exchange	FAB 2	December 2031	Not Applicable (NA)	NA, no emissions
Decarbonization Stripper	FAB 2	December 2031	CO_2	No
Reverse Osmosis (RO)	FAB 2	December 2031	NA	NA, no emissions
NG-fired Cleaver Brooks boiler (2 @12 MMBtu/hr)	FAB2	December 2031	Criteria Pollutants	No

1. Criteria Pollutants include carbon monoxide, sulfur dioxide, oxides of nitrogen, particulate matter less than 10 microns in diameter, ozone (not directly emitted and regulated as precursors VOC and NOx).
2. Exempt and trivial activities are defined in 6 CRR-NY 201-3.2 and 6 CRR-NY 201-3.2, respectively.

1.2.2 Oak Orchard Wastewater Treatment Plant

Concurrent with the design and construction of the IWWTP, OCDWEP is increasing the OOWWTP liquid train treatment capacity to accommodate additional sanitary wastewater volume and adding water reclamation facilities to provide recycled water as requested by Micron. Recycled water for ultrapure water makeup may be provided to Micron as early as August 2029. The existing OOWWTP unit processes will remain operational through late 2030. A maintenance of plant operations (MOPO) project (post existing treatment facility) will be constructed to operate in early 2028 including tankage configured as a moving bed bioreactors (MMBR). The MOPO will replace treatment performed by the OOWWTP lagoons, as these treatment units need to be compensated for and to provide winter nitrification to allow for water reclamation.

The existing OOWWTP generates primary sludge (PSL) from the primary clarifiers and waste activated sludge (WAS) from the secondary clarifiers. The PSL and WAS are combined and sent to two gravity thickeners. Thickened sludge is managed off-site at the Metro Syracuse Wastewater Treatment Plant. Supernatant from the gravity thickeners is returned to the head of the plant. This operating scenario will continue until the proposed biosolids facility is constructed onsite and attains operational status currently projected to be late 2033.

The proposed upgrades to the OOWWTP will be completed in two stages as described further below; the liquid train will be upgraded first followed by the solids process approximately 3 - 4 years later. Potential air emissions sources are summarized below in Table 2. The MOPO project will be post-existing treatment, with the exception that discharge from the MOPO continues to go through the existing chlorination/dechlorination facility until the new liquid train is built.

- Liquid train upgrades to meet the future flow and water quality effluent requirements, upgrades including modifications to the existing processes include the following:
    1. A complete overhaul of the headworks facility to upgrade and expand coarse screening and grit removal, with a more automated system, including screenings handling.
    2. Addition of two new primary clarifiers that match the four existing units.
    3. Replacement of the high purity oxygen activated sludge secondary process with a membrane bioreactor (MBR) secondary treatment process. New fine screens to screen the primary clarifier effluent (upstream of the bioreactors) to protect the membranes.

4. Replacement of the existing chlorination and dechlorination disinfection system with closed vessel ultraviolet light (UV) disinfection.
5. Odor control for the new headworks and primary clarifier weir and effluent channels.
6. New ancillary equipment, chemical storage, flow distribution, and blower and electrical buildings.
7. New administration building.
8. Space allocation for future expansion to add 33% additional capacity if required (expanded headworks, two additional primary clarifiers, and an additional MBR train).
9. New water reuse facility with ultra filtration (UF) and reverse osmosis (RO) (initially until the OOWWTP Liquid train is upgraded).

- The proposed Biosolids Facility includes:
  1. Demolition of the existing gravity thickeners.
  2. High-strength waste receiving station.
  3. Municipal solids receiving station.
  4. Blend tanks for high-strength waste and trucked-in municipal solids.
  5. Gravity thickeners for PSL.
  6. In-line sludge screening units for PSL.
  7. Gravity belt thickeners for WAS, located in the new Thickening/Dewatering Building.
  8. Anaerobic digesters, digested sludge storage tank, and digester heating system.
  9. Dewatering centrifuges located in the new thickening/dewatering building.
  10. Sludge dryer located in a new dryer building.
  11. Biogas storage, biogas conditioning and waste gas flares.
  12. Odor control for new thickening/dewatering and dryer buildings.
  13. Return pump station.
  14. New ancillary equipment, chemical feed systems, chemical storage, and electrical rooms/buildings.

A conceptual Site Plan is presented below in Figure 1.

Table 2. Oak Orchard Municipal Treatment Plant Source Inventory

Source	Directed to Odor Control?	Proposed Construction Start	Pollutants Emitted	Trivial or Exempt?
MOPO Project	No	1/27	Odorous compounds	No
Headworks, primary clarifier effluent weir/effluent channels	Yes	4/27	Odorous compounds	No
Primary clarifier	no	4/27	Negligible	No
Membrane bioreactor	no	4/27	Negligible	No
Sludge thickener	yes	4/27	Odorous Compounds	No
High strength waste receiving and handling	no	1/34	Odorous Compounds	No
Digesters Max Week: 235 scfm	no	1/34	NA	No

Table 2. Oak Orchard Municipal Treatment Plant Source Inventory				
Source	**Directed to Odor Control?**	**Proposed Construction Start**	**Pollutants Emitted**	**Trivial or Exempt?**
Instantaneous Peak: 305 scfm. Annual Average: 180 scfm				
Natural gas / biogas boilers (3) 2 Duty, 1 standby 5 MMBtu/hr each	No	1/34	Criteria, HAP, toxics	No
Flare (235 scfm estimated)	no	1/34	Criteria, HAP, toxics	No
NG/DG Sludge Dryer 7,300 wet lb/hr	yes	1/34	Criteria, HAP, toxics	No
Roof top building heat – natural gas	no	4/27	Criteria, HAP, toxics	Yes, 201-3.2(c)(1)(i)

Trivial sources are identified in 6 CRR-NY 201-3.3. Exempt sources are identified in 6 CRR-NY 201-3.2.

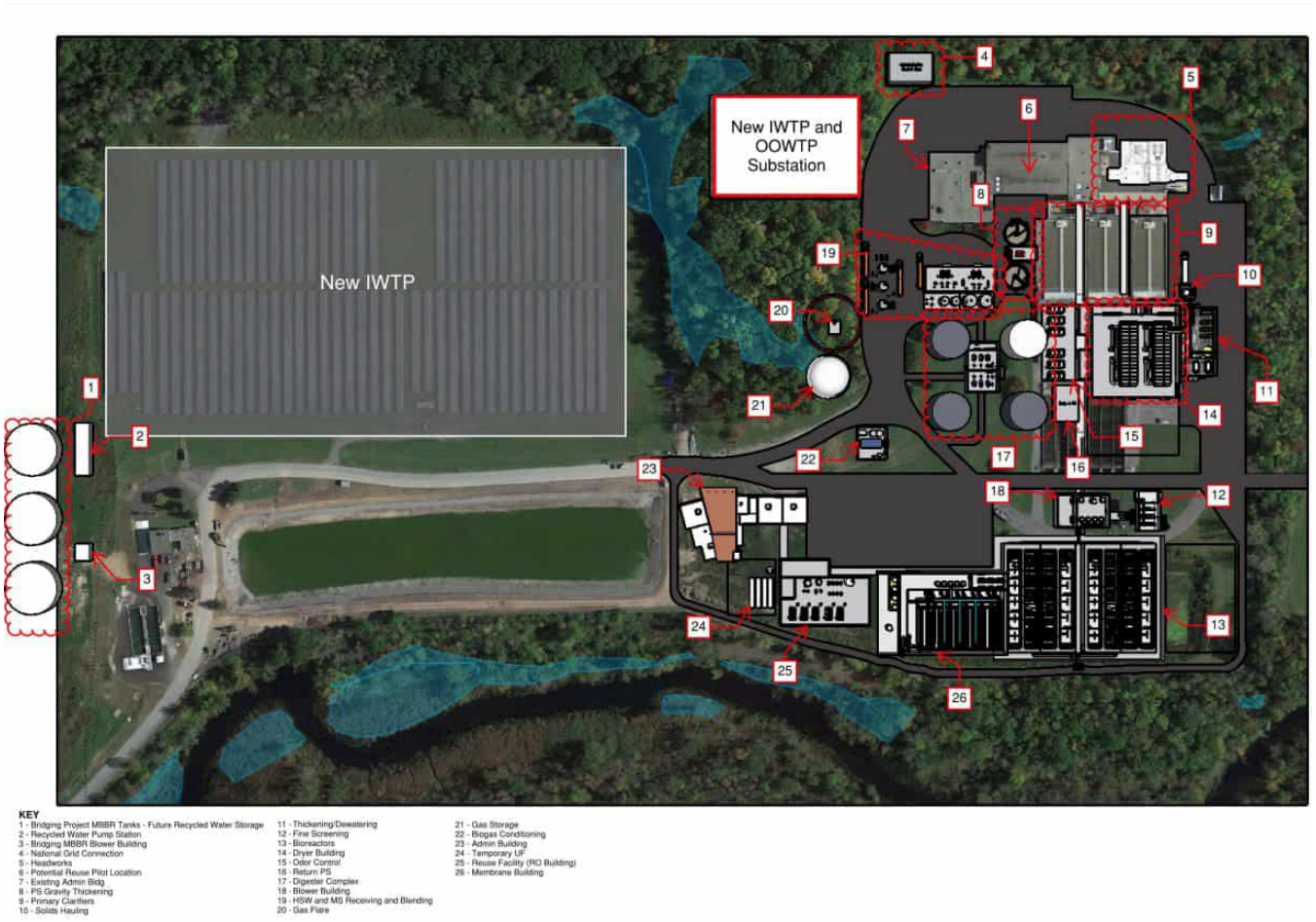

Figure 1. Conceptual site plan

Section 2: Regulatory Review

The Facility is owned and operated by Onondaga County and located on one parcel owned by the County. This review includes both treatment plants, IWWTP and OOWWTP.

2.1 Permitting

2.1.1 Permitting Applicability

The Facility will be a new facility subject to air permitting regulations under the Official Compilation of Codes, Rules and Regulations of the State of New York, Title 6, Chapter III, Subchapter A, Part 201, (6 CRR-NY 201). Under the rules, activities that are not exempt or trivial under 6 CRR-NY Subpart 201-3 must either register with or apply for an air permit from the NYSDEC. If actual emissions are less than 50 percent of the federal major source thresholds and less than the NYSDEC thresholds for persistent, bioaccumulative or toxic (PBT) compounds listed in Table 1 of Subpart 201-9 (combustion sources, exempt, and trivial activities are not subject to the PBT thresholds), the facility may obtain a registration from the New York State Department of Environmental Conservation (NYSDEC) (Registration). An Air Facility State Permit (ASF Permit) is required if potential emissions are between 50 and 100 percent of the Federal major source thresholds; if potential emission exceed these thresholds, a Title V Operating Permit is required. This evaluation was prepared based on the understanding that OCDWEP intends to remain a minor source of air emission and plans to secure an ASF Permit.

As further described in the following sections, emissions at the IWWTP will primarily be associated with the following:

1. Biological nutrient removal (Nitrous Oxide [N2O], carbon dioxide [CO2], and possibly volatile organic compounds [VOC]),
2. Steam generation (two, 12 million British thermal units per hour [MMBtu/hr] natural gas fired boilers, one standby and one duty), and
3. Emergency power (one, 4-megawatt natural gas fired emergency engine).

Emissions from OOWWTP are expected to primarily be odorous compounds and criteria pollutants emitted from the combustion of natural gas and biogas generated from the biosolids management (i.e., digesters).

2.1.2 Permitting Timeline

In accordance with 6 CRR-NY 621 and as outlined on the NYSDEC website (Getting An Environmental Permit - NYSDEC), the steps in the permit application approval process and associated timeframes are as follows.

- Completeness Determination: 60 Days from receipt of the complete application for delegated permits, 15 days for all other permits.
- Public Comment: The Notice of Complete Application initiates the public comment period. This is either 30 or 45 days after the date the Notice is published, depending on the permit type requested (i.e., minor or major).
- Based on any comments received and on staff's review of the project against permitting standards, NYSDES decides whether to hold a public hearing. Minor projects do not usually require public notice.
- The Uniform Procedures Act requires NYSDEC to make its final decision in the following time frames:
  - If no hearing is held, NYSDEC makes its final decision on the application within 90 days of its determination that the application is complete.
  - If a hearing is held, NYSDEC notifies the applicant and the public of a hearing within 60 days of the completeness determination. The hearing must commence within 90 days of the completeness

determination. Once the hearing ends, NYSDEC must issue a final decision on the application within 60 days after receiving the final hearing records.

The completeness determination time frame for a delegated permit is 60 days, otherwise it is 15 days. Under 6 CRR-NY 621.2 (g), delegated permit means a permit issued by the department for which a comparable permit may be required by Federal law. Delegated permits include those for which the department has been delegated the authority or for which the State's program has been approved to issue the permit pursuant to Federal law including New Source Review Part 231 Permits, Title V facility permits, and Title IV facility permits.

Minor projects do not usually require public notice. Under 6 CRR-NY 621.2 (r) major project means any action requiring a permit identified in section 621.1, which is specifically defined as major, or which is not specifically defined as minor in section 621.4. 6 CRR-NY 621.4(g) identifies PSD permit applications, Title V permit applications, projects requiring emission reduction credits, and projects requiring the use of a federally enforceable emission cap (i.e., synthetic minor) as major project.

The range of permit review times outlined in 6 CRR-NY 621 is 105 – 210 days from the date a complete application is submitted:

- 105 days for a major project for a non-delegated permit (e.g., synthetic minor air permit) if no public hearing is required.
- 165 days for a major project for a non-delegated permit (e.g., synthetic minor air permit) if a public hearing is required.
- 150 days for a major project for a delegated permit (e.g., Title V Permit) if no public hearing is required.
- 210 days for a major project for a delegated permit (e.g., Title V Permit) if a public hearing is required.

The fastest permit issuance required under the rules is 3.5 months, if the application is for a synthetic minor permit, deemed complete following first submittal, and no hearing is required. The application will be submitted at least 6 months prior to the start of construction.

2.2 Attainment Status and Ozone Transport Region

The Facility is located in Onondaga County, New York which is currently designated as being in attainment or unclassified for all criteria pollutants. New York is located in the Ozone Transport Region (OTR). The OTR is not considered a nonattainment area; however, the area does contribute to regional ozone pollution and therefore stricter requirements apply to ozone precursor emissions (NOx and VOC) for facilities in the OTR.

2.3 New Source Review and Facility Classification

2.3.1 Source Determination

The Prevention of Significant Deterioration (PSD) permitting program applicability is set forth in 6 CRR-NY 231 and applies to major stationary sources, defined under 6 CRR-NY 201-2.1(b) 21 as a stationary source or any group of stationary sources, any source or any group of sources, or any facility or any group of facilities, that are:

1. Located on one or more contiguous or adjacent properties
2. Under common control.
3. Belonging to a single major industrial grouping and that are described in subparagraph (i), (ii), (iv) or (v) of 6 CRR-NY 201-2.1(b) 21.

   For the purposes of this definition, *a stationary source, source*, or *facility* or *group of stationary sources*, *sources*, or *facilities* shall be considered part of a single industrial grouping if all of the air pollutant or air contaminant emitting activities at such stationary source, source, or facility, or any group

of stationary sources, sources, or facilities on contiguous or adjacent properties belong to the same major group (*i.e.*, all have the same two-digit code), as described in the *Standard Industrial Classification Manual*, 1987.

The Oak Orchard property is owned and operated by OCDWEP and classified under SIC 4953, sewerage systems defined as establishments primarily engaged in the collection and disposal of wastes conducted through a sewer system, including such treatment processes as may be provided. As such, applicability of the PSD program was evaluated including both the OOWWTP and the IWWTP/WRF (i.e., the Facility). OCDWEP plans to request enforceable permit limits if necessary to avoid PSD permitting.

2.3.2 Facility Classification

Since the area is either in attainment or unclassified for all pollutants, Prevention of Significant Deterioration (PSD) could potentially apply (as opposed to nonattainment New Source Review) to the Facility under New Source Review (NSR) requirements. Since the entire state of New York is included in the OTR, the PSD major source permitting thresholds for NOx and VOC are reduced. Permit classification thresholds are summarized in Table 3, below.

Table 3. Permit Classification Thresholds in Tons per Year (Potential Emissions)

PERMIT TYPE	VOC	NOx	CO	SO_2	PM	HAP
Registration	Not exempt or trivial, high toxicity air contaminant less than thresholds in Table 1 (Subpart 201-9), and not subject to State Facility Permit or Title V Permit					
State Facility Permit	25	50	50	50	50	10/25
Title V Permit	50	100	100	100	100	10/25
PSD Permit	50	100	250	250	250	10/25

OCDWEP's intent is to maintain minor source classification and plans to request federally enforceable limits if necessary to avoid Title V and PSD Permitting. PTE will be further refined as the IWWTP concept design is advanced, and the OOWWTP upgrades are further designed.

2.4 Emission Calculations and Facility Classification

Emission estimations were performed for combustion sources only. Potential emissions from combustion sources associated with the Project were estimated based on conservate emission factors to identify the magnitude of emissions for use in defining the likely classification for permitting purposes. As the design progresses, these conservative emission factors may be replaced with more representative factors as more relevant information such as vendor emissions guarantees become available.

Emissions estimates are included in Attachment B. An equipment summary is presented in Table B-1. Criteria pollutant emissions from natural gas-fired combustion equipment are included in Table B-2. Criteria pollutant emissions from dual-fired (i.e., natural gas and biogas) combustion equipment are included in Table B-3. Criteria pollutant emissions from the flare (i.e., biogas) are included in Table B-4. Hazardous Air Pollutant (HAP) emissions from natural gas-fired combustion equipment are included in Table B-5. HAP emissions from the natural gas-fired emergency generator are included in Table B-6. HAP emissions from dual-fired (i.e., natural gas and biogas) combustion equipment are included in Table B-7. HAP pollutant

emissions from the flare (i.e., biogas) are included in Table B-8. Facility-wide emissions of criteria pollutants and HAPs are presented in Table B-9.

Process emissions of volatile organic compounds (VOCs) from the IWWTP and emissions of odorous compounds from the OOWWTP have not yet been quantified, as design is still in the conceptual phase. Odorous compounds from proposed processes at OOWWTP will be captured and controlled. Emissions estimates and control efficiencies will be included in the air permit application. Based on a review of the proposed IWWTP effluent provided by Micron, two HAPs and VOC constituents were identified but no High Toxicity Air Contaminants (HTACs) were identified. Emissions of VOC and HAP from the IWWTP are not expected to be appreciable but will be quantified and included in the air permit application.

2.5 Applicable State Regulations

2.5.1 6 CRR-NY 201-5 State Facility Permits

OCDWEP intends to remain a minor source of air emissions and plans to apply for an Air Facility State Permit (ASF Permit). In accordance with 6 CRR-NY 201-7.1, OCDWEP intends to request federally enforceable permit limits to avoid Title V/PSD permitting by limiting the facility's potential to emit (PTE) to less than Title V/PSD thresholds. Permit conditions limiting emissions may include equipment specifications like low NOx burners and operating limits (e.g., throughput or fuel consumption limitations). Once a permit is obtained, construction must begin within 18 months of permit issuance under 6 CRR-NY 201-1.15.

2.5.2 6 CRR-NY 211 General Prohibitions

2.5.2.1 6 CRR-NY 211.1 Air Pollution Prohibited

Emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property are prohibited under 6 CRR-NY 211.1. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others. OCDWEP intends to comply with all appliable air quality regulations.

2.5.2.2 6 CRR-NY 211.2 Visible Emission Standards

Emissions having an opacity equal to or greater than 20 percent (six-minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity are prohibited under 6 CRR-NY 211.2. OCDWEP intends to comply with all appliable air quality regulations including the visible emission limitation.

2.5.3 6 CRR-NY 212 Process Operations

6 NYCRR-Part 212 applies to process emission sources that are not excepted under Section 212-1.4. Project emission sources that are subject to Part 212 include the proposed biological nutrient removal, decarbonization processes, and odor sources.

Process operation is defined under 6 NYCRR Part 212-1.2 (18) as

> *"any industrial, institutional, commercial, agricultural or other activity, operation, manufacture or treatment in which chemical, biological and/or physical properties of the material or materials are changed, or in which the material(s) is conveyed or stored without changing the material(s) if the conveyance or storage system is equipped with a vent(s) and is non-mobile, and that emits air contaminants to the outdoor atmosphere. A process operation does not include an open fire, operation of a combustion installation, or incineration of refuse other than by-products or wastes from a process operation(s)."*

Process emission sources do not include equipment that combust fuel for electricity or space heating for commercial, industrial plants or residential heating (DAR-1).

Combustion installation is defined under 6 NYCRR Part 200.1(l) as

> *"an installation, consisting of a single furnace, device, engine or turbine in which fossil fuel, wood, and/or other solid, liquid, or gaseous fuel is burned with air or oxygen and the air contaminant emissions include only those products resulting from:*
> *(1) Combustion of the fuel*
> *(2) Additives or impurities in the fuel*
> *(3) Material introduced for the purpose of altering air contaminant emissions."*

Exceptions under 212-1.4 include (among others):

(i) process emission sources with emissions of oxides of sulfur, only with respect to oxides of sulfur emissions attributable solely to sulfur in fuel.

(m) process emission sources with emissions of carbon monoxide (CO) or VOCs produced attributable solely to incomplete combustion of any fuel, except where material is heated, burned, combusted or otherwise chemically changed under oxygen deficient conditions by design.

(r) process emission sources with respect to emissions of NO_x produced by catalytic or thermal oxidizers used as air pollution control equipment.

Emission Standards

6 CRR-NY 212-1.5 (e)(1): A process emission source subject to a Federal New Source Performance Standard (NSPS) under 40 CFR part 60 (see table 1, section 200.9) satisfies the requirements of this Part for the respective air contaminant regulated by the Federal standard if the facility owner or operator can demonstrate that the facility is in compliance with the relevant Federal regulation (212-1.5 (e) (1)).

6 CRR-NY 212-1.5 (e)(2): A process emission source subject to the Federal National Emission Standards for Hazardous Air Pollutants (NESHAP) under 40 CFR part 61 or part 63 satisfies the requirements of this Part for the respective air contaminant regulated by the Federal standard if the facility owner or operator can demonstrate that the process emission source is in compliance with the relevant Federal regulation and, for those NESHAPs regulating HTACs found in section 212-2.2, table 2 – high toxicity air contaminant list, of this Part, provide a Toxic Impact Assessment (TIA) demonstrating that the maximum offsite ambient air concentration is less than the annual guidance concentration (AGC) or short-term guidance concentration (SGC) or meeting the mass emission limit identified in Section 212-2.2, Table 2. Either compliance option must have actual emissions less than the Presumptive BACT trigger for the respective air contaminant.

Limits under 6 NYCRR part 212.2.1(a):

High Toxicity Air Contaminants

For an air contaminant listed in section 212-2.2 Table 2 (the HTAC list), the facility must either limit actual annual emissions from all process operations at the facility so as to not exceed the mass emission limit listed for the individual HTAC, or demonstrate compliance with the air cleaning requirements for the HTAC as specified in subdivision 212-2.3(b), Table 4 (degree of air cleaning required for non-criteria air contaminants), for the environmental rating assigned to the contaminant by the department.

Based on the initial list of wastewater constituents provided by Micron (Summary of Chemical Average and Peak Concentrations and Mass Rate), no HTACs were identified.

Degree of Air Cleaning Required

Under 6 CRR-NY 212.2.1(b) for any air contaminant not listed on Table 2 (i.e., HTAC List), unless it is a solid particulate described in subdivision 6 CRR-NY 212.2.1(c), the facility must not allow emissions of to violate

the requirements specified in subdivision 212-2.3(a), Table 3 (degree of air cleaning required for criteria air contaminants), or subdivision 212-2.3(b), table 4, as applicable, for the environmental rating assigned to the contaminant by the department.

In some cases, air dispersion modeling is required to evaluate whether offsite concentrations are less than the respective National Ambient Air Quality Standard (NAAQS) reported as the design value of the criteria pollutant or that the modeled maximum offsite air concentration is less than the applicable AGC or SGC. Depending on the nature and magnitude of emissions, a Best Available Control Technology (BACT) or Toxics Best Available Control Technology (T-BACT) evaluation [6 CRR-NY 212-1.5(d)] is required.

The proposed natural gas boilers and engines are exempt from Part 212 compliance evaluation as combustion installations (excluded from the definition of process operations). However, the following two proposed processes must be included in a Part 212 Compliance Evaluation:

1. IWWTP:
    a. Influent wastewater contains certain VOCs (e.g., isopropyl alcohol) and nitrogen species. VOCs are expected to degrade in the treatment process however emissions are expected to be negligible.
    b. During anoxic wastewater treatment, nitrates in the wastewater will be denitrified, flow by gravity to the aerobic tank where organics will be degraded, and ammonia will be nitrified. Primary emissions from this process are expected to include nitrous oxide (N_2O) and carbon dioxide. Emissions of ammonia-nitrogen are expected to be negligible given the near neutral pH and low aeration rate.
2. OOWWTP: Biogas will be generated during anaerobic digestion of municipal biosolids and combusted on-site to produce process heat.

Emissions from the treatment processes will be quantified and included in the Part 212 compliance evaluation submitted with the air permit application.

2.5.4 6 CRR-NY 227-1 Stationary Combustion Installations

6 CRR-NY 227-1 establishes requirements for stationary combustion installations; however, the rule does not apply to units subject to NSPS and/or NESHAP where the PM emission standard for the NESHAP is as or more stringent than that in Part 227.

The two natural gas-fired boilers located at the IWWTP will be subject to NSPS Subpart Dc and the emergency generator will be subject to NSPS Subpart JJJJ. However, Subpart JJJJ does not include a PM standard and the PM standard in Subpart Dc does not apply to gaseous-fired boilers, so the limit in 227-1 will apply (0.1 lb/MMBtu).

2.5.5 6 CRR-NY 231 New Source Review for New and Modified Facilities

2.5.5.1 6 CRR-NY 231.7 Prevention of Significant Deterioration

The requirements of this Subpart apply in attainment areas of the State to the construction and/or operation of:

1. Any proposed facility which has the potential to emit a regulated NSR contaminant (i.e., criteria pollutants) in an amount that equals or exceeds the applicable major facility threshold, in table 5 of Subpart 231-13, for that contaminant; or
2. A modification to an existing non-major facility which has a project emission potential for any regulated NSR contaminant that equals or exceeds the applicable major facility threshold, in table 5 of Subpart 231-13, for that contaminant.

6 CRR-NY-231-7.6 requires Best Available Control Technology (BACT) analysis for all new and modified equipment at major sources.

The facility intends to request enforceable permit limits to less than major source thresholds and as such will not be subject to this part.

2.5.5.2 – 6 CRR-NY 231.12 Air Quality Impact Analysis

Proposed new major stationary sources in attainment areas must demonstrate that allowable emission increases from the proposed facility will not, at a minimum, cause or contribute to air pollution in violation of the following:

1. Any NAAQS in any air quality control region.
2. Any applicable maximum allowable PSD increment increase over the baseline concentration in any area, as defined in 6 CRR-NY 231-12.2 (c)(3).
3. Quantified air quality related values including visibility for the applicable Federal class I areas.

Under 6 CRR-NY 231-12.3, prior to submitting an application for a PSD permit accordance with Subpart 231-7 and Subpart 231-8, the applicant must provide an analysis of air quality monitoring data in the area that the proposed new facility would affect for each regulated NSR contaminant that would have the potential to emit in an amount equal to or greater than the applicable significant project threshold in table 6 of 6 CRR-NY 231-13.

OCDWEP intends to request enforceable permit limits to less than major source thresholds and as such will not be subject to this part.

2.5.6 6 CRR 242 CO_2 Budget Trading Program

This rule applies to electric generating units (i.e., fossil fuel-fired stationary boiler, combustion turbine, or combined cycle system) serving an electricity generator exceeding 15 megawatts of electricity (Mwe). No proposed units exceed 15 MWe and therefore this rule does not apply.

2.5.7 6 CRR 243 CSAPR NOx Ozone Season Group 2 Trading Program

Applicability for this program is defined in 40 CFR 97.804 as including any stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine serving at any time, on or after January 1, 2005, a generator with nameplate capacity of more than 25 MWe producing electricity for sale. The facility is not proposing such equipment and therefore this part does not apply.

2.5.8 6 CRR 244 CSAPR NOx Annual Trading Program

Applicability for this program is defined at 40 CFR 97.404 as including any stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine serving at any time, on or after January 1, 2005, a generator with nameplate capacity of more than 25 MWe producing electricity for sale. The facility is not proposing such equipment and therefore this part does not apply.

2.5.9 6 CRR-NY 257 Air Quality Standards

Under 6 CRR-NY 257-1.4 emissions of contaminants that cause or contribute to contravention of air quality standards is not allowed. Additionally, notwithstanding the existence of specific standards, emissions of odorous, toxic, or deleterious substances in concentrations or of such duration that will affect human health or well-being, or unreasonably interfere with the enjoyment of property, or unreasonably and adversely affect plant or animal life shall not be permitted. Equipment selection and design for the proposed Project will include appropriate controls, if deemed necessary during design to comply with the standards of this part including sulfur dioxide standards under 6 CRR-NY 257-2, particulate standards under 6 CRR-NY 257-3, and hydrogen sulfide standards under 6 CRR-NY 257-5.

2.5.10 Climate Leadership and Community Protection Act (CLCPA)

The goal of New York's CLCPA is to achieve net zero greenhouse gas (GHG) emissions. Interim goals are to achieve a 40% reduction from 1990 levels by 2030 and an 85% reduction by 2050. NYSDEC has begun to (and will continue to) prepare policy documents which provide guidance to facilities permitting new equipment or modifying or renewing an existing air permit application. Two existing policy documents potentially apply to the project: DAR-21 (implementing CLCPA 7(2)) and DEP 24-1 (implementing CLCPA 7(3)). The applicability of these policies to the proposed Project is discussed below.

DAR-21: The Climate Leadership and Community Protection Act and Air Permit Applications

DAR-21 is a policy document issued by the NYSDEC establishing requirements for new, modified, or renewed ASF, Title V permit applications, and certain registrations (at the discretion of DEC) to quantify direct, upstream, downstream, and indirect GHG emissions associated with the project. This policy requires the NYSDEC to consider whether approval of an air permit application is consistent with, or will interfere with, the attainment of the statewide GHG emissions limits established by the CLCPA.

The Project is a new facility that is intended to be permitted as a synthetic minor source under an ASF permit. Therefore, applicable direct, upstream, downstream, and indirect GHG emissions produced by the Project will be quantified and included in the air permit application. Because the Project is new, the Facility's emissions are considered an increase, and the air permit application must provide a description of alternatives and/or GHG mitigation measures that could be implemented to limit emissions.

The following items are required to be included in the DAR-21 analysis:

- Direct potential and projected actual GHG emission estimates from the Project.
- The Project's GHG potential and projected actual carbon dioxide equivalent (CO_2e) emissions using the 20-year global warming potentials provided in 6 NYCRR 496.5.
- The Project's GHG emissions from the use of electricity generated in State by fossil fuel combustion and/or electricity imported into NYS. These calculations do not need to include emissions from the use of non-fossil fuels and are to use emission factors provided in the most recent version of NYDEC's *Emission Factors for Use by State Agencies and Applicants*.
- GHG emissions from foreseeable downstream and indirect emissions that occur within NYS. The policy does not include downstream GHG emissions from shipment or end-use of commercial goods or products produced for sale. Therefore, it is anticipated that downstream GHG emissions from the sale of the products produced by the facility are not required to be included. However, the Project will result in other indirect GHG emissions that will need to be quantified including emissions from truck traffic and employee commutes.
- Projected future GHG and CO_2e emissions for the year 2050 and any proposed future emissions reduction strategies.
- A discussion of the technical and economic feasibility of alternatives and/or GHG mitigation measures to address GHG emissions increases.

If the NYSDEC considers the proposed Project inconsistent with goals of the CLCPA, the NYSDEC must provide justification for the project and identify alternatives or GHG mitigation measures to be implemented by the project. This may require the project to provide an additional submission to include further justification of the project and identified alternatives.

DEP 24-1. Permitting and Disadvantaged Communities

DEP 24-1 is a policy document issued by NYSDEC that implements Section 7(3) of the CLCPA effective January 1, 2020. In accordance with Section 7(3) of the CLCPA, State agencies, offices, authorities, and divisions must not disproportionately burden disadvantaged communities (DAC) and must prioritize

reductions of greenhouse gas emissions and co-pollutants in disadvantaged communities when issuing permits, licenses, and other administrative approvals and decisions.

The permit application review process described in DEP-24-1 applies to all major permit applications that involve sources and activities that result in direct or indirect GHG or co-pollutant emissions. Under this policy, co-pollutants are defined as HAPs produced by sources of GHG emissions; for this Project those units which combust fuel would result in co-pollutant emissions. Under 6 CRR-NY 621.2 (r) major project means any action requiring a permit identified in section 621.1 of this Part, which is specifically defined as major, or which is not specifically defined as minor in section 621.4 of this Part. 6 CRR-NY 621.4(g) identifies PSD permit applications, Title V permit applications, projects requiring emission reduction credits, and projects requiring the use of a federally enforceable emission cap (i.e., synthetic minor permits) as major projects. This project is expected to be permitted as a synthetic minor source and therefore review under this policy is required.

Emissions sources which directly or indirectly impact DACs are subject to more stringent standards under this policy. DAC are defined in the CLCPA as communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate- income households. The criteria which identify DAC for CLCA purposes was finalized by the Climate Justice Working Group (CJWG) on March 27, 2023.

The CJWG defined DACs within the State of New York based on geographic, public health, environmental hazard, and socio-economic criteria. Areas defined as DACs are reviewed and updated periodically and are available to view in graphical format online (https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria). The area where the plant is proposed to be located was identified as census tract 36067011300 using the online interface. This tract is not identified as a DAC and is more than five miles from the nearest identified DAC. Although DEP 24-1 states that air quality modeling results could be utilized to identify whether a project would impact DACs more than one-half mile away, it is not specifically required.

Based on a preliminary review, it appears that the requirements of DEP 24-1 (CLCPA 7(3)) do not currently apply to the Project. However, the County is requesting concurrence from the Division of Air Resources.

2.6 Applicable Federal Regulations

2.6.1 New Source Performance Standards (40 CFR Part 60)

2.6.1.1 Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators)

This subpart applies to fossil-fuel-fired steam generating units and fossil-fuel and wood-residue-fired steam generating unit of more than 73 megawatts (MW) heat input rate (250 million British thermal units per hour (MMBtu/hr)) constructed after August 17, 1971.

The proposed boilers have heat inputs less than 250 MMBtu/hr and therefore this part does not apply.

2.6.1.2 Subpart Da (Standards of Performance for Electric Utility Steam Generators)

This subpart applies is each electric utility steam generating unit that is capable of combusting more than 73 megawatts (MW) (250 million British thermal units per hour (MMBtu/hr)) heat input of fossil fuel (either alone or in combination with any other fuel) and was constructed after September 18, 1978. The proposed boilers have heat inputs less than 250 MMBtu/hr and therefore this part does not apply.

2.6.1.3 Subpart Db Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

This subpart applies to steam generating unit constructed after June 19, 1984 with a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

The proposed boilers have heat inputs less than 100 MMBtu/hr and therefore this part does not apply.

2.6.1.4 Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units)

This subpart applies to steam generating units constructed after June 9, 1989 with a heat input capacity of 29 MW (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

The two natural gas fired boilers proposed at the IWWTP are subject to this part, however several of the requirements do not apply since the units are gaseous-fired. Requirements include:

- Submit an Initial Notification.
- Maintain fuel supplier certification including the supplier name, potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input, the method used to determine the potential sulfur emissions rate of the fuel.
- Maintain records of monthly fuel use.

2.6.1.5 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines)

The primary requirement for owners and operators of emergency stationary spark ignition (SI) internal combustion engines manufactured after July 1, 2008, is to purchase an engine certified to the emission standard.

As described in paragraphs (d)(1) through (3) of the subpart, operation of an emergency use engine is limited to: emergency use, maintenance and testing purposes, and for up to 50 hours per year under non-emergency situations. The subpart does not contain a limit on the number of hours an engine can be operated for emergency purposes. Emergency stationary internal combustion engines may be operated for up to 100 hours per year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The allowance of 50 hours of non-emergency use is included within the 100 hours allowed for maintenance purposes.

2.6.2 National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)

2.6.2.1 Subpart E National Emission Standard for Mercury

The provisions of this subpart are set forth in 40 CFR 61.50 and are applicable to those stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge.

Sludge dryer is defined in 40 CFR 61.51(m) and means a device used to reduce the moisture content of sludge by heating to temperatures above 65 °C (ca. 150 °F) directly with combustion gases.

The proposed IWWTP does not include a sludge dryer or incinerator. The proposed biosolids management process at OOWWTP includes a sludge dryer. As stated in the BODR, the recommended heat source will be a boiler equipped with a heat exchanger to avoid direct heating with exhaust gas.

This subpart does not apply because the facility does not process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge. This will need to be readdressed following final design to confirm Subpart E does not apply.

2.6.3 National Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR Part 63)

2.6.3.1 Subpart VVV Publicly Owned Treatment Works

As set forth in 40 CFR 63.1580, Publicly Owned Treatment Works (POTWs) regulated under Subpart VVV include Group 1 POTWs (including both area and major sources) and Group 2 POTWs that are major sources of HAP that are either required to develop and implement a pretreatment program as defined by 40 CFR 403.8, or meet the general criteria for development and implementation of a pretreatment program. Group 1 and Group 2 POTWs are defined under 40 CFR 63.1595 as follows:

- *Group 1 POTW* means a POTW that accepts a waste stream regulated by another NESHAP and provides treatment and controls as an agent for the industrial user. The industrial user complies with its NESHAP by using the treatment and controls located at the POTW. For example, an industry discharges its benzene-containing waste stream to the POTW for treatment to comply with 40 CFR part 61, subpart FF—National Emission Standard for Benzene Waste Operations. This definition does not include POTW treating waste streams not specifically regulated under another NESHAP.
- *Group 2 POTW* means a POTW that does not meet the definition of a Group 1 POTW. A Group 2 POTW can treat a waste stream that is either:
    (1) Not specifically regulated by another NESHAP, or
    (2) From an industrial user that complies with the specific wastewater requirements in their applicable NESHAP prior to discharging the waste stream to the POTW.

OCDWEP's intent is to permit the facility as an area source (i.e., a true minor or synthetic minor source of HAP) and not a major source of HAP. OCDWEP does not intend to provide treatment and controls as an agent for any industrial user who will comply with any NESHAP by using the treatment and controls located at the POTW. Therefore, Subpart VVV does not apply to this facility, as proposed.

2.6.3.2 Subpart ZZZZ Stationary Reciprocating Internal Combustion Engines

The emergency generator will be subject to this rule. Per 40 CFR 63.6590(c), compliance with 40 CFR Part 60 subpart JJJJ satisfies the requirements of Subpart ZZZZ.

2.6.3.3 Subpart JJJJJJ—Industrial, Commercial, and Institutional Boilers Area Sources

This part applies to industrial, commercial, and institutional boilers located at an area source of HAP. Section 40 CFR 63.11195(e) of Subpart JJJJJJ exempts gas-fired boilers. This subpart defines gas-fired boilers as any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel. Therefore, this subpart does not apply to the proposed boilers.

2.6.4 Chemical Accident Prevention Provisions (40 CFR 68)

Applicability of the provisions under this program is defined at 40 CFR 68.10 as including any stationary source that has more than a threshold quantity of a regulated substance in a process. Table 1 in 40 CFR 68.130 provides a list of regulated toxics (including methane) and threshold quantities. If a regulated substance exceeds a threshold quantity in any one process, then the stationary source must determine the

Program Level (Program 1, 2, or 3) of each affected process. Regardless of the program level of the processes, a five-year accident history must be completed for each process and a Risk Management Plan (RMP) must be submitted that covers all applicable processes. Depending on the program level of each of the processes, additional requirements must be complied with (varying levels of hazard assessment, prevention and emergency response, and management requirements).

A flammable substance listed in 40 CFR §68.130 is excluded from these regulations if the substance is used as a fuel or held for sale as a fuel at a retail facility (§68.126). EPA coordinates with the Occupational Safety and Health Administration (OSHA) in interpreting and applying the definition of "fuel" for the purposes of this subpart and in the applicability of the subpart. For example, the Clean Air Act does not define the term "fuel," but OSHA has given ''fuel'' its ordinary meaning in applying its fuel-related exemptions under its Process Safety Management program. Webster's Ninth New Collegiate Dictionary (1990) defines fuel as "a material used to produce heat or power by burning." EPA uses this common definition of the term when deciding whether the exclusion at 40 CFR Part 68.126 applies to a process. Therefore, if methane contained in biogas generated by the facility is combusted on-site in boilers and thermal dryers, it is likely exempt under RMP standards. If the biogas is not being combusted on site (e.g., it is sold to a utility), the exemption from the RMP program does not apply.

Note, the definition of fuel above suggests that biogas combusted in flares may not be classified as fuel and therefore may not be exempt from the RMP program. Therefore, OCDWEP must quantify the maximum quantity of methane stored on site for comparison to the applicability threshold to understand whether further analysis and interpretation is needed.

2.6.5 Mandatory Greenhouse Gas Reporting (40 CFR Part 98 and 6 NYCRR 253)

Mandatory greenhouse reporting under 40 CFR 98 is required for any facility located in the United States that meets any of the following requirements:

- A facility which contains any source category listed in Table A-3 of the regulation.
- Facilities listed in Table A-4 of the subpart which emit 25,000 metric tons CO_2e or more per year in combined emissions from stationary fuel combustion units, miscellaneous uses of carbonate, and all applicable source categories that are listed in Table A-3 and Table A-4.
- A facility that meets the following:
  - The facility does not meet the requirements of either of the bullets above.
  - The aggregate maximum rated heat input capacity of the stationary fuel combustion units at the facility is 30 mmBtu/hr or greater.
  - The facility emits 25,000 metric tons CO_2e or more per year in combined emissions from all stationary fuel combustion sources.

The facility does not contain any source categories listed in Table A-3 of the subpart, however the proposed IWWTP project is one of the categories listed in Table A-4 of the subpart, industrial wastewater treatment. If the facility's GHG emissions exceed the 25,000 metric ton CO2e threshold, the facility will be required to provide an annual GHG report that covers stationary fuel combustion sources, miscellaneous use of carbonates, and the IWWTP. It should be noted that per 98.30(b), "stationary fuel combustion sources" does not include emergency generators or flares, and thus these sources should not be included in the threshold evaluation or annual GHG report (if required).

In addition to the federal GHG reporting requirements, NYSDEC has proposed more stringent GHG reporting thresholds (6 NYCRR Part 253). Under this proposed Regulation, facilities with GHG emissions of 10,000 metric tons CO2e or more would be required to report their emissions to the State of New York.

GHG will be quantified and included in the air permit application with an applicability evaluation for these rules.

Section 3: Summary

The contents of this document apply to the current project as proposed, based on conceptual engineering, and will assist in the preparation of an air permit application. OCDWEP plans to submit an ASF permit application for the proposed project, based on preliminary engineering, around November/December 2025. As design progresses and details of equipment selection are more defined, the permit requirements included in this write-up will be re-visited and updated as necessary.

Attachment A: Equipment Specifications and Process Flow Diagrams

IWWTP Boiler Specifications

IWWTP Emergency Generator Ratings

IWWTP Conceptual Simplified Process Flow Diagram

OOWWTP Process Flow Diagram

MODEL FLX

Packaged Watertube Boiler - 5 Pass Hot Water

1.5 MMBTU/hr - 12.0 MMBTU/hr

Dimensions and Ratings

Figure 1. FLX HW Dimension Drawing

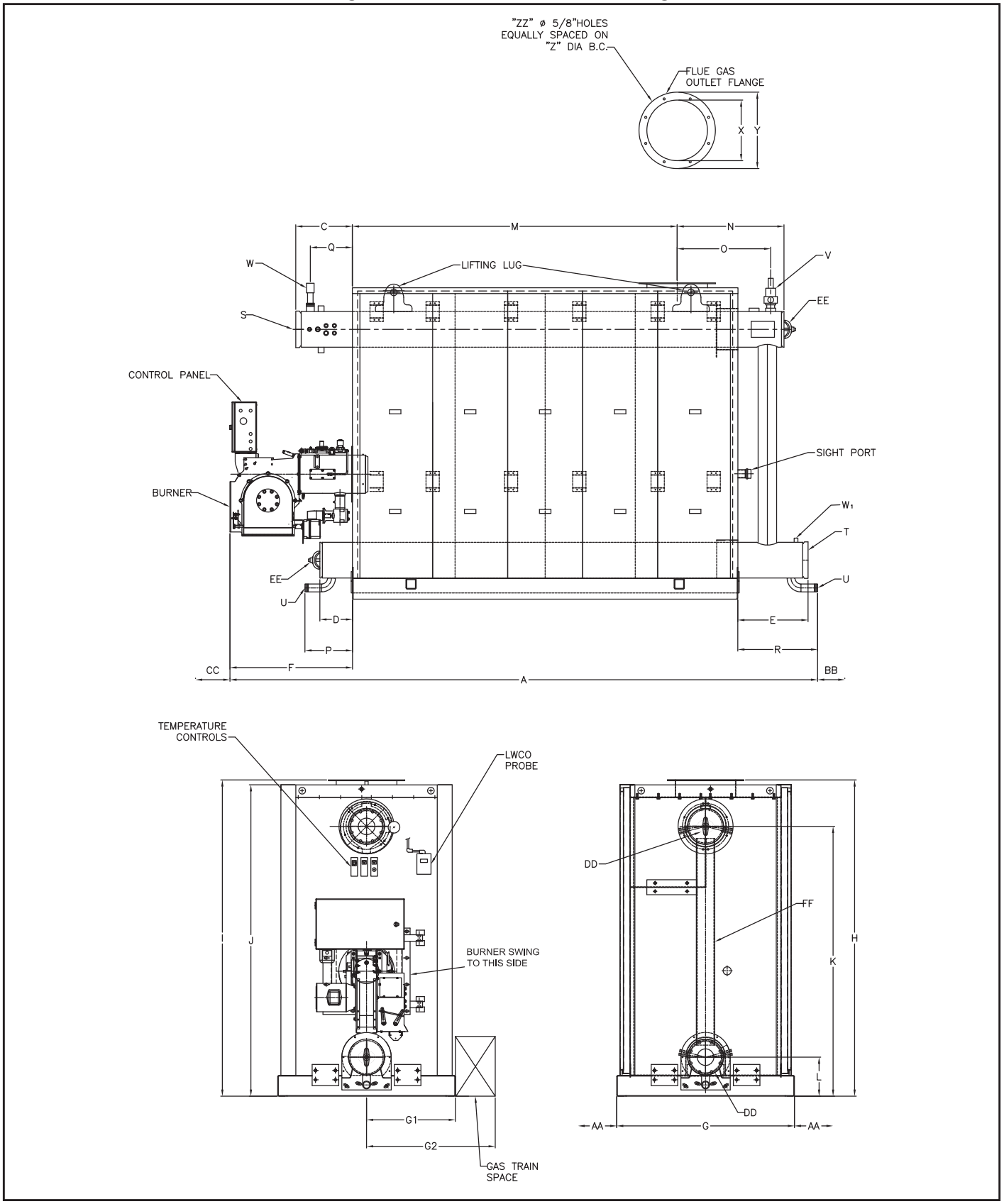

Table 2. FLX HW Dimensions Sizes 550-1200

		BOILER SIZE [SEE NOTE 1]							
		550	600	700	800	900	1000	1100	1200
LENGTHS Inches	**Dim.**								
Overall Length of Boiler	**A**	146	153	174	174	174	206	206	206
Boiler Base Frame	**B**	95	95	116	116	116	140	140	140
Front Extension Upper	**C**	17	17	17	17	17	17	17	17
Front Extension Lower	**D**	11	11	11	11	11	12	12	12
Rear Extension Lower	**E**	21	21	21	21	21	22	22	22
Burner Extension	**F**	31	37	37	37	37	44	44	44
WIDTHS Inches									
Boiler Base Frame [Note	**G**	48	48	54	54	54	54	54	54
Centerline to Casing	**G_1**	24	24	27	27	27	27	27	27
Centerline to outside Gas	**G_2**	36	36	39	39	39	39	39	39
HEIGHTS Inches									
Base to Stack Flange	**H**	86	86	95	95	95	95	95	95
Base to Lifting Lug	**I**	86	86	95	95	95	95	95	95
Base to Top of Casing	**J**	85	85	94	94	94	94	94	94
Base to Supply Nozzle	**K**	73	73	81	81	81	81	81	81
Base to Return Nozzle	**L**	10	10	10	10	10	12	12	12
LOCATIONS Inches									
Flue Outlet Centerline	**M**	81	81	102	102	102	122	122	122
Rear Extension Upper	**N**	28	28	28	28	28	33	33	33
Safety Valves	**O**	24	24	24	24	24	29	29	29
Bottom Drain see Note 3	**P**	15	15	15	15	15	15	15	15
Boiler Air Vent	**Q**	13	13	13	13	13	7	7	7
Bottom Drain Rear see	**R**	24	24	24	24	24	19	19	19
PIPING CONNECTIONS									
Supply Nozzle [Note 4]	**S**	6 FLG	6 FLG	6 FLG	6 FLG	6 FLG	8 FLG	8 FLG	8 FLG
Return Nozzle [Note 4]	**T**	6 FLG	6 FLG	6 FLG	6 FLG	6 FLG	8 FLG	8 FLG	8 FLG
Bottom Drain see Note 2	**U**	2 @ 2	2 @ 2	2 @ 2	2 @ 2	2 @ 2	2 @ 2	2 @ 2	2 @ 2
Safety Valves, 30 psig	**V**	2½	2½	2 @ 2½	2 @ 2½	2 @ 2½	2 @ 2½	2 @ 2½	2 @ 2½
Safety Valves, 60 psig	**V**	2	2	2½	2½	2½	2½	2½	2½
Safety Valves, 125 psig	**V**	1½	1½	1½	1½	1½	1½	1½	1½
Safety Valves, 160 psig	**V**	1¼	1¼	1½	1½	1½	1½	1½	1½
Boiler Air Vent	**W**	1	1	1	1	1	1	1	1
Tapping for optional	**W_1**	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Flue Gas ID	**X**	16	16	18	18	18	24	24	24
Flue Gas Outlet Flange	**Y**	21	21	23	23	23	29	29	29
Flange Bolt Circle	**Z**	18½	18½	20½	20½	20½	26½	26½	26½
Number of holes in bolt	**ZZ**	6	6	8	8	8	8	8	8
MINIMUM SERVICE									
Tube removal each side	**AA**	34	34	40	40	40	40	40	40
Rear service area	**BB**	24	24	24	24	24	24	24	24
Front service area -	**CC**	40	40	40	40	45	45	45	45
PERIPHERAL DATA									
Upper/Lower Drum OD	**DD**	10-3/4"	10-3/4"	10-3/4"	10-3/4"	10-3/4"	10-3/4"	10-3/4"	10-3/4"
Handhole Inspection	**EE**	4" x 5"	4" x 5"	4"x 5"	4" x 5"	4" x 5"	4"x 5"	4" x 5"	4" x 5"
Rear Downcomer (NPS)	**FF**	5	5	5	5	5	5	5	5

NOTES:

1. For Btu/hr input rating, multiply model designation by 10,000.
2. Add 4" to each side of the base frame dimension to account for optional seismic anchor pads.
3. For Models 150 to 350 a single drain connection is provided at the front bottom drum; for Models 400 and greater, an additional drain
4. Supply and return nozzle flanges are 150# Flat Face.
5. Standard safety valve setting is 160 psig and options for reduced settings are noted.

Table 4. FLX HW Ratings Sizes 600-1200

Boiler SIZE	600	700	800	900	1000	1100	1200
Ratings [Notes A and B]							
Output Btu/hr	4,786,925	5,590,325	6,393,725	7,197,125	8,000,525	8,803,925	9,607,325
Output Kcal/Hr	1,206,348	1,408,812	1,611,276	1,813,740	2,016,204	2,218,668	2,421,132
Output kW	1,403	1,638	1,874	2,109	2,345	2,580	2,816
Output Boiler Horsepower	143	167	191	215	239	263	287
Approximate Fuel Consumption [Input - Note B]							
Natural Gas [ft^3/hr] - 180 F Supply Water	5,699	6,735	7,703	8,671	9,639	10,607	11,575
Natural Gas Therms/Hour - 180 F Supply Water	57.0	67.4	77.0	86.7	96.4	106.1	115.8
Natural Gas [m^3/hr] - 82C Water Supply	161.37	190.72	218.13	245.54	272.95	300.36	327.77
Propane Gas [ft^3/hr] - 180 F Supply Water	2,279	2,694	3,081	3,468	3,856	4,243	4,630
Propane Gas [m^3/hr] - 82C Water Supply	64.54	76.29	87.25	98.21	109.18	120.14	131.11
No.2 Oil Fuel - gph, 180 F Supply Water	40.7	47.0	53.7	60.5	68.0	74.9	81.7
No.2 Oil Fuel - liters/hour, 82C Water Supply	153.9	177.6	203.1	228.6	257.2	283.0	308.8
Power Requirements - Uncontrolled Emissions [Notes A and C]							
Blower Motor HP - Gas Firing	5	5	5	7.5	10	10	15
Blower Motor kW - Gas Firing	3.73	3.73	3.73	5.595	7.46	7.46	11.19
Blower Motor HP - Oil or Combination	5	5	5	7.5	10	10	15
Blower Motor kW - Oil or Combination	3.73	3.73	3.73	5.595	7.46	7.46	11.19
Oil Pump for Oil or Combination	0.75	0.75	1	1.5	1.5	1.5	1.5
Oil Pump for Oil or Combination	0.5595	0.5595	0.746	1.119	1.119	1.119	1.119
Minimum Ampacity - Standard							
Blower Motor - Gas, 230/3/60	15.2	15.2	15.2	22	28	28	42
Blower Motor - Oil or Combination, 230/3/60	15.2	15.2	15.2	22	28	28	42
Blower Motor - Gas, 460/3/60	7.6	7.6	7.6	11	14	14	17
Blower Motor - Oil or Combination, 460/3/60	7.6	7.6	7.6	11	14	14	17
Blower Motor - Gas, Oil or Combination, 400/3/50	8	8	8	12	16	16	16
Blower Motor - Gas, 575/3/60	6.1	6.1	6.1	9	11	11	17
Blower Motor - Oil or Combination, 575/3/60	6.1	6.1	6.1	9	11	11	17
Remote Oil Pump, [230]460/3/60	[3.2] 1.6	[3.2] 1.6	[4.2] 2.1	[6] 3	[6] 3	[6] 3	[6] 3
Remote Oil Pump, 575/3/60	1.3	1.3	1.7	2.4	2.4	2.4	2.4
Control Circuit @115/1/60	1.7	1.7	1.7	1.9	1.9	1.9	2.4
Weights							
Operating Weight, lbs.	7,600	10,500	10,500	10,500	12,300	12,300	12,300
Operating Weight, kg	3,447	4,763	4,763	4,763	5,579	5,579	5,579
Water Content Normal, gallons	180	240	240	240	276	276	276
Water Content Normal, liters	681	908	908	908	1,045	1,045	1,045
Water Content Flooded, gallons	180	240	240	240	276	276	276
Water Content Flooded, liters	681	908	908	908	1045	1045	1045
Shipping Weight, approximate lbs.	6,100	8,500	8,500	8,500	10,000	10,000	10,000
Shipping Weight, approximate kg	2,767	3,856	3,856	3,856	4,536	4,536	4,536

Notes:

A. Ratings shown for elevation to 1000 Feet. For ratings above 1000 Feet, contact your local Cleaver-Brooks Representative.

B. Input calculated with Nat. Gas @ 1000 Btu/ft^3, Propane @ 2500 Btu/ft^3, and Oil @ 140,000Btu/gal.

C. Standard Motors meet the requirements of UL & NEMA and include the following:

Open drip proof design	NEMA Design "B"
1.15 Service Factor	Ball Bearing
Class "B" Insulation	Continuous Duty, 40^0 C ambient

October, 2015

e-mail: info@cleaverbrooks.com
Web address: http://www.cleaverbrooks.com

Cat® Gas Generator Set

Ratings Summary

50 Hz Natural Gas[1] Continuous

Model	rpm	Emission Level (Nox)[2]		Aftercooler Temperature		Electric Power[3] @ 1.0 pf	Efficiency[4]		
		mg/Nm³	g/bhp-hr	°C	°F	kWe	Electrical %	Thermal %	Total %
G3412C	1500	885	2.0	54	130	370	37.4	47.3	84.7
CG132B-8	1500	500	1.0	45	113	400	43.0	43.7	86.7
CG132B-12	1500	500	1.0	45	113	600	43.2	44.8	88.0
CG132B-16	1500	500	1.0	45	113	800	43.4	44.7	88.1
G3516	1500	834	2.0	54	130	983	34.8	48.3	83.0
CG132B-16	1500	500	1.0	45	113	1000	41.5	47.0	88.0
CG170-12	1500	500	1.0	60	140	1000	43.0	45.4	88.4
CG170-12	1500	500	1.0	40	104	1125	40.7	45.8	86.5
CG170-12	1500	500	1.0	40	104	1200	43.6	43.3	86.9
CG170B-12	1500	500	1.0	40	104	1380	45.0	42.3	87.3
CG170-16	1500	500	1.0	40	104	1500	40.8	46.4	87.2
G3512H	1500	500	1.0	54	130	1500	44.9	42.1	87.0
CG170-16	1500	500	1.0	40	104	1560	43.2	43.8	87.0
G3516C	1500	500	1.0	54	130	1603	40.0	46.5	86.5
CG170B-16	1500	500	1.0	40	104	1840	44.7	42.6	87.3
G3520C	1500	500	1.0	54	130	1976	40.2	46.6	86.8
CG170-20	1500	500	1.0	38	100	2000	44.4	42.5	86.9
G3520C	1500	500	1.0	54	130	2010	40.4	46.1	86.5
G3516H	1500	500	1.0	48	118	2027	45.3	41.3	86.6
CG170B-20	1500	500	1.0	54	130	2300	45.0	42.3	87.3
G3520H	1500	500	1.0	48	119	2519	45.4	40.9	86.3
CG260-12	1000	500	1.0	40	104	3333	43.6	42.9	86.5
CG260-16	1000	500	1.0	40	104	4300	43.8	43.0	86.8
CG260-16	1000	500	1.0	40	104	4500	44.3	43.5	87.8

50 Hz Biogas, Landfill Gas, Sewage Gas [1)]

Model	rpm	Emission Level (Nox) [2)]		Aftercooler Temperature		Electric Power [3)] @ 1.0 pf	Efficiency [4)]		
		mg/Nm³	g/bhp-hr	°C	°F	kWe	Electrical %	Thermal %	Total %
G3412	1500	7051	19.9	–	–	174	27.4	62.0	89.4
CG132B-8	1500	500	1.0	45	113	400	42.8	42.2	85.0
CG132B-12	1500	500	1.0	45	113	600	42.9	42.8	85.7
CG132B-16	1500	500	1.0	45	113	800	43.1	42.6	85.7
CG170-12	1500	500	1.0	60	140	1000	42.6	44.1	86.7
G3516A	1500	500	1.0	54	130	1041	32.1	47.0	79.1
G3516A	1500	500	1.0	54	130	1105	36.8	41.5	78.3
CG170-12	1500	500	1.0	50	122	1200	43.0	42.7	85.7
CG170B-12	1500	500	1.0	45	113	1380	43.6	42.7	86.3
CG170-16	1500	500	1.0	50	122	1560	42.6	42.9	85.5
CG170B-16	1500	500	1.0	45	113	1840	43.6	42.7	86.3
G3520C	1500	500	1.0	54	130	1984	39.4	41.4	80.5
CG170-20	1500	500	1.0	50	122	2000	43.0	43.2	86.2
CG170B-20	1500	500	1.0	50	122	2300	43.6	42.6	86.2
CG260-16	1000	500	1.0	40	104	3770	43.0	39.8	82.8

Gas Generator Set
Product Ratings Summary

60 Hz Natural Gas[1] Continuous

Model	rpm	Emission Level (Nox)[2]		Aftercooler Temperature		Electric Power[3] @ 1.0 pf	Efficiency[4]		
		mg/Nm³	g/bhp-hr	°C	°F	kWe	Electrical %	Thermal %	Total %
G3412	1800	8566	22.1	–	–	253	30.3	60.9	91.2
CG132B-8	1800	500	1.0	45	113	400	42.0	45.2	87.2
G3412	1800	10624	25.7	54	130	403	33.4	54.3	87.7
G3412C	1800	800	1.9	54	130	453	35.3	47.1	82.4
CG132B-12	1800	500	1.0	45	113	600	42.2	45.9	88.1
CG132B-16	1800	500	1.0	45	113	800	42.4	45.7	88.1
CG170-12	1500	500	1.0	40	104	1125	40.4	45.8	86.2
CG170-12	1500	500	1.0	40	104	1200	43.4	43.2	86.6
G3512H	1500	500	1.0	54	130	1500	44.6	42.0	86.6
CG170-16	1500	500	1.0	40	104	1500	40.4	46.4	86.8
CG170-16	1500	500	1.0	40	104	1560	43.0	43.8	86.8
G3516C	1800	443	1.0	54	130	1675	37.7	48.4	86.1
CG170-20	1500	500	1.0	40	104	2000	43.4	43.3	86.7
G3516H	1500	500	1.0	48	119	2008	45.0	41.1	86.1
G3520C	1800	446	1.0	54	130	2077	37.3	49.4	86.7
G3520H	1500	500	1.0	48	119	2500	45.4	41.0	86.4
CG260-12	900	500	1.0	40	104	3000	43.9	42.1	86.0
CG260-16	900	500	1.0	40	104	4000	43.8	42.4	86.2
CG260-16	900	500	1.0	40	104	4050	44.3	42.6	86.9

60 Hz Natural Gas[1] Standby

Model	rpm	Emission Compliance	kWe @ 0.8 pf	NFPA 110 Compliant	Max Load Step %	UL2200
DG175-1 GC	1800	US EPA Stationary Emergency Certified	175	Yes	100	Yes
DG200-1 GC	1800	US EPA Stationary Emergency Certified	200	Yes	100	Yes
DG230-1 GC	1800	US EPA Stationary Emergency Certified	230	Yes	100	Yes
DG250-1 GC	1800	US EPA Stationary Emergency Certified	250	Yes	100	Yes
DG275-1 GC	1800	US EPA Stationary Emergency Certified	275	Yes	100	Yes
DG300-1 GC	1800	US EPA Stationary Emergency Certified	300	Yes	100	Yes
DG350-1 GC	1800	US EPA Stationary Emergency Certified	350	Yes	100	Yes
DG400-1 GC	1800	US EPA Stationary Emergency Certified	400	Yes	100	Yes
DG450-1 GC	1800	US EPA Stationary Emergency Certified	450	Yes	100	Yes
G3412C	1800	NSPS Compliant Capable[5]	500	No	100	No
G3412	1800	US EPA Stationary Emergency Certified	500	Yes	100	Yes
G3512	1800	US EPA Stationary Non-Emergency Certified	750	Yes	100	Yes
G3512	1800	US EPA Stationary Non-Emergency Certified	1000	Yes	100	Yes
G3516	1800	US EPA Stationary Emergency Certified	1500	Yes	100	Yes
G3520	1800	US EPA Stationary Non-Emergency Certified	2000	Yes	100	Yes
G3520	1800	US EPA Stationary Non-Emergency Certified	2500	Yes	100	Yes

Gas Generator Set
Product Ratings Summary

60 Hz Biogas, Landfill Gas, Sewage Gas [1)]

Model	rpm	Emission Level (Nox) [2)]		Aftercooler Temperature		Electric Power [3)] @ 1.0 pf	Efficiency [4)]		
		mg/Nm³	g/bhp-hr	°C	°F	kWe	Electrical %	Thermal %	Total %
G3412	1800	7051	16.4	–	–	194	26.5	62.9	89.4
CG132B-8	1800	500	1.0	45	113	400	41.7	43.3	85.0
CG132B-12	1800	500	1.0	45	113	600	41.7	43.6	85.3
CG132B-16	1800	500	1.0	45	113	800	41.9	43.3	85.2
G3516A	1200	500	1.0	54	130	824	31.0	47.7	78.7
G3516A	1200	396	0.9	54	130	1012	38.4	37.8	76.2
CG170-12	1500	500	1.0	50	122	1200	42.8	42.5	85.3
CG170-16	1500	500	1.0	50	122	1560	42.3	42.8	85.1
G3520C	1200	439	1.0	54	130	1622	39.8	40.9	80.8
G3520C	1500	500	1.0	54	130	1936	39.1	41.4	80.5
CG170-20	1500	500	1.0	50	122	2000	42.7	43.2	85.9
CG260-16	900	500	1.0	40	104	3510	43.2	38.5	81.7

Notes:

[1)] Bio Gases at LHV = 18.0-23.3 MJ/Nm³ (457 to 593 Btu/cu.ft); MN=130-134. Natural Gas at 34.56 MJ/Nm³ (905 Btu/cu.ft); MN = 80.

[2)] Emissions are based on the engine operating at steady state conditions and adjusted to the specified NOx level at 100% load. Values are engine out without exhaust aftertreatment and subject to nominal tolerance based on fuel, site and operating conditions.

[3)] Power output based on ISO 3046/1 conditions.

[4)] Electrical efficiency based on 1.0 pf, ISO 3046/1. Thermal efficiency based on nominal tolerance (+/-8% for CG line, +/- 10% for G3300/3400/3500/GCM34 line). Thermal efficiency includes heat rejection from jacket water circuit and exhaust gas at LHV to 120ºC (CG series using Bio Gas: 150ºC for CG 132/170, 180ºC for CG260).

[5)] NSPS Compliant Capable with addition of three-way catalyst or oxidation catalyst.

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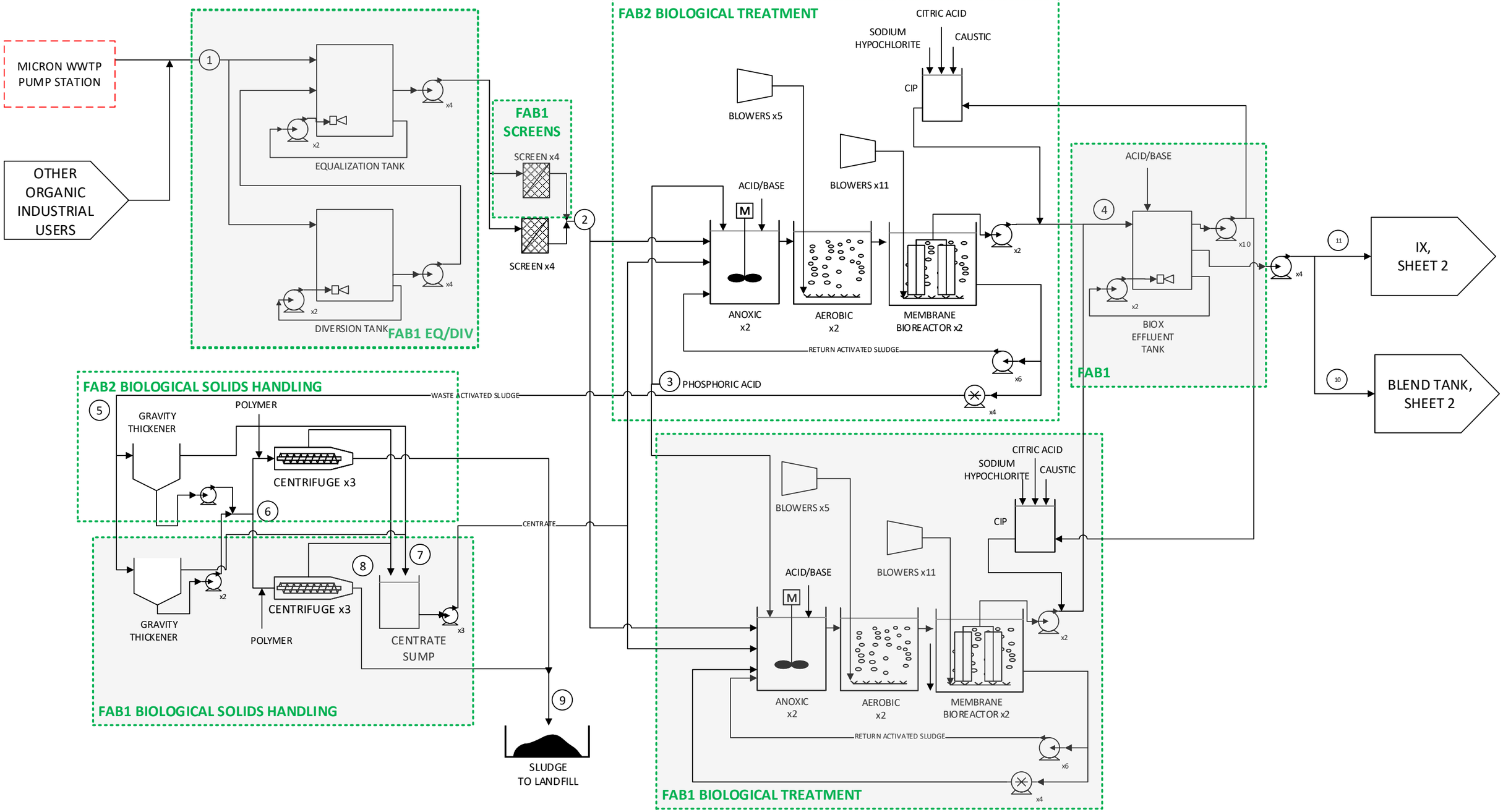


PRELIMINARY NOT FOR CONSTRUCTION RECORDATION, CONVEYANCE, SALES, OR PERMIT ISSUANCE

NOTES:
1. NOT TO SCALE

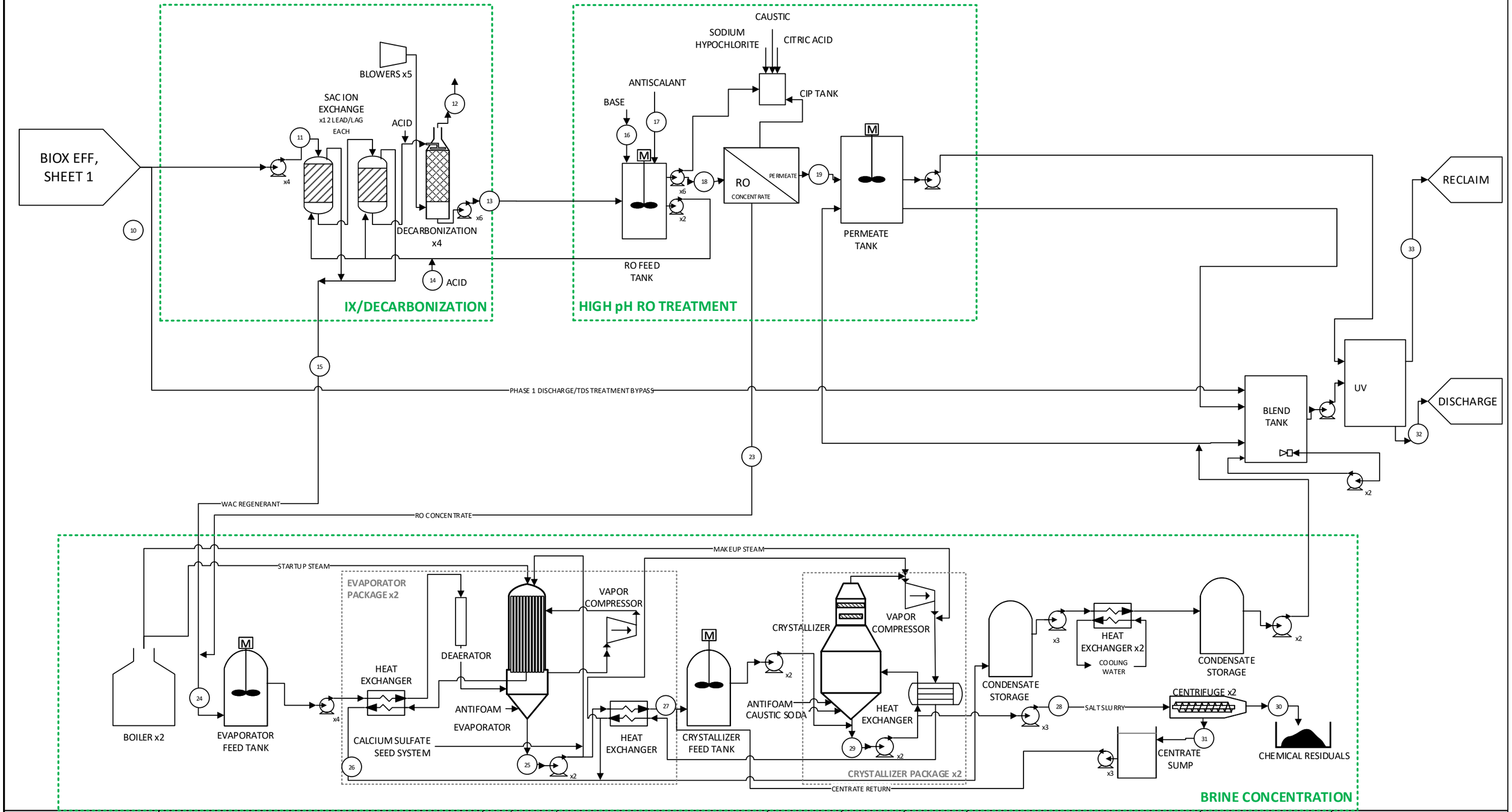
REV	DATE	DESCRIPTION	DRAWN/ENG	CHECKED	APPROVED
0	01/16/2025	CONCEPT FOR DISCUSSION			
1	05/19/2025	REVISED FOR CONCEPT DEVELOPMENT			

Brown AND Caldwell

Onondaga County Water Redevelopment Corporation

Industrial Wastewater Treatment and Water Reclamation Facility (IWWTPWRF)
FIGURE D-1: CONCEPTUAL ALTERNATIVE 11 SIMPLIFIED PROCESS FLOW DIAGRAM

SHEET 1	REV
	1



PRELIMINARY NOT FOR CONSTRUCTION RECORDATION, CONVEYANCE, SALES, OR PERMIT ISSUANCE

NOTES:
1. NOT TO SCALE

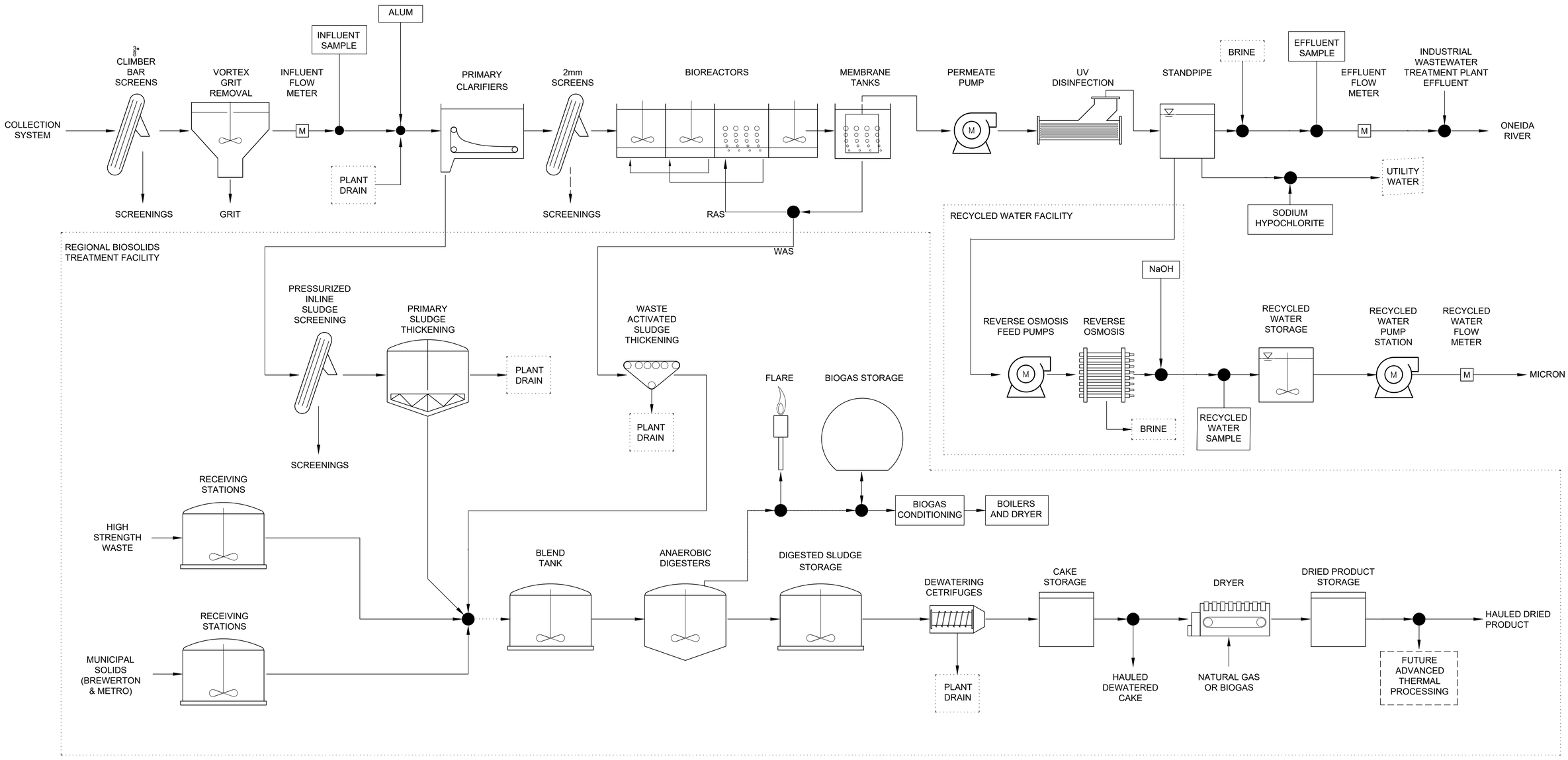
REV	DATE	DESCRIPTION	DRAWN/ENG	CHECKED	APPROVED
0	01/16/2025	CONCEPT FOR DISCUSSION			
1	05/19/2025	REVISED FOR CONCEPT DEVELOPMENT			

Brown AND Caldwell

Industrial Wastewater Treatment and Water Reclamation Facility (IWWTPWRF)
FIGURE D-1: CONCEPTUAL ALTERNATIVE 11 SIMPLIFIED PROCESS FLOW DIAGRAM

Onondaga County Water Redevelopment Corporation

SHEET 2	REV
	1



REV	DATE	BY	DESCRIPTION
			25% DESIGN SUBMITTAL NOT FOR CONSTRUCTION

DESIGNED CE
DRAWN CE
CHECKED
DATE JUNE 2025

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Onondaga County Department of WATER ENVIRONMENT PROTECTION

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION

OOWWTP EXPANSION PROGRAM - UPGRADES AND BIOSOLIDS FACILITY

GENERAL

PROCESS FLOW DIAGRAM

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 203580-60000
DRAWING NO. 00G09
SHEET NO. 02 OF XX

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Attachment B: Emissions Calculations

Table B-1. Equipment Summary Industrial and Oak Orchard Wastewater Treatment Plants					
Plant	**Equipment**	**Heat Input**	**Fuel**	**Criteria Emissions**	**HAP Emissions**
IWTP	Duty Boiler	12 MMBtu/hr	Natural Gas	Table B-2	Table B-5
IWTP	Back up Boiler	12 MMBtu/hr	Natural Gas	Table B-2	Table B-5
OOWTP	Duty Boiler #1	5 MMBtu/hr	NG & DG	Table B-3	Table B-7
OOWTP	Duty Boiler #2	5 MMBtu/hr	NG & DG	Table B-3	Table B-7
OOWTP	Back up Boiler	5 MMBtu/hr	NG & DG	Table B-3	Table B-7
IWTP	Emergency Generator	4500 kWe	Natural Gas	Table B-2	Table B-6
OOWTP	Flare	235 scfm	Digester Gas	Table B-4	Table B-9
OOWTP	Sludge Dryer	10 MMBtu/hr	NG & DG	Table B-3	Table B-7
OOWTP	HVAC Equipment	15.3 MMBtu/hr	Natural Gas	Table B-2	Table B-5
IWTP	HVAC Equipment	12.282 MMBtu/hr	Natural Gas	Table B-2	Table B-5

Table B-2.
Potential Emissions Estimates - Criteria Pollutant - Natural Gas Combustion Units
Industrial and Oak Orchard Wastewater Treatment Plants

EMISSION FACTORS	Pollutant and unit of Measure	NO_X lb/MMscf	CO lb/MMscf	PM lb/MMscf	SO_2 lb/MMscf	VOC lb/MMscf
	Factor	100	84	7.6	0.6	5.5
	AP-42 Table	1.4-1, 1998	1.4-1, 1998	1.4-2, 1998	1.4-2, 1998	1.4-2, 1998

EXTERNAL COMBUSTION DEVICE	HEAT INPUT (BTU/hr)	MAXIMUM FUEL CONSUMPTION (MMscf/yr)	NOx EMISSIONS (tpy)	CO EMISSIONS (tpy)	PM EMISSIONS (tpy)	SO_2 EMISSIONS (tpy)	VOC EMISSIONS (tpy)
IWTP Boiler- Duty	12,000,000	103	5.15	4.33	0.39	0.03	0.28
IWTP Boiler- Back up	12,282,000	105	5.27	4.43	0.40	0.03	0.29
IWTP - Facility Heat	15,342,840	132	6.59	5.53	0.50	0.04	0.36
OOWTP - Facility Heat	12,282,000	105	5.27	4.43	0.40	0.03	0.29
MAXIMUM TOTAL (tpy)			22	19	1.69	0.13	1.23

Notes:
1. Natural gas Higher Heating Value is 1020 Btu/scf per AP-42 Table 1.4-1.
2. Boiler emissions estimates are based on AP-42 as a conservative estimate. When final boiler selection is complete, this estimate should be updated based on vendor specifications. The industrial wastewater treatment plant intends to install two boilers--one operating as duty, one for back up. However, potential emissions are based on two boilers operating 8,760 hours per year.
3. Oak Orchard Wastewater Treatment Plant (OOWTP) and Industrial Wastewater Treatment Plant (IWTP) total HVAC heat input rating is based on the estimated peak natural gas demand for building heat of 15,042 and cubic feet per hour (IWTP) and 12,282 MBH (OOWTP). Potential emissions are based on operating at this demand 8,760 hours per year. Actual natural gas combustion for heating is expected to be less.
3. Based on the projected facility-wide emissions, low NOx burners may be required to maintain emissions less than the major source threshold.
4. The SO_2 emission factor for natural gas combustion is based on 100% conversion of fuel sulfur to SO2 and assumes sulfur content is natural gas of 2,000 grains/10^6 scf. (per AP-42 Chapter 1.4).
5. Abbreviations include Oxides of Nitrogen (NOx), Carbon monoxide (CO), Particulate Matter (PM), Sulfur Dioxide (SO_2), Volatile Organic Compounds (VOC), Carbon Dioxide (CO_2), Nitrous Oxide (N_2O), Regenerative Thermal Oxidizer (RTO), million (MM), British Thermal Unit (Btu), Carbon Dioxide Equivalents (CO_2e), Standard Cubic Feet (scf), pound per year (lb/yr), tons per year (tpy).

EMISSION FACTORS	Pollutant and unit of Measure	NO_X lb/MMBtu	CO lb/MMBtu	PM lb/MMBtu	SO_2 lb/MMBtu	VOC lb/MMBtu
	Factor	4.08	0.56	9.99E-03	5.88E-04	1.18E-01
	AP-42 Table	3.2-2, 2024	3.2-2, 2024	3.2-2, 2024	3.2-2, 2024	3.2-2, 2024

INTERNAL COMBUSTION DEVICES	POWER RATING (HP)	BRAKE SPECIFIC FUEL CONSUMPTION (Btu/hp-hr)	NOx EMISSIONS (tpy)	CO EMISSIONS (tpy)	PM EMISSIONS (tpy)	SO_2 EMISSIONS (tpy)	VOC EMISSIONS (tpy)
IWWTP Emergency Generator	6,868	7,000	49.04	6.69	0.12	0.007	1.42

Notes:
1. The emergency generator calculations assume a brake specific fuel consumption (BSFC) value of 7,000 Btu/hp-hr per AP-42, table 3.4-1 for dual fuel engines (95% natural gas and 5% diesel fuel). 4,500 kWe was converted to kW mechanical based on an 87.8% efficiency. Emissions calculations will be updated with the engine's actual BSFC once an engine has been selected (the actual BSFC is expected to be lower than the current value which will reduce emissions estimates).
2. Emergency generator potential to emit is based on 500 hours per year of operation per the U.S. EPA memo titled Calculating Potential to Emit (PTE) for Emergency Generators, dated September 6, 1995.
3. The electrical output of 4,500 kilowatt (kWe) was converted to brake horsepower (HP) based on 87.8% efficiency and 1.34 hp/kW.
4. AP-42 Table 3.2-2 offers two NOx emission factors for 4-stroke lean burn engines: one for 90-105% load and another for less than 90% load. For a conservative estimate, the larger emission factor for 90-105% load is used to determine maximum potential emissions.
5. AP-42 Table 3.2-2 offers two CO emission factors for 4-stroke lean burn engines: one for 90-105% load and another for less than 90% load. For a conservative estimate, the larger emission factor for less than 90 load is used to determine maximum potential emissions.
6. The PM emission factor includes both condensable and filterable PM.

Table B-3.
Potential Emissions Estimates - Criteria Pollutant - Digester gas / Natural Gas Combustion Units
Oak Orchard Wastewater Treatment Plant

FUEL	HEAT CONTENT (Btu/scf)	MAX FUEL USE (MMscf/hr)	POLLUTANT AND UNIT OF MEASURE	NO_X lb/MMscf	CO lb/MMscf	PM lb/MMscf	SO_2 lb/MMscf	VOC lb/MMscf
Natural Gas	1020	0.0049	Factor	100	84	7.6	0.6	5.5
			AP-42 Table	1.4-1, 1998	1.4-1, 1998	1.4-2, 1998	1.4-2, 1998	1.4-2, 1998

DUAL FUEL COMBUSTION DEVICE	HEAT INPUT (BTU/hr)	MAX FUEL USE (MMscf/hr)	MAX FUEL USE (MMscf/yr)	NOx EMISSIONS (tpy)	CO EMISSIONS (tpy)	PM EMISSIONS (tpy)	SO_2 EMISSIONS (tpy)	VOC EMISSIONS (tpy)
OOWTP Digester Boiler 1 - Duty	5,000,000	0.0049	43	2.1	1.8	0.16	0.01	0.12
OOWTP Digester Boiler 2 - Duty	5,000,000	0.0049	43	2.1	1.8	0.16	0.01	0.12
OOWTP Digester Boiler 3 - Stand by	5,000,000	0.0049	43	2.1	1.8	0.16	0.01	0.12
OOWTP Sludge Dryer	10,000,000	0.0098	86	4.3	3.6	0.33	0.03	0.24
MAXIMUM TOTAL (tpy)				10.7	9.0	0.82	0.06	0.59

FUEL	Heat Content (Btu/scf)	Maximum Daily DG Fuel Use (MMscf/hr)	Pollutant and unit of Measure	NO_X lb/MMscf	CO lb/MMscf	PM lb/MMscf	SO_2 lb/MMscf	VOC lb/MMscf
Biogas	600		Factor	58.8	49.41	4.47	499	3.24
			Source	SDACPD B11 Boiler Digester Gas Fired Uncontrolled (except SO2, calculated below)				

DUAL FUEL COMBUSTION DEVICE	HEAT INPUT (BTU/hr)	Maximum Daily DG Fuel Use (MMscf/hr)	MAXIMUM FUEL CONSUMPTION (MMscf/yr)	NOx EMISSIONS (tpy)	CO EMISSIONS (tpy)	PM EMISSIONS (tpy)	SO_2 EMISSIONS (tpy)	VOC EMISSIONS (tpy)
OOWTP Digester Boiler 1 - Duty	5,000,000	0.0083	73	2.1	1.8	0.16	18.21	0.12
OOWTP Digester Boiler 2 - Duty	5,000,000	0.0083	73	2.1	1.8	0.16	18.21	0.12
OOWTP Digester Boiler 3 - Stand by	5,000,000	0.0083	73	2.1	1.8	0.16	18.21	0.12
OOWTP Sludge Dryer	10,000,000	0.0167	146	4.3	3.6	0.33	36.41	0.24
MAXIMUM TOTAL (tpy)				10.7	9.0	0.82	91	0.59

CONSTITUENT	CONCENTRATION (%)	CONCENTRATION (ppm)	GAS CONSTANT (ft^3-atm / lbmol-R)	MOLECULAR WEIGHT (lb/lb-mol)	TEMPERATURE (Rankine)	GAS CONTENT (lb/MMSCF)[7]	EMISSION FACTOR (lb/MMSCF as SO_2)
H_2S	0.3	3,000	0.7302	34.08	527.67	265	499

NOTES:
1. Three boilers are proposed, two duty and one standby. However, PTE was estimated based on all 3 operating 8,760 hours per year.
2. PTE was estimated based on combusting each fuel a maximum capacity and selecting the worst case emissions.
4. Natural gas Higher Heating Value is 1020 Btu/scf per AP-42 Table 1.4-1.
5. Digester gas Higher Heating Value is 600 Btu/scf per SDAPCD Emission Factors for Digester Gas.
6. Sulfur dioxide from digester gas combustion is estimated based on an expected maximum H2S concentration in the biogas of 3,000 ppm, 68°F (per NYDES), and 100% H2S conversion to SO_2, as a conservatice estimate.
7. lb/mmscf = [ppm] x [lbmol-R/atm-ft^3] x [lb/lbmol] x [atm / R] x [10^6 scf / mmscf]

Table B-4.
Potential Emissions - Criteria - Flare
Oak Orchard Wastewater Treatment Plant

Natural Gas - Pilot Light	
Fuel Content - HHV (Btu/scf)	1,020
Maximum Fire Rate (SCF/hr)	70
Maximum Fuel Consumption (MMBTU/yr)	625

Digester Gas	
Fuel Content - HHV (Btu/scf)	600
Maximum Digester Gas Flared (scfm)	305
Maximum Digester Gas Flared (MMscf/yr)	160

Emissions Calculations

Pollutant	Pilot - Natural Gas [9]				Digester Gas [10]			
	Emission Factor	Emission Factor Source	Maximum Emission Rate		Emission Factor	Emission Factor Source	Expected Emission Rate	
	lb/MMBTU		lb/yr	ton/yr	lb/MMscf		lb/yr	ton/yr
Criteria Pollutant								
NO_X	0.068	AP-42 Table 13.5-1	42.53	0.02	48.00	SDAPCD Emission Factor Tables F02: Flares, Digester Gas Fired, Enclosed; Rev 2021 (except SO2)	7,695	3.85
CO	0.37		231.4	0.12	1.80		289	0.14
SO_X	0.0005	See Footnote 8	0.3294	1.65E-04	499		79,960	40.0
PM	0.017	AP-42 Table 2.4-5 Rev. Aug 2024 [7]	10.42	0.00521	12.00		1,924	0.96
PM	0.017		10.42	0.00521	12.00		1,924	0.96
PM	0.017		10.42	0.00521	12.00		1,924	0.96
VOC	0.00388	AP-42 Table 13.5-1	2.43	0.00121	12.10		1,940	0.97

NOTES:
1. Natural gas Higher Heating Value is 1020 Btu/scf per AP-42 Table 1.4-1.
2. Digester gas Higher Heating Value is 600 Btu/scf per SDAPCD Emission Factors for Digester Gas.
3. SO2 emissions were estimated based on a maximum H2S content in digester gas of 3,000 ppm, complete conversion from H2S to SO2, and the molar ratios of H2S to SO2.
4. The maximum natural gas consumption for the pilot is based on the maximum fuel consumption rate of 70 standard cubic feet per hour (scf/hr) (based on the EPA Flares Cost Manual, Chapter 7 (August 2019 edition) Section 1.3.5 Pilot Gas Requirement), 8,760 hours per year and the heat content of the fuel.
5. The maximum digester gas flared is based on the instantaneous peak generation rate of 305 standard cubic feet per minute (scfm) per project design criteria, 24 hours per day (hpd), and 365 days per year. However, the annual average gas generation is less than 305 scfm. The nameplate capacity is expected to reflect the maximum instantaneous peak generation rate.
7. The particulate matter (PM10) emission factor for the natural-gas-fired pilot is from AP-42 chapter 2, Table 2.4-5; (May 2025). The factor, 17 pounds per million standard cubic feet (lb/MMSCF) was converted to pounds per million British Thermal Units (lb/MMBTU) based on the heat content and methane content of the fuel.
8. The Sulfur Dioxide (SO2) emission factor for natural gas is based on the expected upper range of sulfur content in pipeline quality natural gas (i.e., 2,000 grains H2S/ 10^6 cubic feet natural gas)
9. Potential flare emission calculations do not include emissions associated with the natural gas-fired pilot because the calculations assume the flare combusts digester gas 8,760 hours/year and the pilot will not continue to burn once the flare is lit and actively burning digester gas. Therefore, the flare emissions cited in the Facility Wide Emissions Summary are based on the combustion of digester gas only.

Table B-5.
Potential Emissions - Hazardous Air Pollutant - Natural Gas External Combustion Devices
Industrial and Oak Orchard Wastewater Treatment Plant

Fuel Information	
Fuel	Natural Gas
Fuel Higher Heating Value (Btu/scf) [2]	1,020
Operating Hours (hr/yr)	8,760

HEAT INPUT (MMBtu/hr)			
12	12	15.34284	12.3

Hazardous Air Pollutant Emissions from Natural Gas Combustion								
Pollutant	CAS	Number of Boilers [1]	Emission Factor	Emission Factor Reference	IWTP Duty Boiler	IWTP Back Up Boiler	IWTP Building Heat	OOWTP Building Heat
			lb/MMscf		ton/yr	ton/yr	ton/yr	ton/yr
2-Methyl-naphthalene	91-57-6		2.40E-05		1.24E-06	1.24E-06	1.58E-06	1.27E-06
3-Methyl-cholanthrene	56-49-5		1.80E-06		9.28E-08	9.28E-08	1.19E-07	9.49E-08
7,12-Dimethyl-benz(a)-anthracene	POM		1.60E-05		8.24E-07	8.24E-07	1.05E-06	8.44E-07
Acenaphthene	83-32-9		1.80E-06		9.28E-08	9.28E-08	1.19E-07	9.49E-08
Acenaphthylene	203-96-8		1.80E-06		9.28E-08	9.28E-08	1.19E-07	9.49E-08
Anthracene	120-12-7		2.40E-06		1.24E-07	1.24E-07	1.58E-07	1.27E-07
Benz(a)-anthracene	56-55-3		1.80E-06		9.28E-08	9.28E-08	1.19E-07	9.49E-08
Benzene	71-43-2		2.10E-03		1.08E-04	1.08E-04	1.38E-04	1.11E-04
Benzo(a)pyrene	50-32-8		1.20E-06		6.18E-08	6.18E-08	7.91E-08	6.33E-08
Benzo(b)-fluoranthene	205-99-2		1.80E-06		9.28E-08	9.28E-08	1.19E-07	9.49E-08
Benzo(g,h,i)-perylene	191-24-2		1.20E-06		6.18E-08	6.18E-08	7.91E-08	6.33E-08
Benzo(k)-fluoranthene	207-08-9		1.80E-06	AP-42 Table 1.4-3 Rev. July 1998	9.28E-08	9.28E-08	1.19E-07	9.49E-08
Chrysene	218-01-9		1.80E-06		9.28E-08	9.28E-08	1.19E-07	9.49E-08
Dibenzo(a,h)-anthracene	53-70-3		1.20E-06		6.18E-08	6.18E-08	7.91E-08	6.33E-08
Dichloro-benzene	25321-22-6		1.20E-03		6.18E-05	6.18E-05	7.91E-05	6.33E-05
Fluoranthene	206-44-0		3.00E-06		1.55E-07	1.55E-07	1.98E-07	1.58E-07
Fluorene	86-73-7		2.80E-06		1.44E-07	1.44E-07	1.84E-07	1.48E-07
Formaldehyde	50-00-0		7.50E-02		3.86E-03	3.86E-03	4.94E-03	3.96E-03
Hexane	110-54-3		1.80E+00		9.28E-02	9.28E-02	1.19E-01	9.49E-02
Indeno (1,2,3-cd) pyrene	193-39-5		1.80E-06		9.28E-08	9.28E-08	1.19E-07	9.49E-08
Naphthalene	91-20-3		6.10E-04		3.14E-05	3.14E-05	4.02E-05	3.22E-05
Phenanthrene	85-01-8		1.70E-05		8.76E-07	8.76E-07	1.12E-06	8.97E-07
Pyrene	129-00-0		5.00E-06		2.58E-07	2.58E-07	3.29E-07	2.64E-07
Toluene	108-88-3		3.40E-03		1.75E-04	1.75E-04	2.24E-04	1.79E-04
Arsenic	7440-38-2		2.00E-04		1.03E-05	1.03E-05	1.32E-05	1.05E-05
Beryllium	7440-41-7		1.20E-05	AP-42 Table 1.4-4 Rev. July 1998	6.18E-07	6.18E-07	7.91E-07	6.33E-07
Cadmium	7440-43-9		1.10E-03		5.67E-05	5.67E-05	7.25E-05	5.80E-05
Chromium	7440-47-3		1.40E-03		7.21E-05	7.21E-05	9.22E-05	7.38E-05
Cobalt	7440-48-4		8.40E-05		4.33E-06	4.33E-06	5.53E-06	4.43E-06
Lead	7439-92-1		5.00E-04	AP-42 Table 1.4-2 Rev. July 1998	2.58E-05	2.58E-05	3.29E-05	2.64E-05
Manganese	7439-96-5		3.80E-04		1.96E-05	1.96E-05	2.50E-05	2.00E-05
Mercury	7439-97-6		2.60E-04	AP-42 Table 1.4-4 Rev. July 1998	1.34E-05	1.34E-05	1.71E-05	1.37E-05
Nickel	7440-02-0		2.10E-03		1.08E-04	1.08E-04	1.38E-04	1.11E-04
Selenium	7782-49-2		2.40E-05		1.24E-06	1.24E-06	1.58E-06	1.27E-06
Total HAPs	N/A				0.10	0.10	0.12	0.10

Footnotes

[1] Two boilers are being installed at the OOWTP, one duty and one standby . However, PTE is based on both operating 8,760 hours per year.

[2] Natural gas Higher Heating Value is 1020 Btu/scf per AP-42 Table 1.4-1.

Table B-6.
Potential Emissions - Hazardous Air Pollutant Internal Combustion
Oak Orchard Wastewater Treatment Plant

Generator Specifications	
Generator Manufacturer, Model Number	TBD
Generator Purpose	Emergency Power
Fuel	Natural Gas
Power Rating (HP) (1)	6,868
BRAKE SPECIFIC FUEL CONSUMPTION (Btu/hp-hr)	7,000
Fuel Consumption (MMbtu/hr)	48.1
Fuel Higher Heating Value (Btu/scf)	1,020
Operating Hours (hr/yr) (2)	500

Hazardous Air Pollutant Emissions Calculations					
Pollutant	CAS No.	Emission Factor lb/MMBtu	Emission Factor Reference	Number of Generators	Emission Rate ton/yr
1,1,2,2-Tetrachloroethane	79-34-5	4.00E-05	AP-42 Table 3.2-2 Rev. October 2024	1	4.81E-04
1,1,2-Trichloroethane	79-00-5	3.18E-05			3.82E-04
1,1-Dichloroethane	75-34-3	2.36E-05			2.84E-04
1,2-Dichloroethane	107-06-2	2.36E-05			2.84E-04
1,2-Dichloropropane	78-87-5	2.69E-05			3.23E-04
1,3-Butadiene	106-99-0	2.67E-04			3.21E-03
1,3-Dichloropropene	542-75-6	2.64E-05			3.17E-04
2-Methylnaphthalene	POM	3.32E-05			3.99E-04
2,2,4-Trimethylpentane	540-84-1	2.50E-04			3.00E-03
Acenaphthene	POM	1.25E-06			1.50E-05
Acenaphthylene	POM	5.53E-06			6.65E-05
Acetaldehyde	75-07-0	8.36E-03			1.00E-01
Acrolein	75-05-8	5.14E-03			6.18E-02
Benzene	71-43-2	4.40E-04			5.29E-03
Benzo(b)fluoranthene	POM	1.66E-07			2.00E-06
Benzo(e)pyrene	POM	4.15E-07			4.99E-06
Benzo(g,h,i)perylene	POM	4.14E-07			4.98E-06
Biphenyl	92-52-4	2.12E-04			2.55E-03
Carbon Tetrachloride	56-23-5	3.67E-05			4.41E-04
Chlorobenzene	108-90-7	3.04E-05			3.65E-04
Chloroform	67-66-3	2.85E-05			3.43E-04
Chrysene	POM	6.93E-07			8.33E-06
Ethylbenzene	100-41-4	3.97E-05			4.77E-04
Ethylene Dibromide	106-93-4	4.43E-05			5.32E-04
Fluoranthene	POM	1.11E-06			1.33E-05
Fluorene	POM	5.67E-06			6.81E-05
Formaldehyde	50-00-0	5.28E-02			6.35E-01

Table B-6. Potential Emissions - Hazardous Air Pollutant Internal Combustion Oak Orchard Wastewater Treatment Plant					
Methanol	67-56-1	2.50E-03			3.00E-02
Methylene Chloride	75-09-2	2.00E-05			2.40E-04
n-Hexane	110-54-3	1.11E-03			1.33E-02
Naphthalene	91-20-3	7.44E-05			8.94E-04
PAH	POM	1.41E-04			1.69E-03
Phenanthrene	POM	1.04E-05			1.25E-04
Phenol	108-95-2	2.40E-05			2.88E-04
Pyrene	POM	1.36E-06			1.63E-05
Styrene	100-42-5	2.36E-05			2.84E-04
Perchloroethylene	127-18-4	2.48E-06			2.98E-05
Toluene	108-88-3	4.08E-04			4.90E-03
Vinyl Chloride	75-01-4	1.49E-05			1.79E-04
Xylene	1330-20-7	1.84E-04			2.21E-03
				Total:	0.87

NOTES:

1. Assumes a brake specific fuel consumption value of 7,000 Btu/hp-hr per AP-42, table 3.4-1 for dual fuel engines (95% natural gas and 5% diesel fuel).
2. Emergency generator potential to emit is based on 500 hours per year of operation per the U.S. EPA memo titled Calculating Potential to Emit (PTE) for Emergency Generators, dated September 6, 1995.
3. The electrical output of 4,500 kilowatt (kWe) was converted to brake horsepower (HP) based on 87.8% efficiency and 1.34 hp/kW.

Table B-7.
Potential Emissions - Hazardous Air Pollutant - Dual Fired External Combustion
Oak Orchard Wastewater Treatment Plant

Fuel	Dual-fired: Natural Gas & Digester Gas
Natural Gas Higher Heating Value (Btu/scf)	1,020
BioGas Higher Heating Value (Btu/scf)	600

Heat Input (MMBtu/hr)	5	5	5	10
Operating Hours (hr/yr)	8,760	8,760	8,760	8,760

Hazardous Air Pollutant Emissions Calculations

Pollutant	CAS	Natural Gas			Digester Gas			MAXIMUM Emission Factor	EMISSIONS			
		Emission Factor Reference	Emission Factor	Emission Factor	Emission Factor Reference	Emission Factor	Emission Factor		OOWTP Boiler - Duty	OOTP Boiler - Duty	OOTP Boiler Stand By	OOWTO Sludge Dryer
			lb/MMscf	lb/MMBtu		lb/MMscf	lb/MMBtu	lb/MMBtu	lb/yr	lb/yr	lb/yr	lb/yr
2-Methyl-naphthalene	91-57-6	AP-42 Table 1.4-3 Rev. July 1998	2.40E-05	2.35E-08	SDAPCD B11 Boiler Digester Gas Fired Uncontrolled	-	-	2.35E-08	1.03E-03	1.03E-03	1.03E-03	2.06E-03
3-Methyl-cholanthrene	56-49-5		1.80E-06	1.76E-09		-	-	1.76E-09	7.73E-05	7.73E-05	7.73E-05	1.55E-04
7,12-Dimethyl-benz(a)-anthracene	POM		1.60E-05	1.57E-08		-	-	1.57E-08	6.87E-04	6.87E-04	6.87E-04	1.37E-03
Acenaphthene	83-32-9		1.80E-06	1.76E-09		-	-	1.76E-09	7.73E-05	7.73E-05	7.73E-05	1.55E-04
Acenaphthylene	203-96-8		1.80E-06	1.76E-09		-	-	1.76E-09	7.73E-05	7.73E-05	7.73E-05	1.55E-04
Ammonia	7664-41-7		-	-		4.80E-03	8.00E-06	8.00E-06	3.50E-01	3.50E-01	3.50E-01	7.01E-01
Anthracene	120-12-7		2.40E-06	2.35E-09		-	-	2.35E-09	1.03E-04	1.03E-04	1.03E-04	2.06E-04
Benz(a)-anthracene	56-55-3		1.80E-06	1.76E-09		-	-	1.76E-09	7.73E-05	7.73E-05	7.73E-05	1.55E-04
Benzene	71-43-2		2.10E-03	2.06E-06		2.59E-02	4.32E-05	4.32E-05	1.89E+00	1.89E+00	1.89E+00	3.78E+00
Benzo(a)pyrene	50-32-8		1.20E-06	1.18E-09		-	-	1.18E-09	5.15E-05	5.15E-05	5.15E-05	1.03E-04
Benzo(b)-fluoranthene	205-99-2		1.80E-06	1.76E-09		-	-	1.76E-09	7.73E-05	7.73E-05	7.73E-05	1.55E-04
Benzo(g,h,i)-perylene	191-24-2		1.20E-06	1.18E-09		-	-	1.18E-09	5.15E-05	5.15E-05	5.15E-05	1.03E-04
Benzo(k)-fluoranthene	207-08-9		1.80E-06	1.76E-09		-	-	1.76E-09	7.73E-05	7.73E-05	7.73E-05	1.55E-04
Chlorobenzene	108-90-7		-	-		2.00E-04	3.33E-07	3.33E-07	1.46E-02	1.46E-02	1.46E-02	2.92E-02
Chrysene	218-01-9		1.80E-06	1.76E-09		-	-	1.76E-09	7.73E-05	7.73E-05	7.73E-05	1.55E-04
Dibenzo(a,h)-anthracene	53-70-3		1.20E-06	1.18E-09		-	-	1.18E-09	5.15E-05	5.15E-05	5.15E-05	1.03E-04
Dichloro-benzene	25321-22-6		1.20E-03	1.18E-06		1.80E-03	3.00E-06	3.00E-06	1.31E-01	1.31E-01	1.31E-01	2.63E-01
Ethylbenzene	100-41-4		-	-		1.00E-03	1.67E-06	1.67E-06	7.30E-02	7.30E-02	7.30E-02	1.46E-01
Ethylene Dichloride	107-06-2		-	-		1.40E-03	2.33E-06	2.33E-06	1.02E-01	1.02E-01	1.02E-01	2.04E-01
Fluoranthene	206-44-0		3.00E-06	2.94E-09		-	-	2.94E-09	1.29E-04	1.29E-04	1.29E-04	2.58E-04
Fluorene	86-73-7		2.80E-06	2.75E-09		-	-	2.75E-09	1.20E-04	1.20E-04	1.20E-04	2.40E-04
Formaldehyde	50-00-0		7.50E-02	7.35E-05		1.35E-01	2.25E-04	2.25E-04	9.86E+00	9.86E+00	9.86E+00	1.97E+01
Hexane	110-54-3		1.80E+00	1.76E-03		6.47E-02	1.08E-04	1.76E-03	7.73E+01	7.73E+01	7.73E+01	1.55E+02
Hydrogen Chloride	7647-01-0		-	-		6.46E-01	1.08E-03	1.08E-03	4.72E+01	4.72E+01	4.72E+01	9.43E+01
Hydrogen Sulfide	7783-06-4		-	-		2.15E-02	3.58E-05	3.58E-05	1.57E+00	1.57E+00	1.57E+00	3.14E+00
Indeno (1,2,3-cd) pyrene	193-39-5		1.80E-06	1.76E-09		-	-	1.76E-09	7.73E-05	7.73E-05	7.73E-05	1.55E-04
Methylene Chloride	75-09-2		-	-		1.00E-04	1.67E-07	1.67E-07	7.30E-03	7.30E-03	7.30E-03	1.46E-02
Naphthalene	91-20-3		6.10E-04	5.98E-07		-	-	5.98E-07	2.62E-02	2.62E-02	2.62E-02	5.24E-02
Perchloroethylene	127-18-4		-	-		5.00E-04	8.33E-07	8.33E-07	3.65E-02	3.65E-02	3.65E-02	7.30E-02
Phenanthrene	85-01-8		1.70E-05	1.67E-08		-	-	1.67E-08	7.30E-04	7.30E-04	7.30E-04	1.46E-03
Pyrene	129-00-0		5.00E-06	4.90E-09		-	-	4.90E-09	2.15E-04	2.15E-04	2.15E-04	4.29E-04
Toluene	108-88-3		3.40E-03	3.33E-06		1.29E-01	2.15E-04	2.15E-04	9.42E+00	9.42E+00	9.42E+00	1.88E+01
1,1,1-Trichloroethane	71-55-6		-	-		1.00E-04	1.67E-07	1.67E-07	7.30E-03	7.30E-03	7.30E-03	1.46E-02
Trichloroethylene	79-01-6		-	-		3.00E-04	5.00E-07	5.00E-07	2.19E-02	2.19E-02	2.19E-02	4.38E-02
Xylenes	1330-20-7		-	-		4.50E-03	7.50E-06	7.50E-06	3.29E-01	3.29E-01	3.29E-01	6.57E-01
Arsenic	7440-38-2		2.00E-04	1.96E-07			-	1.96E-07	8.59E-03	8.59E-03	8.59E-03	1.72E-02

Table B-7.
Potential Emissions - Hazardous Air Pollutant - Dual Fired External Combustion
Oak Orchard Wastewater Treatment Plant

Beryllium	7440-41-7	AP-42 Table 1.4-4 Rev. July 1998	1.20E-05	1.18E-08		-	-	1.18E-08	5.15E-04	5.15E-04	5.15E-04	1.03E-03
Cadmium	7440-43-9		1.10E-03	1.08E-06		-	-	1.08E-06	4.72E-02	4.72E-02	4.72E-02	9.45E-02
Chromium	7440-47-3		1.40E-03	1.37E-06		-	-	1.37E-06	6.01E-02	6.01E-02	6.01E-02	1.20E-01
Cobalt	7440-48-4		8.40E-05	8.24E-08		-	-	8.24E-08	3.61E-03	3.61E-03	3.61E-03	7.21E-03
Lead	7439-92-1	AP-42 Table 1.4-2 Rev. July 1998	5.00E-04	4.90E-07		-	-	4.90E-07	2.15E-02	2.15E-02	2.15E-02	4.29E-02
Manganese	7439-96-5	AP-42 Table 1.4-4 Rev. July 1998	3.80E-04	3.73E-07		-	-	3.73E-07	1.63E-02	1.63E-02	1.63E-02	3.26E-02
Mercury	7439-97-6		2.60E-04	2.55E-07		-	-	2.55E-07	1.12E-02	1.12E-02	1.12E-02	2.23E-02
Nickel	7440-02-0		2.10E-03	2.06E-06		-	-	2.06E-06	9.02E-02	9.02E-02	9.02E-02	1.80E-01
Selenium	7782-49-2		2.40E-05	2.35E-08		-	-	2.35E-08	1.03E-03	1.03E-03	1.03E-03	2.06E-03
								TOTAL (tpy):	0.07	0.07	0.07	0.15

NOTES:
1. Three boilers will be installed--two duty and one standby. However, Potential to Emit (PTE) is based on all three operating 8,760 hours per year.
2. Natural gas Higher Heating Value is 1020 Btu/scf per AP-42 Table 1.4-1.
3. Digester gas Higher Heating Value is 600 Btu/scf per SDAPCD Emission Factors for Digester Gas.
4. SDAPCD emission factors included a factor for arsenic. However it was not used because it is based on a Landfill gas guidance document which is derived from haul road landfill sampling and is not representative of digester gas.

Table B-8.
Potential Emissions - Hazardous Air Pollutant - Dual Fired External Combustion
Oak Orchard Wastewater Treatment Plant

Fuel	Dual-fired: Natural Gas & Digester Gas
Natural Gas Higher Heating Value (Btu/scf)	1,020
BioGas Higher Heating Value (Btu/scf)	600

	DG	NG
Operating Hours (hr/yr)	8,760	8,760
Flowrate (scfh)	18,300	70
Gas flow (mmscf/yr)	160	1

Hazardous Air Pollutant Emissions Calculations

Pollutant	CAS	Natural Gas		Digester Gas		EMISSIONS	
		Emission Factor Reference	Emission Factor lb/MMscf	Emission Factor Reference	Emission Factor lb/MMscf	DG Emissions lb/yr	NG Combustion lb/yr
1,1,2 Trichloroethane	79-00-5	AP-42 Table 1.4-3 Rev. July 1998		SJVAPCD Sewage Gas-Fired External Combustion (WWTP), Flare (Except for H_2S)	1.00E-04	1.60E-02	
2-Methyl-naphthalene	91-57-6		2.40E-05				1.47E-05
3-Methyl-cholanthrene	56-49-5		1.80E-06				1.10E-06
7,12-Dimethyl-benz(a)-anthracene	POM		1.60E-05				9.81E-06
Acenaphthene	83-32-9		1.80E-06				1.10E-06
Acenaphthylene	203-96-8		1.80E-06				1.10E-06
Acetaldehyde	75-07-0				2.58E-02	4.14E+00	
Acrolein	107-02-8				6.00E-03	9.62E-01	
Ammonia	7664-41-7						
Anthracene	120-12-7		2.40E-06				1.47E-06
Benz(a)-anthracene	56-55-3		1.80E-06				1.10E-06
Benzene	71-43-2		2.10E-03		9.54E-02	1.53E+01	1.29E-03
Benzo(a)pyrene	50-32-8		1.20E-06				7.36E-07
Benzo(b)-fluoranthene	205-99-2		1.80E-06				1.10E-06
Benzo(g,h,i)-perylene	191-24-2		1.20E-06				7.36E-07
Benzo(k)-fluoranthene	207-08-9		1.80E-06				1.10E-06
Chlorobenzene	108-90-7				2.00E-04	3.21E-02	
Chrysene	218-01-9		1.80E-06				1.10E-06
Dibenzo(a,h)-anthracene	53-70-3		1.20E-06				7.36E-07
Dichlorobenzene	25321-22-6		1.20E-03				7.36E-04
Dichlorobenzene	106-46-7				1.80E-03	2.89E-01	
Ethylbenzene	100-41-4				8.67E-01	1.39E+02	
Ethylene Dichloride	107-06-2				1.40E-03	2.24E-01	
Fluoranthene	206-44-0		3.00E-06				1.84E-06
Fluorene	86-73-7		2.80E-06				1.72E-06

Table B-8. Potential Emissions - Hazardous Air Pollutant - Dual Fired External Combustion Oak Orchard Wastewater Treatment Plant							
Formaldehyde	50-00-0		7.50E-02		7.01E-01	1.12E+02	4.60E-02
Hexane	110-54-3		1.80E+00		1.74E-02	2.79E+00	1.10E+00
Hydrogen Chloride	7647-01-0				6.46E-01	1.04E+02	
Hydrogen Sulfide	7783-06-4				5.71E-03	9.16E-01	
Indeno (1,2,3-cd) pyrene	193-39-5		1.80E-06				1.10E-06
Methylene Chloride	75-09-2				1.00E-04	1.60E-02	
Naphthalene	91-20-3		6.10E-04		6.60E-03	1.06E+00	3.74E-04
PAH	1-15-1				1.80E-03	2.89E-01	
Perchloroethylene	127-18-4				5.00E-04	8.02E-02	
Phenanthrene	85-01-8		1.70E-05				1.04E-05
Propylene	115-07-1				1.46E+00	2.34E+02	
Pyrene	129-00-0		5.00E-06				3.07E-06
Toluene	108-88-3		3.40E-03		3.48E-02	5.58E+00	2.08E-03
1,1,1-Trichloroethane	71-55-6						
Trichloroethylene	79-01-6				3.00E-04	4.81E-02	
Xylenes	1330-20-7				2.19E-02	3.51E+00	
Arsenic	7440-38-2	AP-42 Table 1.4-4 Rev. July 1998	2.00E-04				1.23E-04
Beryllium	7440-41-7		1.20E-05				7.36E-06
Cadmium	7440-43-9		1.10E-03				6.75E-04
Chromium	7440-47-3		1.40E-03				8.58E-04
Cobalt	7440-48-4		8.40E-05				5.15E-05
Lead	7439-92-1	AP-42 Table 1.4-2 Rev. July 1998	5.00E-04				3.07E-04
Manganese	7439-96-5	AP-42 Table 1.4-4 Rev. July 1998	3.80E-04				2.33E-04
Mercury	7439-97-6		2.60E-04				1.59E-04
Nickel	7440-02-0		2.10E-03				1.29E-03
Selenium	7782-49-2		2.40E-05				1.47E-05
					Annual emissions (tpy):	0.31	5.79E-04

NOTES:

1. Even though the pilot (natural gas) will not be combusted concurrent with DG, both DG and natural gas are assumed to be combusted 8,760 hour/year
2. Natural gas Higher Heating Value is 1020 Btu/scf per AP-42 Table 1.4-1.
3. Digester gas Higher Heating Value is 600 Btu/scf per SDAPCD Emission Factors for Digester Gas.
4. H_2S emissions are taken as the hydrogen sulfide content of the digester gas and assume at least 98% oxidation to SO_2

Table B-9.
Facility Wide Emissions Summary
Industrial and Oak Orchard Wastewater Treatment Plants

Pollutant	Potential Emissions (ton/yr)								
	OOWTP HVAC Equipment	IWTP HVAP Equipment	IWTP NG Boilers (2)	OOWTP Dual Fuel Boilers (x3)	OOTP Sludge Dryer NG Burner	IWTP NG Generator	Flare	Total Potential	Major Source Threshold
NO_x	5.27	6.59	10.43	6.44	4.29	49.04	3.85	85.91	100
CO	4.43	5.53	8.76	5.41	3.61	6.69	0.14	34.58	100
SO_2	0.03	0.04	0.06	0.04	0.03	0.01	39.98	40.19	100
PM_{10} / $PM_{2.5}$	0.40	0.50	0.79	0.49	0.33	0.12	0.96	3.59	100
VOC	0.29	0.36	0.57	0.35	0.24	1.42	0.97	4.20	50
HAPs[3]	0.10	0.12	0.19	0.22	0.15	0.87	0.001	1.66	10/25

NOTES:

1. The maximum instantaneous digester gas production is 305 standard cubic feet per minute (scfm). The max week digester gas production is 230 scfm. The annual average digester gas production is 180 scfm. The flare nameplate capacity is expected to reflect the maximum instantaneous digester gas production of 305 scfm. Therefore, the potential emissions from the flare are conservatively estimated based on 305 scfm.
2. The digester gas will be preferentially burned in the boilers and thermal dryer. The biogas will only be flared if generation exceeds demand. The facility wide emissions summary assumes 100% of the biogas generated is combusted in the flare. Emissions from other equipment is based on natural gas combustion 8,760 hours per year.
3. The major source threshold for HAPs is 10 tpy for any single HAP compound or 25 tpy for combined HAP emissions. Since total HAP emissions are less than the 10 tpy threshold for a single compound, only total (combined) HAP emissions are presented.