



Exhibit 14: Wetlands

Cider Solar Farm
Towns of Oakfield and Elba
Genesee County, New York

Matter No. 21-01108

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Table of Contents

Abbreviations	ii
Glossary of Terms.....	iii
a) Maps of Wetlands on the Project Area and Study Area	1
b) Wetland and Stream Delineation Survey Report.....	1
c) Wetland Functions and Values Assessment.....	4
d) Off-site Wetland Analysis	5
e) Avoidance of Impacts	5
f) Impact Description and Minimization.....	6
g) Mitigation Requirements.....	14
References	17

List of Tables

Table 14-1: Proposed Direct Construction Impacts to Delineated Wetlands.....	9
Table 14-2. Proposed Construction Impacts to State Regulated Adjacent Areas	11
Table 14-3: Summary of State Regulated Wetland Mitigation Requirements	15

List of Figures

Figure 14-1: Delineated Aquatic Resources
Figure 14-2: Delineated Wetland and Streams Impacts

List of Appendices

Appendix 14-A: ORES Jurisdictional Determination
Appendix 14-B: Wetland Restoration and Mitigation Plan

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Abbreviations

CWA	Clean Water Act
NRCS	Natural Resources Conservation Service
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
ORES	New York State Office of Renewable Energy Siting
PEM	Palustrine Emergent
PFO	Palustrine Forested
PSS	Palustrine Scrub-Shrub
PUB	Palustrine Unconsolidated Bottom (Open Water)
PVP	Potential Vernal Pool
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WOUS	Waters of the United States

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Glossary of Terms

Applicant	Hecate Energy Cider Solar LLC
Project	Refers to the proposed Cider Solar Farm, an up to 500-megawatt utility scale solar project that will be comprised of photovoltaic panels, inverters, access driveways, electrical collection lines, point of interconnection/substation, construction staging areas, fencing and plantings, located on private land in the towns of Elba and Oakfield, Genesee County, New York.
Project Area	Refers to the Project Site and surrounding/adjacent land totaling approximately 7,518 acres.
Project Footprint	Refers to the limit of temporary and permanent disturbance within the Project Site caused by the construction and operation of all components of the Project totaling approximately 2,452 acres.
Project Site	Refers to those privately owned parcels under option to lease, purchase, easement or other real property interests with the Applicant in which all Project components will be sited totaling approximately 4,650 acres.
Study Area	Refers to the area evaluated for specific resource identification and/or resource impact assessment. The size of this area is appropriate for the target resource and takes into account the project setting, the significance of resource or impact being identified or evaluated, and the specific survey distances included in Chapter XVIII, Title 19 of NYCRR Part 900. As appropriate, the Study Area for each type of survey or resource impact assessment is provided in the respective sections within the Application.

EXHIBIT 14: WETLANDS

Matter No. 21-01108

The content of Exhibit 14 is provided in conformance with Chapter XVIII, Title 19 of the New York Codes, Rules, and Regulations (NYCRR) § 900-2.15, as follows.

a) Maps of Wetlands on the Project Area and Study Area

The Applicant has prepared a *Wetland and Stream Delineation Report and Functions and Values Assessment* (Stantec 2021; Appendix 13-B in Exhibit 13: *Water Resources and Aquatic Ecology* of this Application) and maps showing wetlands and streams delineated in the Study Area (provided as Attachment A in the Wetland Delineation Report). The Study Area comprises an area measuring 100 feet from the boundary of the total Project Footprint and encompasses an area of approximately 4,306 acres. Maps showing the field delineated boundaries of all federal and state regulated wetlands are provided in Figure 14-1: *Delineated Aquatic Resources*. Due to access restrictions, satellite imagery and remote sensing data was used to delineate two wetlands remotely (WL112 and WL113). The boundaries of state jurisdictional wetlands were determined based upon consultation with New York State Office of Renewable Energy Siting (ORES) during field visits in November and December 2020 and subsequent communication in meetings held in February and March 2021. The correspondence from ORES providing Project specific jurisdictional determination is included as Appendix 14-A: *Wetlands Jurisdictional Determination*.

b) Wetland and Stream Delineation Survey Report

The Applicant's *Wetland and Stream Delineation Report and Functions and Values Assessment* is included in Appendix 13-B. An initial desktop analysis of the Study Area was conducted prior to performing on-site wetland and stream delineations. The desktop analysis was performed using NYSDEC Freshwater Wetland mapping (NYSDEC 2020), United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping (USFWS 2020), United States Geological Survey (USGS) topographical mapping (USGS 2018), and Natural Resource Conservation Service (NRCS) soil survey mapping (NRCS 2019). Stantec identified areas likely to contain wetlands and streams using these data resources. Desktop analysis of non-participating properties within the Study Area were performed utilizing the publicly available data sources described above and aerial photograph interpretation.

Initial surveys were conducted in July and September 2020, the results of which are provided in the Cider Solar Farm Wetland and Stream Delineation Report and Functions and Values Assessment, submitted in draft form to ORES in November 2020 (Draft Report). After submission of the November 2020 Draft Report, Stantec personnel met with ORES representatives in the field to review the boundaries and extents of delineated wetlands included in the Draft Report. During the site visits conducted on November 24, November 25, and December 9, several delineated wetland resources were identified where boundaries needed to be expanded or reduced. In November and December 2020, Stantec conducted the wetland boundary extensions/reductions discussed during the ORES site visit. Additionally, in January 2021, Stantec delineated previously unsurveyed locations, based on changes in Project design. The final *Wetland and Stream Delineation Report and Functions and Values Assessment* (Stantec 2021) summarizes the results of all field delineation efforts and is provided in Appendix 13-B.

Wetland boundaries were determined using the technical criteria described in the *Corps Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of*

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement (USACE 2012). In addition, delineated boundaries of freshwater wetlands regulated under Article 24 of the New York Environmental Conservation Law were assessed according to methods described in the *New York State Freshwater Wetlands Delineation Manual* (NYSDEC 1995). Wetland boundaries were demarcated with pink flagging.

Data collected for each of the wetlands include the dominant vegetation, hydric soil indicators, and wetland hydrology indicators. Details of each delineated wetland are summarized in Attachment B of Appendix 13-B. Streams and other potential waters of the United States were delineated based on NYSDEC technical criteria and the Navigable Waters Protection Rule; Final Rule (June 22, 2020). Data collected on streams included flow regime, channel width (Ordinary High-Water Mark [OHWM]), and channel substrate. Details of each delineated stream are described in Attachment C of Appendix 13-B. Wetland and stream boundaries were located using an Apple iPad Pro, paired with a Trimble® 'R1' Global Positioning System (GPS) Receiver, capable of sub-meter accuracy. GPS data were used to produce the Natural Resource Maps located in Attachment A of Appendix 13-B. Photographs were taken of each delineated resource. Representative photographs are included in Attachment D of Appendix 13-B. Regional Supplement Wetland Determination Forms were completed for each wetland and are included in Attachment E of Appendix 13-B.

Concurrent with wetland delineations Stantec identified potential vernal pools (PVPs) within the Study Area. Vernal pools are typically ephemeral to semi-permanent bodies of water occurring in shallow depressions that fill with surface water during the spring or fall and may dry during the summer. Because vernal pools characteristically do not support viable populations of predatory fish, they are the preferred breeding habitat for a suite of amphibians including, but not limited to, wood frogs (*Lithobates sylvaticus*), spotted salamanders (*Ambystoma maculatum*), and blue spotted salamanders (*Ambystoma laterale*), as well as invertebrate species such as fairy shrimp (*Eubrachipus* sp.). During field delineations, Stantec identified 10 PVPs based upon physical characteristics within wetlands such as shallow surface water, sparsely vegetated depressions, and evidence of variable water levels (e.g., water marks on trees).

Wetland Descriptions

Stantec delineated 119 wetlands and 76 streams within the wetland and stream delineation Study Area. Most wetlands were found along stream channels and depressional areas in the landscape. Four primary wetland types were identified based on the Federal Geographic Data Committee *Classification of Wetlands and Deepwater Habitats of the United States* classification scheme (adapted from Cowardin et. al. 1979) as briefly described below. A summary table of the field data collected regarding vegetation, soils and hydrology and copies of Wetland Determination Forms are included in the Wetland and Stream Delineation Report (provided in Appendix 13-B).

Based upon field studies and desktop analysis, all of the 119 field delineated wetlands are likely to be considered jurisdictional by the USACE under Section 404 of the Clean Water Act (CWA) due to connections with adjacent and other navigable Waters of the United States (WOUS). The USACE has not completed a jurisdictional determination at the time of this Application. In accordance with 19 NYCRR §§ 1.4(b), 2.14(f), the Applicant has described its plan for making such request of USACE, including a

EXHIBIT 14: WETLANDS

Matter No. 21-01108

timetable, in Exhibit 13. The Applicant will submit its request for a Water Quality Certification to ORES when the Applicant makes its application for a federal permit.

ORES provided an Approved Jurisdictional Determination of state regulated wetlands on April 2, 2021 (Appendix 14-A). The total area of field delineated wetlands is approximately 278 acres, or 6.5% of the total Study Area. The Wetland Summary table lists the delineated wetland identification information (dominant vegetation, wetland hydrology Indicators, and hydric soil indicators) and pertinent details regarding NYSDEC wetland status (Appendix 13-B).

Delineated wetlands and streams were found along the edges of agricultural fields and depressional areas in the landscape and include four primary wetland types and a variety of stream flow regimes (e.g., perennial to ephemeral). Brief descriptions of the common wetland community types and streams are presented below. All wetlands and streams delineated with the Study Area are depicted on the Wetland and Stream Delineation Figures (Figure 14-1).

Wetlands delineated in the Study Area were comprised of palustrine forested wetlands (PFO), palustrine scrub-shrub wetlands (PSS), palustrine emergent wetlands (PEM), open water wetlands (PUB), and streams. Descriptions of typical delineated wetlands and streams are provided below.

Palustrine Forested Wetlands

Broad-leaved deciduous wetlands occurred in conjunction with all the other wetland community types including needle-leaved evergreen forested wetlands. These wetlands receive runoff from the surrounding landscape and are often inundated and characterized by poorly drained soils. Common species of vegetation in these wetlands include silver maple (*Acer saccharinum*), eastern cottonwood (*Populus deltoides*), green ash (*Fraxinus pennsylvanica*), black willow (*Salix nigra*), riverbank grape (*Vitis riparia*), spotted jewelweed (*Impatiens capensis*), Morrow's honeysuckle (*Lonicera morrowii*), devil's beggarticks (*Bidens frondosa*), and poison ivy (*Toxicodendron radicans*).

Palustrine Scrub-Shrub (PSS) Wetlands

PSS wetlands occurred mostly within depressions or along streams within the Study Area. These wetlands may be inundated with several inches of water or be nearly dry at various times during the growing season. The PSS wetlands were often found in conjunction with forested and emergent wetland communities. Common species of vegetation within these wetlands include black willow (*Salix nigra*), silky dogwood (*Cornus amomum*), gray dogwood (*Cornus racemosa*), green ash, reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), panicled aster (*Symphyotrichum lanceolatum*), Virginia creeper (*Parthenocissus quinquefolia*), and riparian grape.

Palustrine Emergent (PEM) Wetlands

PEM wetlands were found throughout the Study Area, primarily within and along the edges of farm fields, in conjunction with scrub-shrub and open water wetlands, or on the fringe of forested wetlands. Many of the large, contiguous wetland communities had an emergent wetland component. Common species of vegetation within these wetlands included narrow-leaf cat-tail (*Typha angustifolia*), creeping jenny (*Lysimachia nummularia*), reed canary grass, red top grass (*Agrostis gigantea*), dark green bulrush (*Scirpus atrovirens*), lady's thumb (*Persicaria maculosa*), straw-colored flat sedge (*Cyperus strigosus*),

EXHIBIT 14: WETLANDS

Matter No. 21-01108

lamp rush (*Juncus effusus*), cottongrass bulrush (*Scirpus cyperinus*), spotted jewelweed, and common reed.

Open Water Wetlands Palustrine Unconsolidated Bottom (PUB) (Open Water) wetlands within the Study Area consisted of created ponds for agricultural activity to provide irrigation, drainage, or historically, for livestock. These ponds occurred in a variety of settings, including open fields, emergent wetlands, scrub-shrub wetlands. They typically contained more than 3 feet of water and were fringed by emergent vegetation.

Streams

Streams in the Study Area generally flow to the north and northwest, and are tributaries to Oak Orchard Creek, outside of the Study Area. The delineated streams were evenly distributed throughout the Study Area but were primarily located outside the boundaries of active agricultural fields. The majority of streams had an ephemeral or intermittent flow regime, many of which having been altered, maintained, and/or channelized to suit various agricultural land use needs. Several of the large, streams have not been historically altered have a perennial flow (e.g., stream ST08 and ST75). Substrates generally consisted of a mix of cobble, gravel, sand, silt, and clay. Streams are further described in Exhibit 13.

c) Wetland Functions and Values Assessment

Stantec completed a wetland functions and values assessment of the delineated wetlands, largely based upon *The Highway Methodology Workbook Supplement: Wetland Function and Value, A Descriptive Approach* (USACE 1999). This method bases function and value determinations on the presence or absence of specific criteria for each of the 13 wetland functions and values: groundwater recharge/discharge, floodflow alteration, fish and shellfish habitat, sediment/toxicant retention, nutrient removal, production export, sediment/shoreline stabilization, wildlife habitat, recreation, educational/scientific value, uniqueness/heritage, visual quality/aesthetics, and endangered species habitat. Results of this assessment are presented in Attachment F of the Wetland and Stream Delineation Report (Appendix 13-B) and summarized below.

Functions provided by many of the delineated wetlands include groundwater recharge/discharge, floodflow alteration, water quality protection (i.e., sediment/toxicant retention; and nutrient removal), and wildlife habitat. Those wetlands associated with streams also would provide sediment/shoreline stabilization, and those associated with perennial streams would contribute to fish and shellfish habitat. Although these functions are not principal for all the delineated wetlands, it is expected that they provide these functions by varying degrees depending upon characteristics such as size, percent of vegetation cover, and landscape position. Larger wetland complexes would have a greater capacity to provide most functions. Similarly, wetlands dominated by dense vegetation would be more capable of retaining and slowing surface flow, thereby reducing potential flooding, and protection water quality by allowing sediment to settle out of the water column. The Project will be located on privately owned land, so it is not expected that the delineated wetlands will provide significant recreational, education/scientific, or visual/aesthetic value for the general public.

Attachment F provides a summary of the vegetation and hydrologic characteristics for each delineated wetland as well as the 100-foot buffer around each wetland. The wetlands were assigned to 1 of 3 size

EXHIBIT 14: WETLANDS

Matter No. 21-01108

categories based upon the field delineated wetland area and each was assigned a predicted functional capacity based upon wetland and buffer characteristics, and the wetland's opportunity to provide the assessed functions. Principal functions also were identified for each delineated wetland. The identification of principal wetland functions incorporated information collected during field delineations and publicly available information such as aerial photographs, NWI data, and NYDEC mapped wetlands. The following provides a brief summary of principal functions identified for wetlands within the Study Area.

Floodflow alteration: All the delineated wetlands can receive and detain precipitation and surface runoff, thereby slowing or desynchronizing overland flows and contributing to cumulative flood protection capacity in the watershed. Those wetlands associated with streams would be expected to have greater opportunity to provide this function.

Water quality protection: Similar to floodflow alteration, each of the delineation wetlands have some capacity to provide water quality protection. Those wetlands located adjacent to development including roads, residences, and agricultural areas would have a greater opportunity to provide this function than isolated wetlands away from development.

Wildlife habitat: many of the delineated wetlands not directly in active agricultural fields have the potential to function as wildlife habitat. However, wildlife habitat provided by these wetlands is not necessarily for wetland-dependent species. Many of the wetlands provide foraging, cover, travel corridor, roosting and breeding habitats for generalist wildlife species, similar to upland habitats in the surrounding landscape. Those wetlands with open water or emergent marsh would provide potential habitat for waterfowl, wading birds, and amphibians.

Fish and shellfish habitat: Perennial streams and some areas of open water within the delineated areas may be capable of providing habitat for fish. Wetlands located along these streams, as well as other perennial waters, may help protect water quality and provide thermal protection by shading the streams.

Sediment and shoreline stabilization: Similar to the function of fish and shellfish habitat, wetlands along streams can provide bank stabilization and thereby protect the streams from erosion and protect water quality.

d) Off-site Wetland Analysis

As noted in Section (a), above, the study area for wetland and stream delineations included a 100-foot buffer around the proposed Project Footprint. For those locations where the delineation limits extended onto non-participating properties with no access permission, Stantec interpreted aerial photographs and reviewed publicly available data to identify approximate wetland boundaries. Wetlands WL112 and WL113 were delineated using these methods, and neither appear to be hydrologically connected to any NYSDEC jurisdictional wetlands, which was confirmed by ORES representatives during the November and December 2020 field visits.

e) Avoidance of Impacts

A primary consideration in the design and layout of the Project was the avoidance of impacts to delineated wetlands and streams. Through an extensive and iterative design alternatives analysis

EXHIBIT 14: WETLANDS

Matter No. 21-01108

process, the Applicant evaluated routing and siting options and optimized the layout and design to avoid and minimize impacts to delineated wetlands and streams. As an initial objective for avoidance, the Applicant sited all solar arrays and inverter pads outside of delineated wetlands. Subsequently, the Applicant routed the linear components in consideration of the boundaries of streams and wetlands in an effort to avoid and minimize impacts to surface waters and wetlands wherever practicable, reducing the number of linear crossings with access roads as well as buried collection lines. The Project layout presented in this Application achieves avoidance of impacts through further siting efforts including siting Project substation and temporary laydown yards outside of wetlands and streams; utilizing existing culverts and farm roads wherever possible for site access; limiting crossings of wetlands with new access roads; crossing wetlands at the most narrow crossing location; minimizing clearing of forested wetlands through routing or use of trenchless installation methods including horizontal directional drilling (HDD); and siting buried electrical collection lines around wetlands and streams where practicable. Where feasible, security fencing has been sited to avoid wetlands, but where it must be located to protect the security of the Project and safety of the public, fencing will cross wetlands in the narrowest locations. Additionally, only selective clearing of forested wetlands will occur in order to install security fencing. In wetland locations, fencing will be installed across jurisdictional features by spanning the wetland with posts, or using driven posts, rather than excavation and installation of concrete piles. See Section (f) below for further discussion of proposed impacts and associated avoidance measures.

f) Impact Description and Minimization

Although wetlands and streams were largely avoided during Project siting, Project construction will have direct impacts to federal and state-regulated wetlands and state-regulated 100-foot adjacent areas. Project components that will be sited within wetlands are limited to only 8 access roads (4 in state regulated wetlands), security fencing, and buried electrical collection lines. Project components sited in 100-foot regulated adjacent areas of state regulated wetlands include solar panels, access roads, security fencing and buried electrical collection lines. Potential temporary and permanent impacts to regulated areas may occur from the following site development activities:

- Clearing wetland and adjacent area vegetation;
- Earthwork and fill in wetlands for the placement of roads and culverts, where permanent road impacts include the 20-foot built road, plus 5 feet on either side of the road to account for fill and culverts;
- Placement of the security fence within wetlands, where impacts include 1-foot-wide fence, plus a 15-foot-wide temporary workspace. Where fence alignment goes through PFO wetlands, selective clearing only where necessary would occur, and as a result, would not result in permanent conversion;
- Trenching of buried electrical collection lines, which assumes a 20-foot-wide corridor, including trench and workspace. Where collection lines and roads are collocated, collection line work area is only 5 feet wide, in addition to the 30-foot road impact;
- Permanent forested wetland conversion to other wetland cover types;
- Sedimentation/erosion during construction activities.

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Impacts to wetlands (calculations) were determined based upon the Design Drawings, but general assumptions apply as described above. Figure 14-2 shows temporary and permanent impacts to each wetland are quantified in Table 14-1: *Proposed Direct Construction Impacts to Delineated Wetlands* based on the limits of disturbance, as determined from the Design Drawings (see Exhibit 5: *Design Drawings* of this Application). Regulated adjacent area impacts are presented in Table 14-2: *Proposed Construction Impacts to State Regulated Adjacent Areas*. Impacts to streams are addressed in detail in Exhibit 13 and shown in Table 13-4.

Facility construction and operation is estimated to impact 0.96 acres of federal wetlands, of which 0.55 acres will be temporary and 0.41 acres will be permanent (including permanent PFO conversion) (Table 14-1).

Construction and operation will result in permanent impacts to portions of 10 State-regulated wetlands, totaling 0.134 acres of permanent fill (PEM: 0.079 acres; PSS: 0.018 acres; PFO: 0.036 acres), with de minimis (less than 0.01) acres of permanent forest conversion, from the installation of buried collection lines, security fences, an inverter, and access roads. Temporary impacts to State-regulated wetlands will total 0.156 acres (PEM: 0.141 acres; PSS: 0.015 acres), and result from temporary workspaces for fence and collection line installation.

Significant avoidance and minimization of impacts (temporary and forested conversion) to wetlands, especially forested wetlands, will be accomplished by installation of buried electrical collection lines through trenchless technologies, including HDD. This includes avoidance of impacts at five state-regulated wetlands.

Impacts to Class I wetlands were avoided to the maximum extent practicable. The only impacts to a Class I wetland is for the installation of one security fence crossing at WL01, which includes very minor impacts of approximately 39 square feet associated with a conservative estimate of impacts for 39 linear feet of fencing installation. Initially, siting the security fence in this area occurred because this delineated wetland was not mapped by NYSDEC Freshwater Wetland Mapping. Subsequently, ORES determined the delineated wetland 'finger' extending into the field was an unmapped portion of NYSDEC OK-1 located to the northwest (see Jurisdictional Determination (JD), ORES, Appendix 14-A). Avoidance of this area was not feasible without affecting the security of the Project solar array panels sited in the adjacent agricultural field in this area. Impacts to WL01/NYSDEC OK-1 were minimized by placing the fence across only the narrow finger of the wetland in the agricultural field. During construction, this area will only have selective clearing of trees needed for safe installation of the fence, and fence posts will be placed in the wetland by either spanning the wetland or by placing driven posts/earth screws (no concrete fill in wetland). No adverse impacts to the functions and values of OK-1 are anticipated as a result of the Project. In fact, the regulated adjacent area east of WL01 will be converted to a meadow condition (from cultivated cropland), improving the function and value related to water quality and run off in this area.

Permanent impacts to State-regulated adjacent areas will total 13.15 acres and will result from the clearing of successional shrubland and forested vegetation and converting to herbaceous/meadow covertypes for the installation of solar panels and associated maintained areas, as well as the installation of security fencing. However, the Project will improve the functions and values of regulated adjacent areas that are largely currently actively cultivated agricultural land and converting it to a meadow

EXHIBIT 14: WETLANDS

Matter No. 21-01108

condition that will remain largely undisturbed for the 30-year operating life of the Project. Temporary impacts to State-regulated adjacent areas will total 37.52 acres and will result from clearing of non-forested vegetation (primarily actively cultivated agricultural land) for installation of solar arrays, buried collection lines, fences, and establishment of maintained meadow areas.

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Table 14-1: Proposed Direct Construction Impacts to Delineated Wetlands

Wetland ID	Dominant Wetland Type Impacted	DEC Wetland Class	Impacts by Project Component (acres)				Temporary Impact Total ³		Permanent Impact Total ³		Permanent PFO Conversion ³		Acreage Requiring Mitigation (Per 19 NYCRR § 900-2.15[g], Table 1)
			Collection Lines	Roads ¹	Fences ²								
			Temporary	Permanent	Permanent	Temporary	Square feet	Acres	Square feet	Acres	Square feet	Acres	
WL01/ NYSDEC OK-1	PFO	1			0.0009				39.20	0.0009			0.0009 - Security Fence
WL02	PFO	N/A	0.0075		0.0004				18.41	0.0004	325.87	0.0075	
WL03	PFO	N/A			0.0003				11.62	0.0003			
WL05	PEM	N/A	0.0016	0.0134			68.18	0.0016	583.79	0.0134			
WL06	PEM	N/A	0.0776		0.0022	0.0338	4853.39	0.1114	96.97	0.0022			
WL07	PSS	N/A			0.0008	0.0120	522.27	0.0120	34.39	0.0008			
WL11	PEM	N/A	0.0012	0.0076	0.0003	0.0043	241.26	0.0055	341.92	0.0078			
WL12	PEM	N/A			0.0004	0.0059	258.04	0.0059	18.16	0.0004			
WL17	PEM	N/A			0.0009	0.0123	535.94	0.0123	38.94	0.0009			
WL20	PFO	Unmapped		0.0342					1488.91	0.0342			0.0342 - Access Road
	PEM	Unmapped		0.0618					2690.74	0.0618			0.0618 - Access Road
WL22	PFO	Unmapped			0.0012				52.32	0.0012			0.0012 - Security Fencing
WL29/NYSDEC BN-13	PFO	2			0.0018				76.65	0.0018			0.0018 - Security Fencing
	PEM	2			0.0008	0.0187	813.71	0.0187	35.32	0.0008			0.0008 - Security Fencing; 0.0187 - Clearing and manipulation of undisturbed vegetation
WL30	PEM	N/A			0.0008	0.0129	560.43	0.0129	35.61	0.0008			
WL33/NYSDEC BN-14	PEM	3		0.0077				0.0000	335.05	0.0077			0.0019 - Security Fence; 0.0271 - Clearing and manipulation of undisturbed vegetation
WL41	PFO	N/A	0.1759								7661.76	0.1759	
WL45/NYSDEC BN-15	PEM	2			0.0019	0.0271	1181.17	0.0271	82.12	0.0019			0.0019 - Security Fence; 0.0271 - Clearing and manipulation of undisturbed vegetation
WL50	PEM	N/A			0.0005	0.0076	330.33	0.0076	22.11	0.0005			
	PFO	N/A			0.0006				27.53	0.0006			
WL53/NYSDEC BN-1	PSS	3		0.0172	0.0010	0.0152	661.06	0.0152	789.08	0.0181			0.0172 - Access Road; 0.0010 Security Fencing; 0.0152 - Clearing and manipulation of undisturbed vegetation
WL54/NYSDEC BN-14	PEM	3	0.0032				140.66	0.0032					0.0032 - Collection Line
WL70	PEM	N/A	0.0352	0.0258	0.0050	0.0496	3690.45	0.0847	1342.67	0.0308			
WL74	PSS	N/A			0.0004	0.0068	294.15	0.0068	18.76	0.0004			
WL86	PSS	N/A	0.0006				26.37	0.0006					
WL91	PSS	N/A	0.0030		0.0003		129.02	0.0030	12.30	0.0003			

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Wetland ID	Dominant Wetland Type Impacted	DEC Wetland Class	Impacts by Project Component (acres)				Temporary Impact Total ³		Permanent Impact Total ³		Permanent PFO Conversion ³		Acreage Requiring Mitigation (Per 19 NYCRR § 900-2.15[g], Table 1)
			Collection Lines	Roads ¹	Fences ²								
			Temporary	Permanent	Permanent	Temporary	Square feet	Acres	Square feet	Acres	Square feet	Acres	
WL92	PEM	Unmapped	0.0877				3819.95	0.0877					0.0877 - Collection Line
WL103/NYSDEC OK-11	PEM	2	0.0008	0.0064	0.0003	0.0038	198.60	0.0046	290.78	0.0067			0.0008 - Collection Line; 0.0064 Access Road; 0.0003 Security Fencing; Clearing and manipulation of undisturbed vegetation
WL105	PEM	N/A	0.0007	0.0035			31.31	0.0007	154.30	0.0035			
WL113	PEM	N/A	0.0201				875.83	0.0201					
	PSS	N/A	0.0913				3975.63	0.0913					
WL115	PFO	N/A			0.0075				325.26	0.0075			
	PEM	N/A	0.0036	0.0261	0.0009	0.0146	791.91	0.0182	1174.35	0.0270			
Totals			0.5099	0.2036	0.0292	0.2244	23,999.69	0.5510	10,137.27	0.2327	7987.63	0.1834	

¹Permanent road impacts to wetlands include the 20' built road, plus 5' on either side of the road to account for fill and culverts

²Fence impacts include 1' wide fence, plus a 15' temporary workspace. Where fence alignment goes through PFO wetlands, selective clearing only where necessary would occur, and as a result, would not result in permanent conversion.

³Total Impacts to wetlands = Temporary + Permanent + Permanent PFO Conversion

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Table 14-2. Proposed Construction Impacts to State Regulated Adjacent Areas

Wetland ID	DEC Wetland Class	Impacts by Project Component (acres)									Temporary Impact Total		Permanent Impact Total		Acreage Requiring Mitigation (Per 19 NYCRR § 900-2.15[g])
		Solar Panels		Collection Lines	Roads	Fences		Inverter	Maintained Area						
		Temporary	Permanent	Temporary	Permanent	Temporary	Permanent	Permanent	Temporary	Permanent	Square feet	Acres	Square feet	Acres	
WL01/ NYSDEC OK-1	1	0.5308				0.3706	0.0253		1.8133		118248.30	2.7146	1102.86	0.0253	0.5308 – Solar Panels; 0.0253 – Security Fencing; 2.1838 - Grading and manipulation of disturbed areas (ag fields)
WL20	Unmapped	0.8247	0.4504	0.0409	0.3541	1.4075	0.0972		1.5852	0.8248	168068.56	3.8583	75207.86	1.7265	Mitigation not required for impacts to Unmapped Wetland AA
WL22	Unmapped	0.6884	0.0452	0.0611		0.2645	0.0182		3.8893	0.7092	213589.22	4.9033	33654.95	0.7726	Mitigation not required for impacts to Unmapped Wetland AA
WL24	Unmapped	1.0566	0.6534	0.0180	0.0189				3.4964	4.7027	199112.08	4.5710	234137.51	5.3751	Mitigation not required for impacts to Unmapped Wetland AA
WL29/NYSDEC BN-13	2	1.1690	0.0393			0.1375	0.0095		4.8679	1.3247	268954.50	6.1743	59827.84	1.3735	1.2083 – Solar Panels; 1.3247 Forest Clearing (permanent 'maintained area'); Mitigation not required for security fencing in AA; temporary workspace for fence, and grading/manipulation of "maintained areas" occur in active agricultural fields; therefore, no mitigation required.
WL33/NYSDEC BN-14	3				0.0905	0.0212	0.0062				924.91	0.0212	4213.04	0.0967	Mitigation not required for impacts to Class 3 Wetland AA
WL45/NYSDEC BN-15	2					0.1654	0.0113		2.0266		95479.78	2.1919	492.70	0.0113	Mitigation not required for security fencing in AA; Temporary workspace for fence installation, and clearing for "maintained area" is entirely within active agricultural fields; therefore, do not require mitigation
WL51/NYSDEC BN-1	3			0.1114							4853.79	0.1114			Mitigation not required for impacts to Class 3 Wetland AA
WL53/NYSDEC BN-1	3	0.4704	0.0854	0.0233	0.2358	0.4352	0.0305	0.0054	1.9415	1.2144	125029.08	2.8703	68448.22	1.5714	Mitigation not required for impacts to Class 3 Wetland AA
WL54/NYSDEC BN-14	3	0.0892		0.0457		0.1127	0.0084		0.1771		18502.97	0.4248	365.08	0.0084	Mitigation not required for impacts to Class 3 Wetland AA
WL57/NYSDEC BN-4	2	0.0593		0.0086	0.1518	0.0696	0.0050		0.1404		12101.38	0.2778	6829.63	0.1568	0.0593 – Solar Panels; 0.0086 – Collection Line; 0.1518 – Access Road; Mitigation not required for security fencing; temporary workspace for fence, and grading/manipulation of "maintained areas" occur in active agricultural fields; therefore, no mitigation required.
WL58/NYSDEC BN-4	2	0.2247		0.2553	0.0536	0.3036	0.0271		0.9718		76462.13	1.7553	3515.31	0.0807	0.2247 - Solar Pan Is; 0.2553 – Collection Line; 0.0536 Access Road; Mitigation not required for fencing in AA; temporary workspace for fence, and grading/manipulation of "maintained areas" occur in active agricultural fields; therefore, no mitigation required.

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Wetland ID	DEC Wetland Class	Impacts by Project Component (acres)									Temporary Impact Total		Permanent Impact Total		Acreage Requiring Mitigation (Per 19 NYCRR § 900-2.15[g])
		Solar Panels		Collection Lines	Roads	Fences		Inverter	Maintained Area						
		Temporary	Permanent	Temporary	Permanent	Temporary	Permanent	Permanent	Temporary	Permanent	Square feet	Acres	Square feet	Acres	
WL87/NYSDEC BN-2	2					0.0009	0.0003				39.68	0.0009	13.25	0.0003	Mitigation not required for security fencing in AA; Mitigation for clearing of trees in AA is not required with a setback of 75 feet from the wetland; therefore, no mitigation required
WL92	Unmapped	1.0038	0.1930	2.0099		1.3958	0.0969		2.2166	0.8128	288631.41	6.6261	48035.22	1.1027	Mitigation not required for impacts to Unmapped Wetland Adjacent Areas
WL100	Unmapped		0.0077			0.0912	0.0075		0.0781	0.0244	7371.61	0.1692	1725.75	0.0396	Mitigation not required for impacts to Unmapped Wetland AA
WL103/NYSDEC OK-11	2		0.0299	0.0223	0.1672	0.0812	0.0056		0.7436	0.6100	36898.41	0.8471	35395.88	0.8126	0.0299 – Solar Panels; 0.0223 – Collection Line; 0.1672 – Access Road; 0.6100 – Forest Clearing (permanent 'maintained area'); Mitigation not required for security fence in AA; Temporary workspace for fence installation, and clearing for "maintained area" is entirely within active agricultural fields and disturbed areas, therefore, do not require mitigation
Total		6.12	1.50	2.60	1.07	4.86	0.35	0.01	23.95	10.22	1,634,267.81	37.52	572,965.09	13.15	

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Through an iterative process, the Applicant designed the Project to consider the extent of delineated wetlands and to site project components to avoid and minimize impacts to surface waters and wetlands wherever practicable. The Project layout presented in this Application achieves this by locating solar panels outside of wetlands and by routing access roads and collection lines around wetlands and streams where practicable. Specifics are as follows:

- All solar panels have been sited outside of all delineated wetland boundaries;
- To avoid temporary impacts due to collection line installation and permanent impacts due to PFO conversion, HDD construction method would be used at the following seven proposed wetland crossings for collection lines: WL20, WL22, WL52, WL56, WL58, WL73, and WL117.
- Access road and collection line crossings have been collocated to the extent feasible to reduce impacts at the following resources: WL05, WL11, WL20, WL103, WL105, WL115;
- Construction laydown yards were sited to avoid impacts to wetlands and adjacent areas;
- The substation and associated infrastructure has been sited outside of any wetland or associated regulated adjacent area;
- Vegetation clearing and grading was minimized where wetlands occur within the Project Site; and
- Fence installation within PFO wetlands will involve only selective tree clearing where necessary and will not result in permanent conversion.

The Applicant will implement best management plans (BMPs) during construction to minimize impacts to wetlands from sedimentation, erosion, and pollution. These are industry standard practices that are employed judiciously when working proximal to sensitive resources. Avoidance, minimization, and mitigation measures to protect surface waters are further discussed in Exhibit 13. Significant impacts from sedimentation, erosion, and pollution are minimized through the implementation of the following measures:

No Equipment Access Areas: To prohibit motorized equipment, streams and wetlands will be designated as “No Equipment Access” areas except where crossed by permitted access roads or through non-jurisdictional use of temporary matting.

Restricted Activities Area: A buffer zone of 100 feet, referred to as “Restricted Activities Area,” will be established where Project construction traverse wetlands and other bodies of water.

Restrictions will include:

- No deposition of slash within or adjacent to a waterbody; No accumulation of construction debris within the area;
- Herbicide restrictions within 100 feet of a wetland (or as required per manufacturer’s instructions);
- No equipment washing or refueling within the area, with the exception of dewatering pumps, which may be refueled in place;
- No storage of any petroleum or chemical material.

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Sedimentation and Erosion Control: As previously noted, the Applicant will implement a SWPPP as part of the State Pollutant Discharge Elimination System (SPDES) General Permit for the Facility (see Appendix 13-C: *Stormwater Pollution Prevention Plan*). Silt fences, hay bales, and temporary siltation basins will be installed and maintained throughout Project construction. Exposed soil will be seeded and/or mulched to ensure that erosion is minimized along wetland boundaries. Specific control measures are identified in the SWPPP. The contractor and other appropriate parties will review the location of wetlands and waterbodies on construction drawings prior to construction. Wetlands and waterbodies will be inspected on a regular basis through construction and restoration.

Environmental Compliance Monitoring: Environmental compliance monitoring will be implemented during project construction in adherence to permit conditions to protect wetlands and streams. An Environmental Monitor will be present during construction to monitor application of BMPs, inspect erosion and sediment control measures and promote avoidance of unpermitted wetland impacts.

g) Mitigation Requirements

Construction, operation, and maintenance of the Project will result in permanent impacts to portions of 10 State-regulated wetlands, totaling 0.134 acres of permanent fill (PEM: 0.079 acres; PSS: 0.018 acres; PFO: 0.036 acres), with 0 acres of permanent forest conversion, from the installation of buried collection lines, security fences, an inverter, and access roads. Temporary impacts to State-regulated wetlands will total 0.156 acres (PEM: 0.141 acres; PSS: 0.015 acres), and result from temporary workspaces for fence and collection line installation. Permanent impacts to State-regulated adjacent areas will total 13.15 acres and will result from the clearing of successional and forested vegetation and converting to herbaceous covertypes for the installation of solar panels and associated maintained areas, as well as the installation of security fencing. Temporary impacts to State-regulated adjacent areas will total 37.52 acres and will result from clearing of non-forested vegetation for installation of solar arrays, buried collection lines, fences, and associated maintained areas.

All temporarily disturbed wetland areas will be restored to pre-construction contours, and upland areas to be maintained as a part of the solar panel arrays will be vegetated with an herbaceous native seed mix resulting in a meadow condition. The Project would permanently impact 0.41 acres of wetlands anticipated to be under the jurisdiction of the USACE, and mitigation associated with those impacts would be addressed in consultation with the USACE, pursuant to permitting under CWA Section 404 requirements.

Not all impacts to State-regulated wetlands and streams require mitigation. The State-regulated wetland and adjacent area impacts and mitigation amounts are summarized in Table 14-3, below, based on wetland mitigation requirements set forth in 19 NYCRR § 900-2.15(g). In total, the Project will require 0.299 acre of wetland restoration for direct impacts to regulated wetlands, and 6.856 acres of upland adjacent area enhancement for impacts to regulated adjacent areas.

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Table 14-3: Summary of State Regulated Wetland Mitigation Requirements

Project Component	Wetland ID (NYSDEC Wetland ID)	Direct Impacts (acres)	Adjacent Area Impacts Requiring Mitigation (acres)	Mitigation Requirement (Per 19 NYCRR § 900-2.15, Table 1(fd)(2))
Class 1 Wetlands				
Security Fence	WL01(OK-1)	0.001	0.025	<u>For Direct Impacts</u> - 3:1 Mitigation Ratio - <i>Restoration</i> = 0.003 acre; <u>For AA Impacts</u> - <i>Enhancement</i> = 0.025 acre
Solar Panels	WL01 (OK-1)	-	0.531	<u>For AA Impacts</u> - <i>Enhancement</i> (assume 1:1) = 0.531 acre
Grading and manipulation of disturbed areas	WL01(OK-1)	-	2.184	<u>For AA Impacts</u> - <i>Enhancement</i> (assume 1:1) = 2.184 acres
Class 2 Wetlands				
Security Fence	WL29(BN-13), WL45(BN-15), WL57(BN-4), WL58(BN-4), WL87(BN-2), WL103 (OK-11)	0.005	No mitigation required for AA impacts	<u>For Direct Impacts</u> - 1:1 Mitigation Ratio - <i>Restoration</i> = 0.005 acre
Collection Line	WL57(BN-4), WL58(BN-4), WL103(OK-11)	0.001	0.286	<u>For Direct Impacts</u> - 2:1 Mitigation Ratio - <i>Restoration</i> = 0.002 acre; <u>For AA Impacts</u> - <i>Enhancement</i> = 0.286 acre
Solar Panels	WL29(BN13), WL57(BN-4), WL58(BN-4)		1.522	<u>For AA Impacts</u> - <i>Enhancement</i> (assume 1:1) = 1.522 acre
Access Road	WL57(BN-4), WL58(BN-4), WL103(OK-11)	0.006	0.373	<u>For Direct Impacts</u> - 2:1 Mitigation Ratio - <i>Restoration</i> = 0.012 acre; <u>For AA Impacts</u> - <i>Enhancement</i> (assume 1:1) = 0.373 acre
Clearing and manipulation of non-forested, undisturbed vegetation	WL29(BN-13), WL45(BN-15), WL103(OK-11)	0.050		<u>For Direct Impacts</u> - 1:1 Mitigation Ratio - <i>Restoration</i> = 0.050 acre
Clearing of forest	WL29(BN-13), WL103(OK-11)		1.935	<u>For AA Impacts</u> - <i>Enhancement</i> (assume 1:1) = 1.487acre
Class 3, Class 4, Unmapped >12.4				
Security Fence (Permanent)	WL22, WL53(BN-1)	0.002	No mitigation required for AA impacts	No mitigation required for security fence
Collection Line	WL54(BN-14), WL92	0.091	No mitigation required for AA impacts	<u>For Direct Impacts</u> - 1:1 Mitigation Ratio - <i>Restoration</i> = 0.091 acre
Access Road	WL20, WL33(BN-14), WL53	0.121	No mitigation required for AA impacts	<u>For Direct Impacts</u> - 1:1 Mitigation Ratio - <i>Restoration</i> = 0.121 acre
Clearing of Undisturbed vegetation	WL53(BN-1)	0.015	No mitigation required for AA impacts	<u>For Direct Impacts</u> - 1:1 Mitigation Ratio - <i>Restoration</i> = 0.015 acre

EXHIBIT 14: WETLANDS

Matter No. 21-01108

Unavoidable impacts to State regulated wetland and adjacent area will be mitigated as required by 19 NYCRR § 900-2.15(g) in consultation with ORES and NYSDEC. The Applicant proposes accomplishing this mitigation through an on-site restoration and enhancement project, as described in detail in Appendix 14-B: *Wetland Restoration and Mitigation Plan*. The Applicant proposes to fully compensate for permanent wetland fill impacts and forested wetland conversion through the combination of wetland restoration by tree and shrub plantings on approximately 0.299 acre of wetland on the Offhaus Farms parcel (parcel number 16.-1-19.113) at delineated wetland WL92. These mitigation efforts will also include enhancement of approximately 6.856 acres of shrub and forest woody vegetated upland buffers surrounding portions of these enhanced wetlands.

The Applicant has prepared the *Wetland Restoration and Mitigation Plan* in accordance with 19 NYCRR § 900-10.2(f)(2) and 19 NYCRR § 900-2.15(g). As further described in this plan, on-site delineated wetland WL92 was selected by the Applicant as mitigation area because it offers significant characteristics that make it a suitable location, including:

- Location on-site, within the affected watershed (same HUC 8 sub-basin);
- Landowner willing to allow mitigation activities and subsequent land use activities restriction;
- Existing state-regulated wetland (as determined by Final JD, ORES, April 2, 2021);
- Suitable site soils and hydrology for restoration and enhancement success;
- Hydrologically connected to offsite wetlands, benefitting watershed at the landscape level;
- Prior land use that included site degradation, offering opportunity for restoration of wetland functions and values that have been partially or completely lost; and
- Appropriate amount of contiguous land available to provide enhancement in the uplands and wetland areas contiguous to WL92 to increase selective functions and benefits that offsets the loss of functions or benefits from impacted wetlands and adjacent areas.

The Applicant summarized the intent of the wetland mitigation plan at WL92 to ORES and NYSDEC in a pre-application meeting held on April 15, 2021. Based upon initial positive feedback of the location, the Applicant provided a draft of the plan to ORES and NYSDEC for initial comment. ORES subsequently provided a site specific comment that the mitigation site is not currently “subject to NYSDEC jurisdiction under ECL Article 24”. However, ORES determined delineated wetland WL92 to be a state-regulated wetland in the JD provided to the Applicant on April 2, 2021. In addition to responding with specific comments on the draft plan, ORES responded on May 14, 2021, with an indication of potential other suitable mitigation sites that may exist within the Project Site contiguous with mapped NYSDEC Freshwater Wetlands OK-1, AB-1, OK-11 and BN-2. ORES offers these locations as potential alternative sites that would meet the requirements of § 900-2.15(g)(2)(ii & iii).

The Applicant asserts that the proposed improvements at delineated wetland WL92 described in the *Wetland Restoration and Mitigation Plan* in Appendix 14-B offer the best site conditions to provide successful mitigation for the unavoidable impacts to State-regulated wetlands and adjacent areas. However, the Applicant will ultimately provide a *Wetland Restoration and Mitigation Plan* in accordance with § 900-10.2(f)(2) as a pre-construction compliance filing, that fully mitigates impacts to wetlands in further consultation with ORES and NYSDEC.

EXHIBIT 14: WETLANDS

Matter No. 21-01108

References

- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1. US Army Corps of Engineers, Waterways Experiment Station; Vicksburg, MS.
- Federal Geographic Data Committee. 2013. *Classification of wetlands and deepwater habitats of the United States*. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.
- Munsell Color. 2009. Munsell Soil Color Chart. MacBeth Division of Kollmorgen Instruments Corporation. Baltimore, MD. Revised 2018.
- New York State Department of Environmental Conservation (NYSDEC). 2020. Environmental Resource Mapper. Available at: <https://gisservices.dec.ny.gov/gis/erm/>. Accessed July 2020.
- NYSDEC. 1995. Freshwater Wetlands Delineation Manual. 54 pp.
- New York State Office of Renewable Energy Siting (ORES). 2021. DRAFT Wetlands Jurisdictional Determination. Issued 3/9/2021.
- Natural Resources Conservation Service, United States Department of Agriculture (NRCS). 2019. Web Soil Survey. Last Modified 07/31/2019. Available at: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed July 2020.
- NRCS. 2010. New York Rapid Watershed Assessment Profile: Oak Orchard-Twelvemile Watershed (HUC 04130001). Produced by Syracuse State Office. March 2010. Available at: <https://water.usgs.gov/lookup/getwatershed?04130001>. Accessed October 22, 2020.
- Stantec Consulting Services Inc. (Stantec). 2020. Wetland and Stream Delineation Report and Function and Value Assessment. Submitted November 2020.
- Stantec. 2021. Supplemental Wetland and Stream Delineation Report and Function and Value Assessment. Submitted March 2021.
- United States Corps of Engineers (USACE) and United States Environmental Protection Agency (USEPA). 2020. The Navigable Waters Protection Rule: Definition of "Waters of the United States" (85 FR 22250). Published April 21, 2020; Effective June 22, 2020.
- USACE. 2018. National Wetland Plant List. version 3.4. Available at: http://wetland-plants.usace.army.mil/nwpl_static/v34/home/home.html. Accessed July 2020.
- USACE. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- USACE. 1999. The Highway Methodology Workbook Supplement: Wetland Functions and Values, A Descriptive Approach. 1999. New England Division. Waltham, MA. 32 pp. NAEEP-360-1-30a.

EXHIBIT 14: WETLANDS

Matter No. 21-01108

United States Fish and Wildlife Service (USFWS). National Wetlands Inventory Wetland Mapper. Last Modified May 2020. Available at: <https://www.fws.gov/wetlands/data/Mapper.html>. Accessed July 2020.

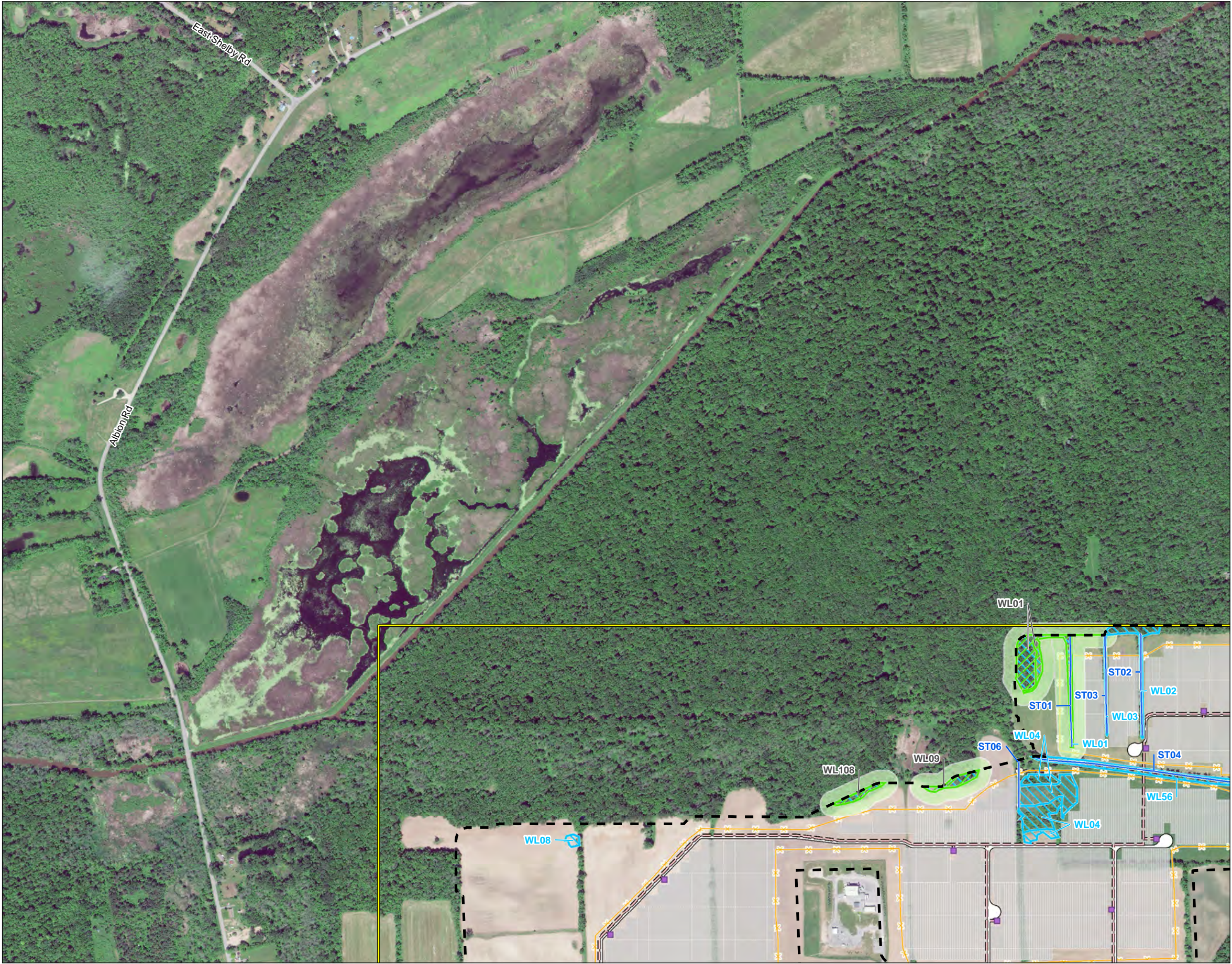
United States Geological Survey (USGS). 2018. National Hydrography Dataset Plus. Updated 12/01/2018. Available at: <https://www.epa.gov/waterdata/nhdplus-great-lakes-data-vector-processing-unit-04>. Accessed July 2020.

EXHIBIT 14: WETLANDS

Matter No. 21-01108

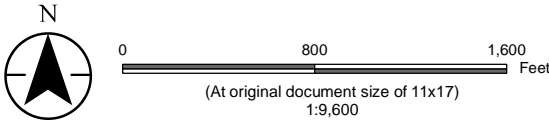
FIGURES

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-1_Delineated_Aquatic_Resources_within_Project_Area_CSF.mxd Revised: 2021-05-13 By: astaplton

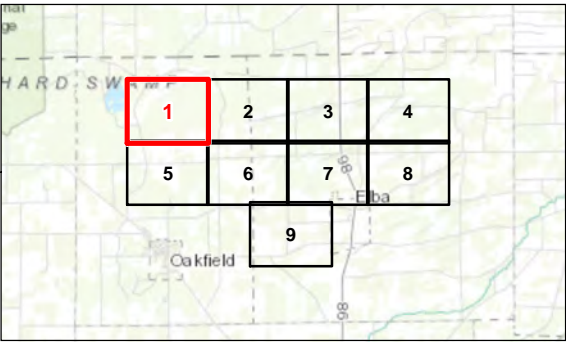


Legend

- Project Area
- Study Area
- Proposed Project
 - Substation and Switchyard
 - Inverter
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
- Delineated Features
 - Culvert
 - Delineated Stream - Linear
 - Delineated Stream - Area
 - Delineated Wetland - State Jurisdiction
 - Delineated Wetland - Federal Jurisdiction
 - NYSDEC-Regulated Adjacent Area
- Existing Features
 - Watershed Boundary (HUC 12)
 - Municipal Boundary



- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS GIS Clearinghouse (<https://gis.ny.gov>), USDA NRCS (<http://www.nrcs.usda.gov>)
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Town of Oakfield
Genesee County, NY

Prepared by AS on 2021-04-27
TR by EE on 2021-04-27
IR by AS on 2021-04-27

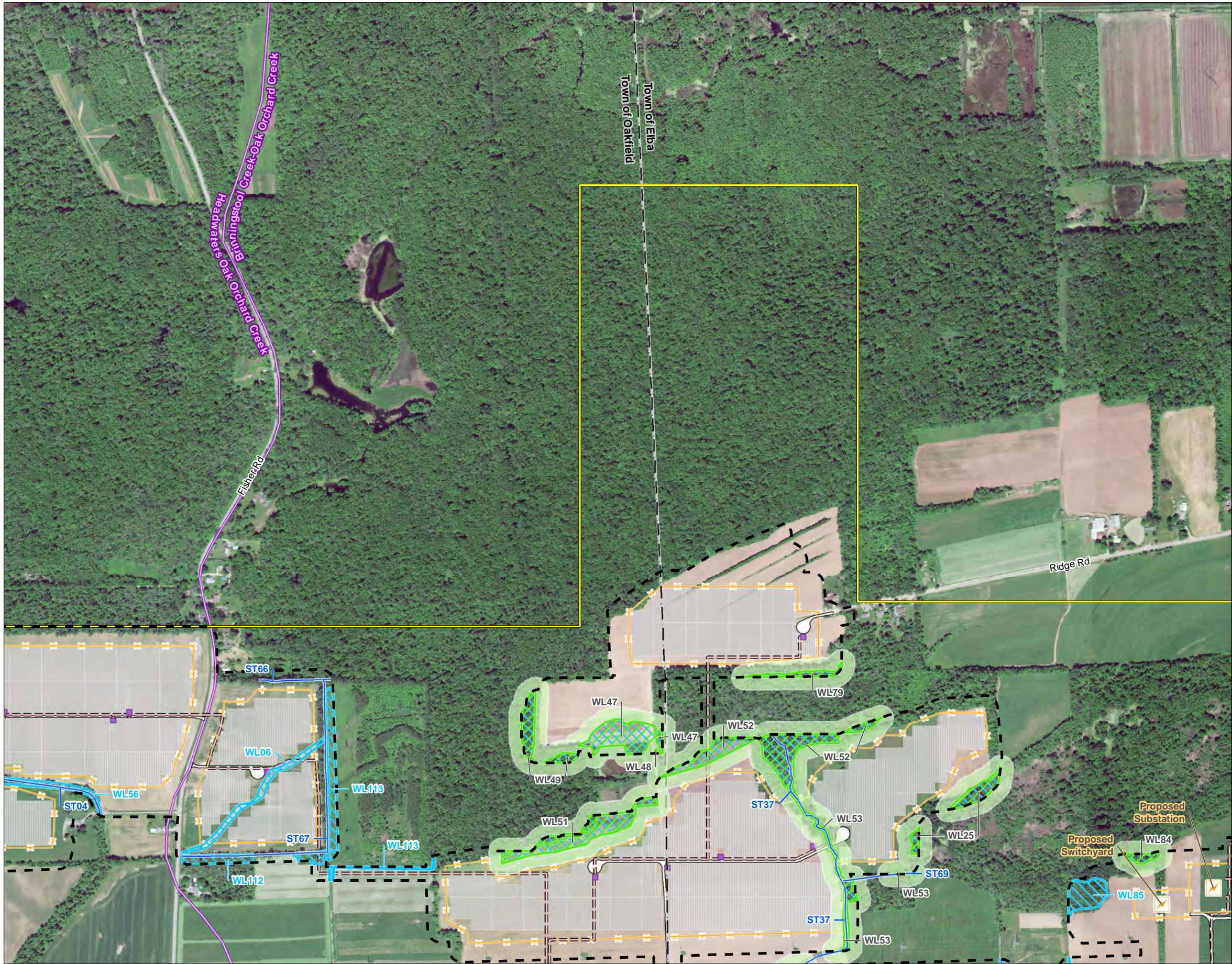
Client/Project
Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

Figure No.
14-1

Title
**Delineated Aquatic Resources
within Project Area
Map 1 of 9**

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-1_Delineated_Aquatic_Resources_within_Project_Area_CSF.mxd Revised: 2021-05-13 By: astapleton



Legend

- Project Area
- Study Area

Proposed Project

- Substation and Switchyard
 - Inverter
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
- #### Delineated Features
- Culvert
 - Delineated Stream - Linear
 - Delineated Stream - Area
 - Delineated Wetland - State Jurisdiction
 - Delineated Wetland - Federal Jurisdiction
 - NYSDEC-Regulated Adjacent Area

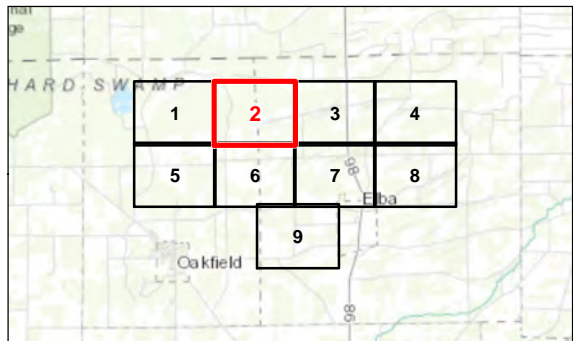
Existing Features

- Watershed Boundary (HUC 12)
- Municipal Boundary



0 800 1,600 Feet
(At original document size of 11x17)
1:9,600

- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS GIS Clearinghouse (<https://gis.ny.gov>), USDA NRCS (<http://www.nrcs.usda.gov>)
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Oakfield and Elba
Genesee County, NY

Prepared by AS on 2021-04-27
TR by EE on 2021-04-27
IR by AS on 2021-04-27

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

Figure No.

14-1

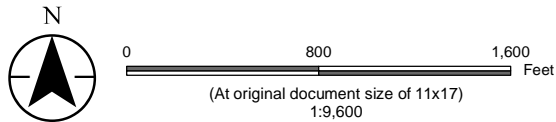
Title
**Delineated Aquatic Resources
within Project Area
Map 2 of 9**

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-1_Delineated_Aquatic_Resources_within_Project_Area_CSF.mxd Revised: 2021-05-13 By: astaplton

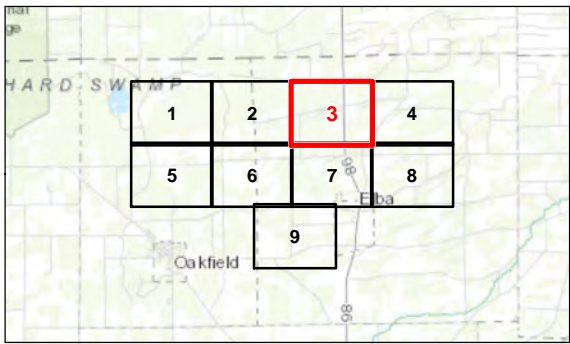


Legend

- Project Area
- Study Area
- Proposed Project
 - Substation and Switchyard
 - Inverter
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
- Delineated Features
 - Culvert
 - Delineated Stream - Linear
 - Delineated Stream - Area
 - Delineated Wetland - State Jurisdiction
 - Delineated Wetland - Federal Jurisdiction
 - NYSDEC-Regulated Adjacent Area
- Existing Features
 - Watershed Boundary (HUC 12)
 - Municipal Boundary



- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS GIS Clearinghouse (<https://gis.ny.gov>), USDA NRCS (<http://www.nrcs.usda.gov>)
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Town of Elba
Genesee County, NY

Prepared by AS on 2021-04-27
TR by EE on 2021-04-27
IR by AS on 2021-04-27

Client/Project
Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

Figure No.
14-1

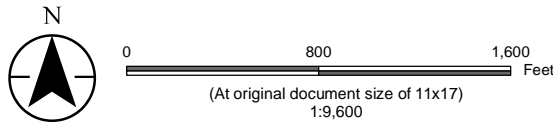
Title
**Delineated Aquatic Resources
within Project Area
Map 3 of 9**

U:\190502038\03_data\gis\mxd\Application\Exhibit 14-1_Delineated_Aquatic_Resources_within_Project_Area_CSF.mxd Revised: 2021-05-13 By: astapleton

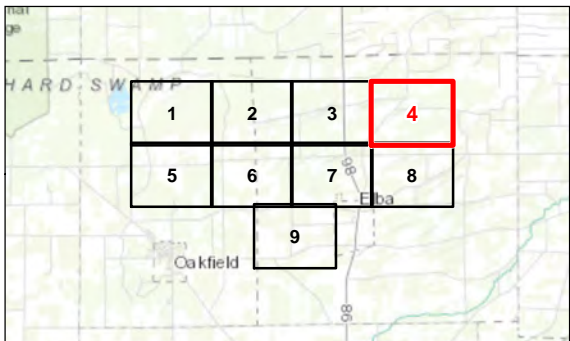


Legend

- Project Area
- Study Area
- Proposed Project
 - Substation and Switchyard
 - Inverter
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
- Delineated Features
 - Culvert
 - Delineated Stream - Linear
 - Delineated Stream - Area
 - Delineated Wetland - State Jurisdiction
 - Delineated Wetland - Federal Jurisdiction
 - NYSDEC-Regulated Adjacent Area
- Existing Features
 - Watershed Boundary (HUC 12)
 - Municipal Boundary



- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS GIS Clearinghouse (<https://gis.ny.gov>), USDA NRCS (<http://www.nrcs.usda.gov>)
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Town of Elba
Genesee County, NY

Prepared by AS on 2021-04-27
TR by EE on 2021-04-27
IR by AS on 2021-04-27

Client/Project
Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

Figure No.
14-1

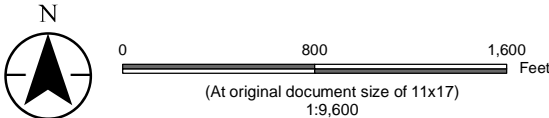
Title
**Delineated Aquatic Resources
within Project Area
Map 4 of 9**

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-1_Delineated_Aquatic_Resources_within_Project_Area_CSF.mxd Revised: 2021-05-13 By: astapleton

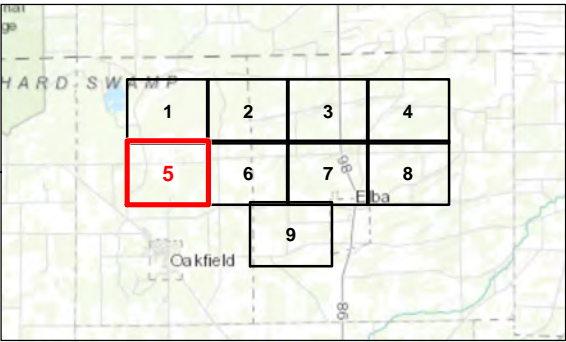


Legend

- Project Area
- Study Area
- Proposed Project
 - Substation and Switchyard
 - Inverter
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
- Delineated Features
 - Culvert
 - Delineated Stream - Linear
 - Delineated Stream - Area
 - Delineated Wetland - State Jurisdiction
 - Delineated Wetland - Federal Jurisdiction
 - NYSDEC-Regulated Adjacent Area
- Existing Features
 - Watershed Boundary (HUC 12)
 - Municipal Boundary



- Notes
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS GIS Clearinghouse (<https://gis.ny.gov>), USDA NRCS (<http://www.nrcs.usda.gov>)
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Town of Oakfield
Genesee County, NY

Prepared by AS on 2021-04-27
TR by EE on 2021-04-27
IR by AS on 2021-04-27

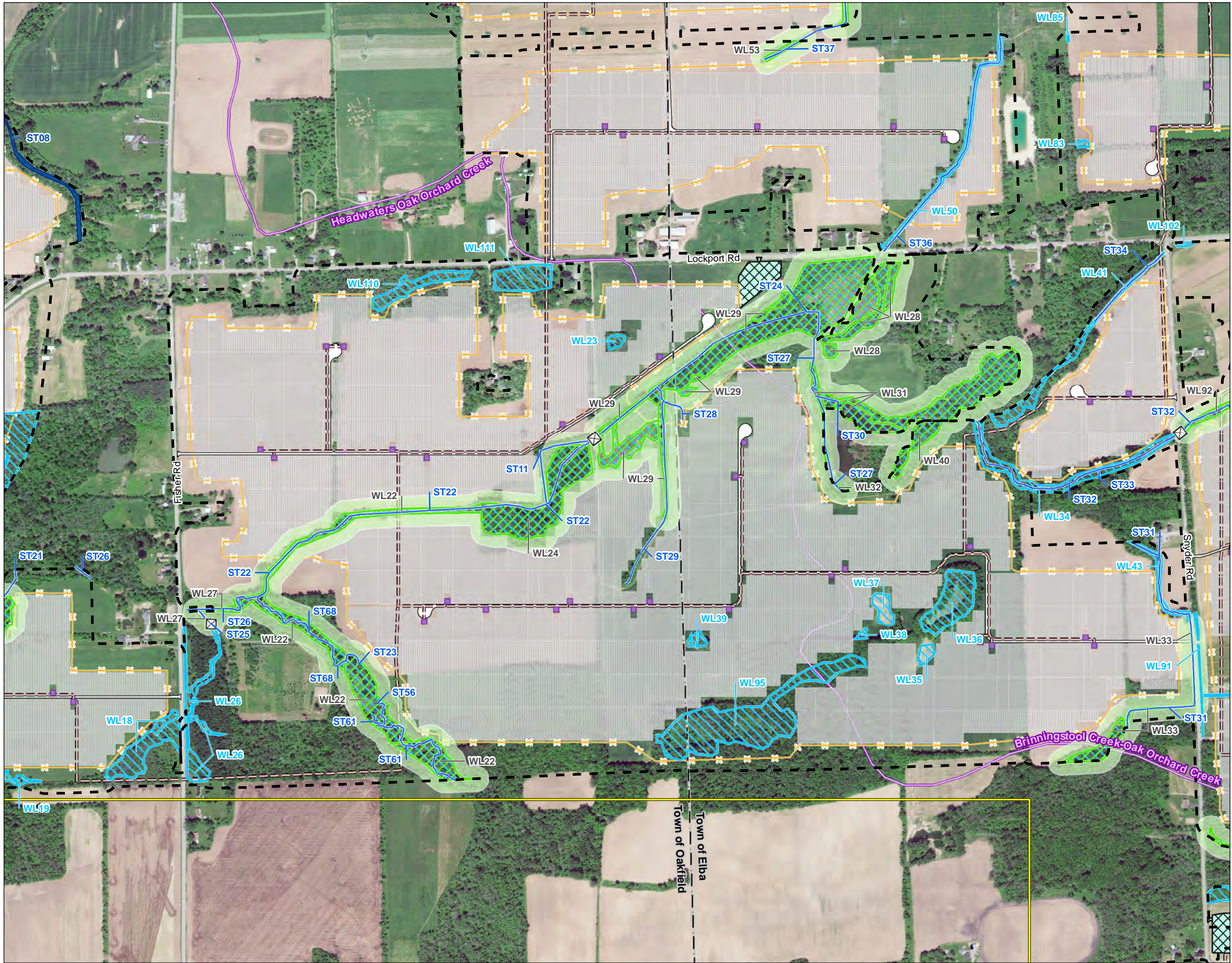
Client/Project
Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

Figure No.
14-1

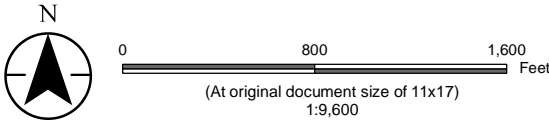
Title
**Delineated Aquatic Resources
within Project Area
Map 5 of 9**

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-1_Delineated_Aquatic_Resources_within_Project_Area_CSF.mxd Revised: 2021-05-13 By: astapleton

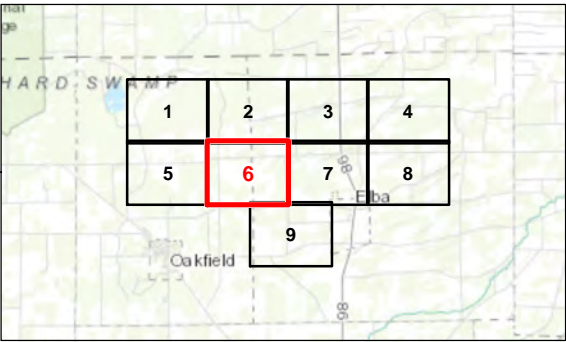


Legend

- Project Area
- Study Area
- Proposed Project
 - Substation and Switchyard
 - Inverter
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
- Delineated Features
 - Culvert
 - Delineated Stream - Linear
 - Delineated Stream - Area
 - Delineated Wetland - State Jurisdiction
 - Delineated Wetland - Federal Jurisdiction
 - NYSDEC-Regulated Adjacent Area
- Existing Features
 - Watershed Boundary (HUC 12)
 - Municipal Boundary



- Notes
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS GIS Clearinghouse (<https://gis.ny.gov>), USDA NRCS (<http://www.nrcs.usda.gov>)
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Oakfield and Elba
Genesee County, NY

Prepared by AS on 2021-04-27
TR by EE on 2021-04-27
IR by AS on 2021-04-27

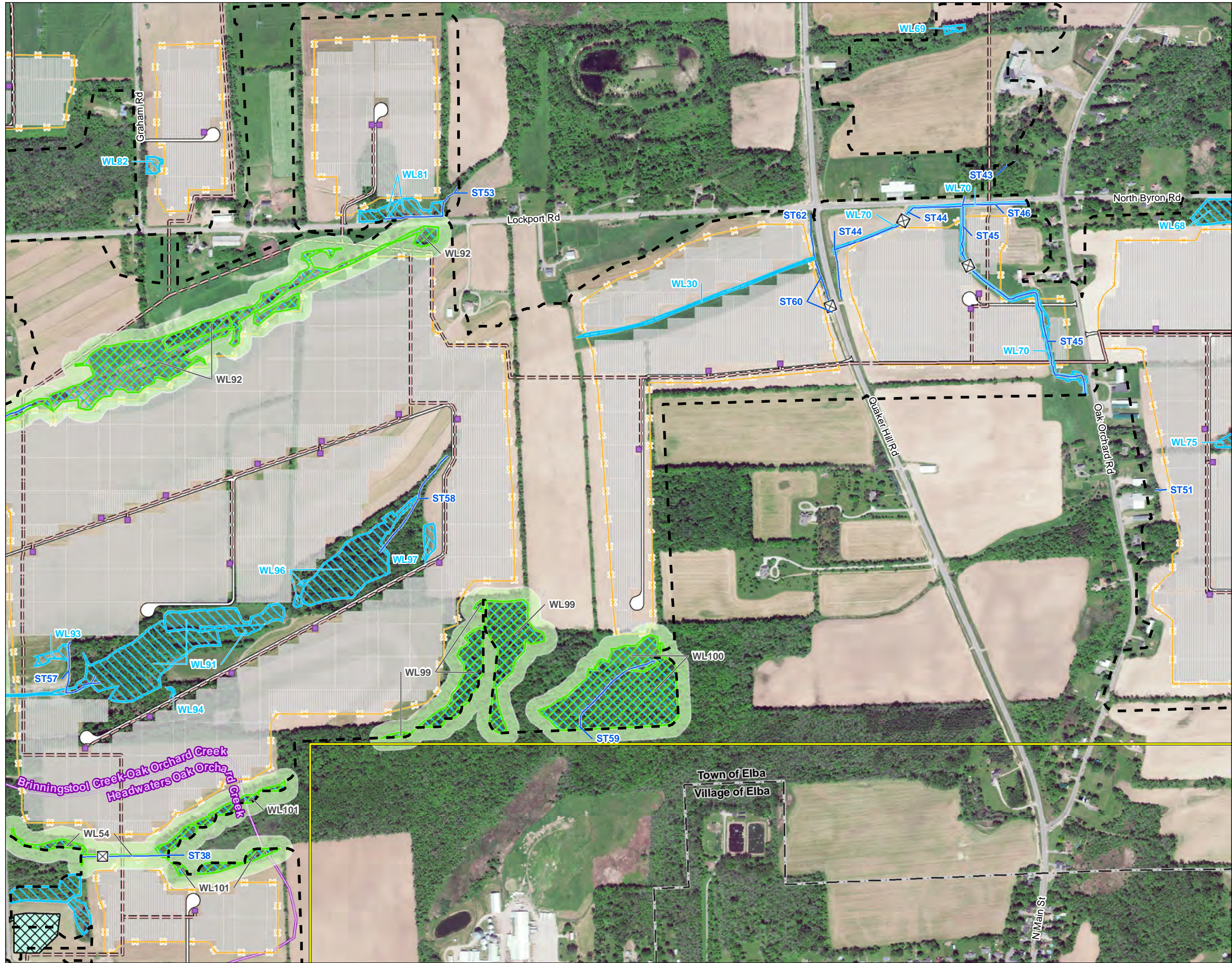
Client/Project
Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

Figure No.
14-1

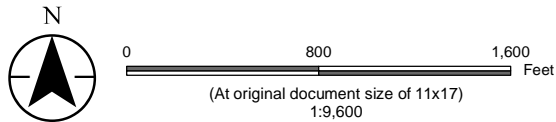
Title
**Delineated Aquatic Resources
within Project Area
Map 6 of 9**

U:\190502038\03_data\gis\mxd\Application\Exhibit 14-1_Delineated Aquatic Resources_within_Project_Area_CSF.mxd Revised: 2021-05-13 By: astapleton

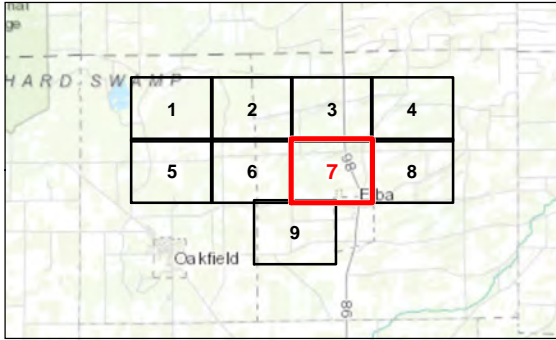


Legend

- Project Area
- Study Area
- Proposed Project
 - Substation and Switchyard
 - Inverter
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
- Delineated Features
 - Culvert
 - Delineated Stream - Linear
 - Delineated Stream - Area
 - Delineated Wetland - State Jurisdiction
 - Delineated Wetland - Federal Jurisdiction
 - NYSDEC-Regulated Adjacent Area
- Existing Features
 - Watershed Boundary (HUC 12)
 - Municipal Boundary



Notes
1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. Data Sources: NYS GIS Clearinghouse (<https://gis.ny.gov>), USDA NRCS (<http://www.nrcs.usda.gov>)
3. Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Town of Elba
Genesee County, NY

Prepared by AS on 2021-04-27
TR by EE on 2021-04-27
IR by AS on 2021-04-27

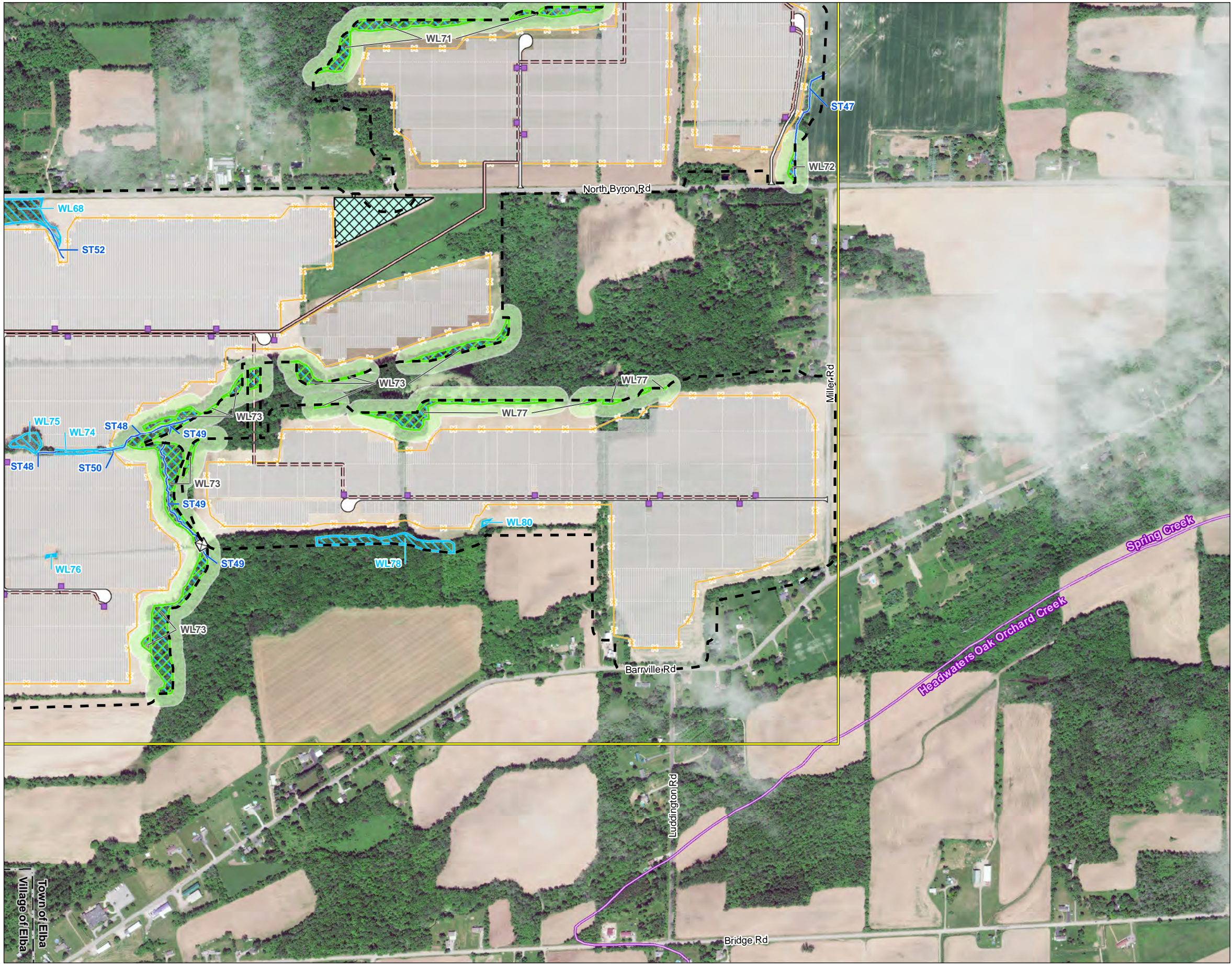
Client/Project
Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

Figure No.
14-1

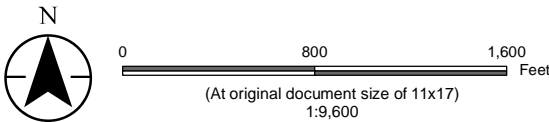
Title
**Delineated Aquatic Resources
within Project Area
Map 7 of 9**

U:\190502038\03_data\gis\mxd\Application\Exhibit 14-1_Delineated_Aquatic_Resources_within_Project_Area_CSF.mxd Revised: 2021-05-13 By: astaplton

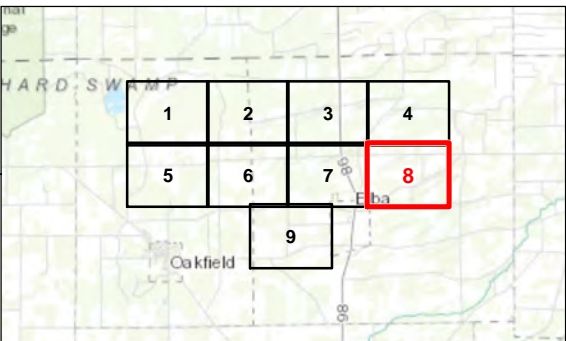


Legend

- Project Area
- Study Area
- Proposed Project
 - Substation and Switchyard
 - Inverter
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
- Delineated Features
 - Culvert
 - Delineated Stream - Linear
 - Delineated Stream - Area
 - Delineated Wetland - State Jurisdiction
 - Delineated Wetland - Federal Jurisdiction
 - NYSDEC-Regulated Adjacent Area
- Existing Features
 - Watershed Boundary (HUC 12)
 - Municipal Boundary



- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS GIS Clearinghouse (<https://gis.ny.gov>), USDA NRCS (<http://www.nrcs.usda.gov>)
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



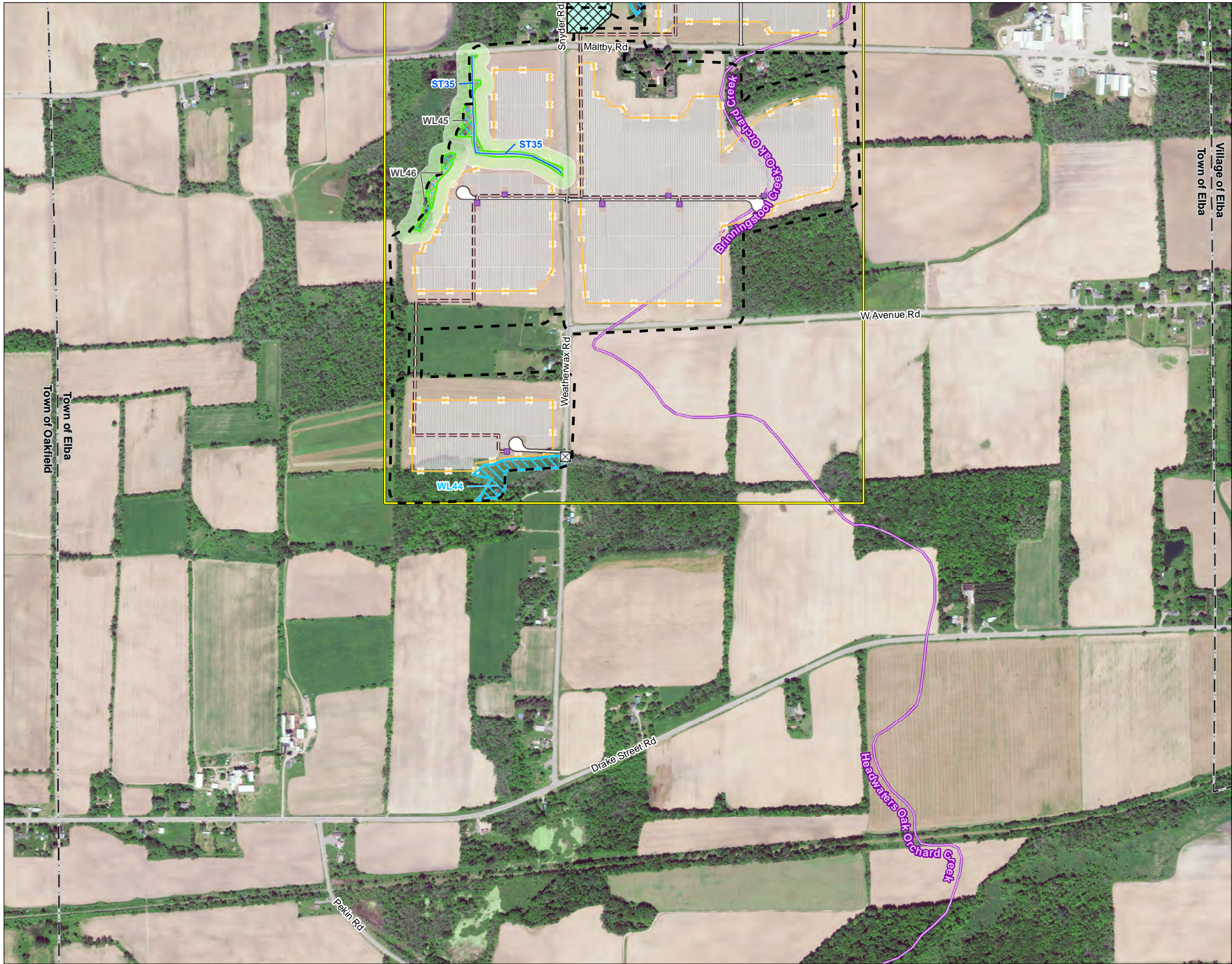
Project Location: Town of Elba, Genesee County, NY
Prepared by AS on 2021-04-27
TR by EE on 2021-04-27
IR by AS on 2021-04-27

Client/Project: Hecate Energy Cider Solar LLC, Cider Solar Farm
190502038 REV B

Figure No.: 14-1

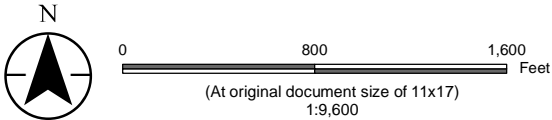
Title: Delineated Aquatic Resources within Project Area
Map 8 of 9

U:\190502038\03_data\gis\mxd\Application\Exhibit 14\Fig_14-1_Delineated_Aquatic_Resources_within_Project_Area_CSF.mxd Revised: 2021-05-13 By: astapleton

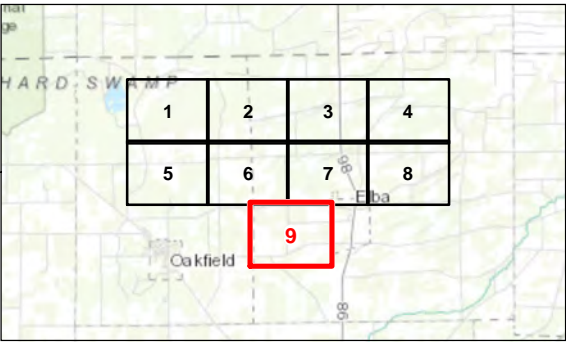


Legend

- Project Area
- Study Area
- Proposed Project
 - Substation and Switchyard
 - Inverter
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
- Delineated Features
 - Culvert
 - Delineated Stream - Linear
 - Delineated Stream - Area
 - Delineated Wetland - State Jurisdiction
 - Delineated Wetland - Federal Jurisdiction
 - NYSDEC-Regulated Adjacent Area
- Existing Features
 - Watershed Boundary (HUC 12)
 - Municipal Boundary



- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS GIS Clearinghouse (<https://gis.ny.gov>), USDA NRCS (<http://www.nrcs.usda.gov>)
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



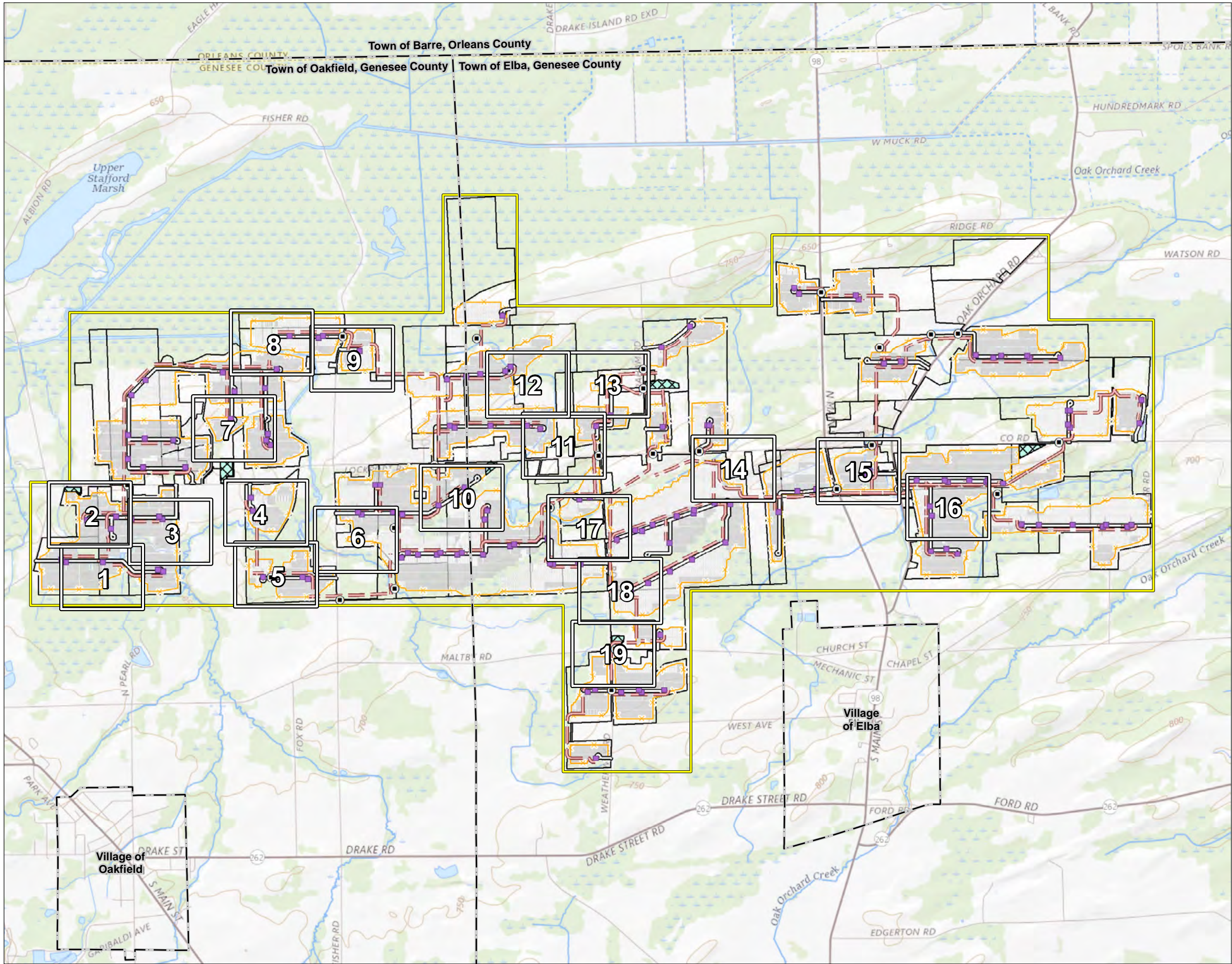
Project Location: Town of Elba, Genesee County, NY
Prepared by AS on 2021-04-27
TR by EE on 2021-04-27
IR by AS on 2021-04-27

Client/Project: Hecate Energy Cider Solar LLC, Cider Solar Farm
190502038 REV B

Figure No.: 14-1

Title: Delineated Aquatic Resources within Project Area
Map 9 of 9

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpactKey_CSF_dft.mxd Revised: 2021-05-24 By: eeshenaur



Legend

Project Area

Proposed Project

- Substation and Switchyard
 - Inverter
 - HDD
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
 - Project Site
- Existing Features
- Municipal Boundary



0 3,000 6,000 Feet
(At original document size of 11x17)
1:36,000

Notes
1. Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
2. Data Sources: NYS Office of ITS GPO, NYS Civil Boundaries, 2018
3. Background: USGS Topo Basemap - The National Map (Web Map Service); Data refreshed May, 2020.



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project
Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REVA

Figure No.
14-2 Key Map

Title
Delineated Wetland & Stream Impacts Key

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eeshenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

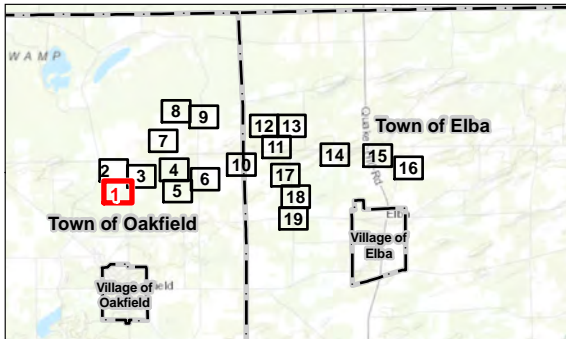
Existing Features

- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

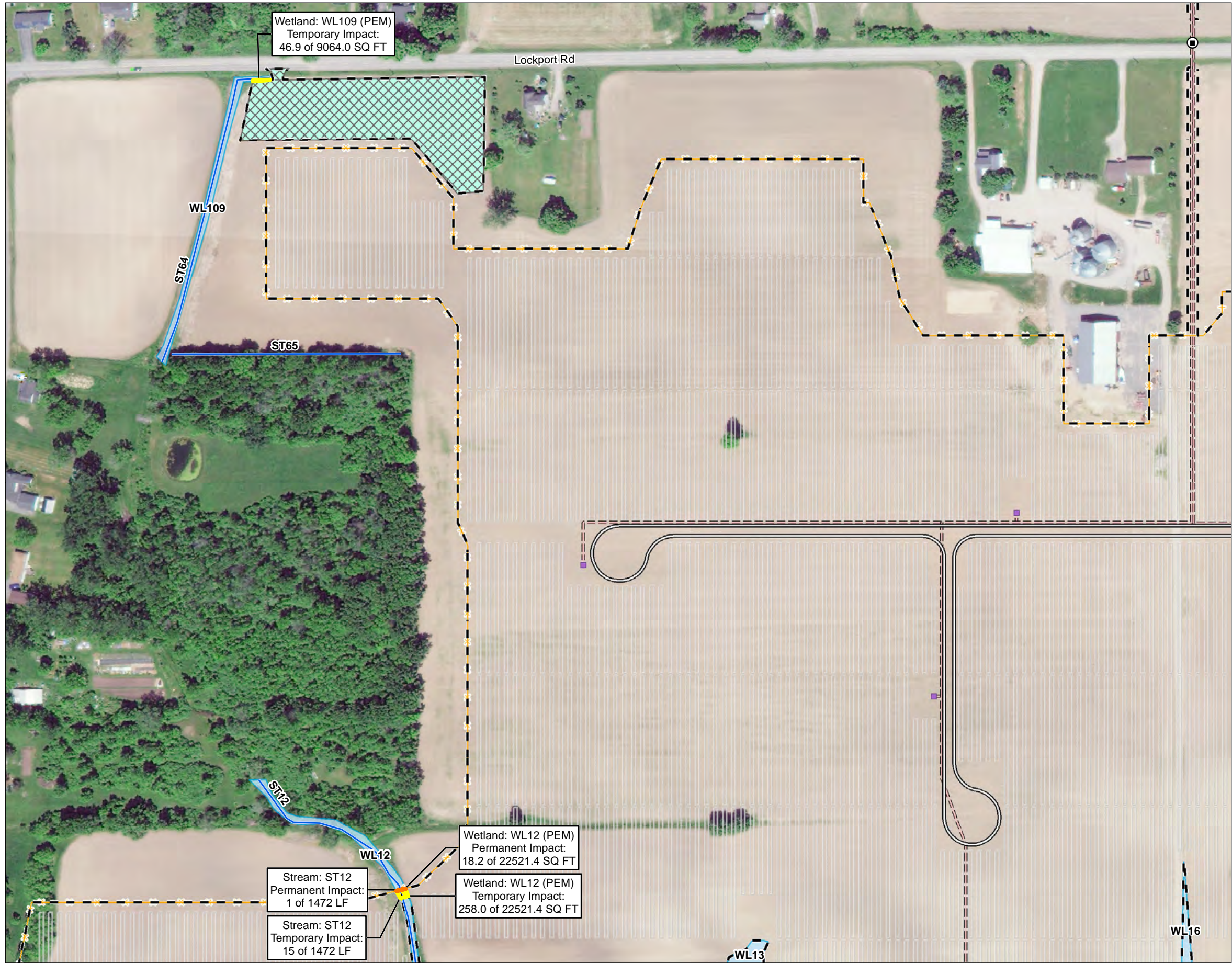
Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 1 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit1 A\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eashenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

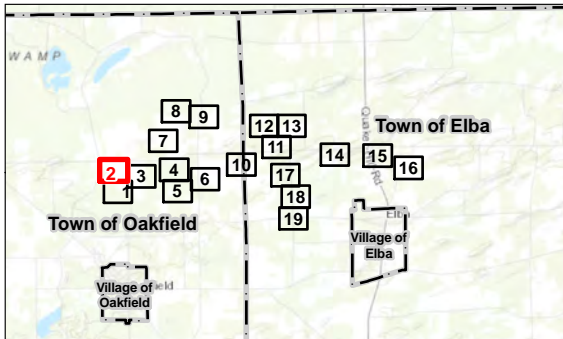
- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

Notes

- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
- Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
- Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

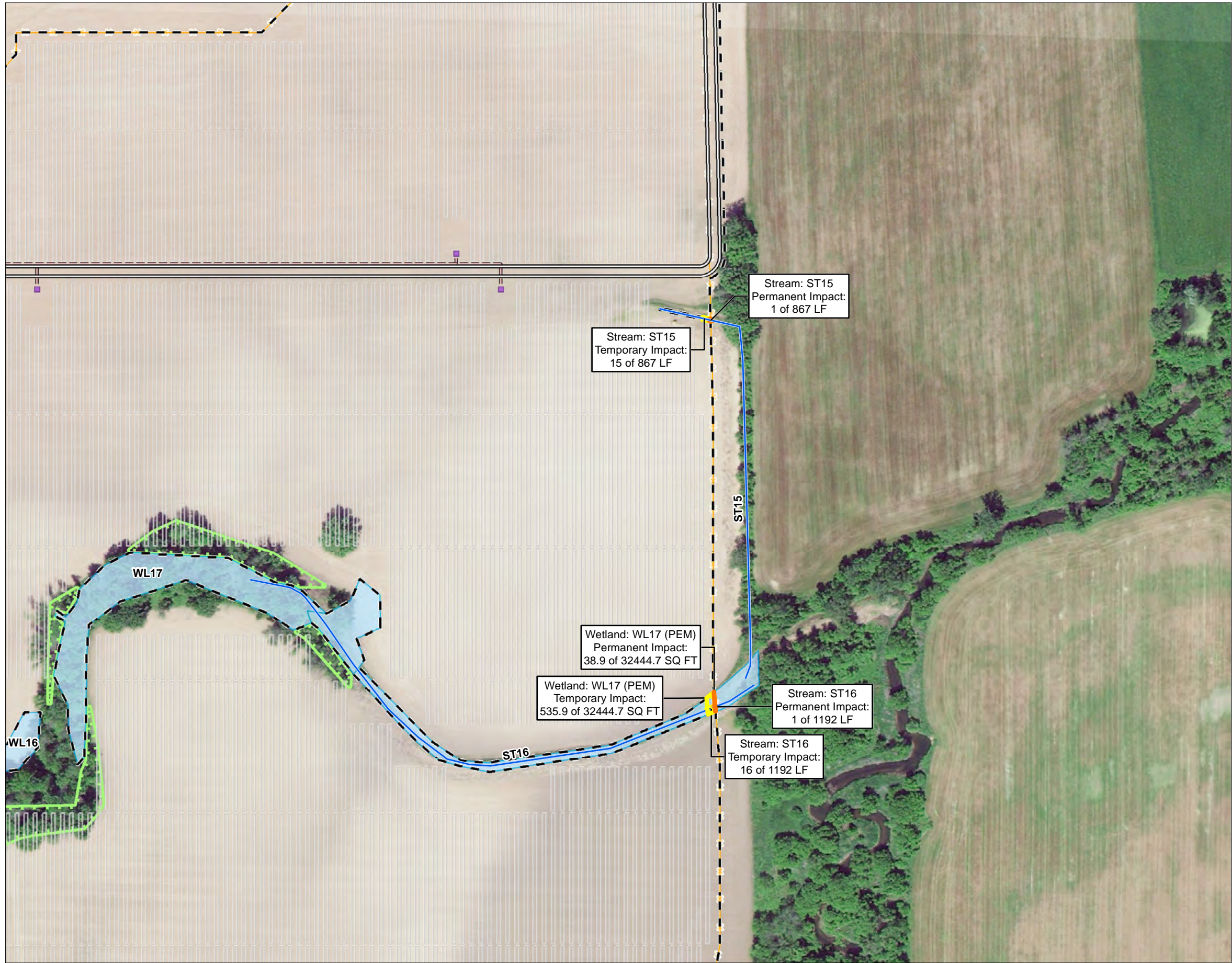
Figure No.

14-2

Title

**Delineated Wetland & Stream Impacts
Map 2 of 19**

U:\190502038\03_data\gis\mxd\Application\Exhibit1 A\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eeshenour



Stantec



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

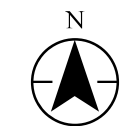
- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

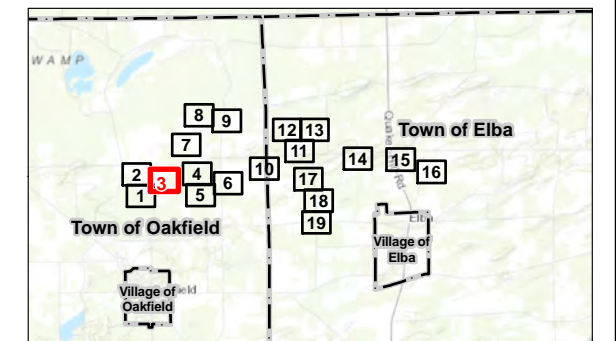
- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

Notes

- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
- Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
- Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

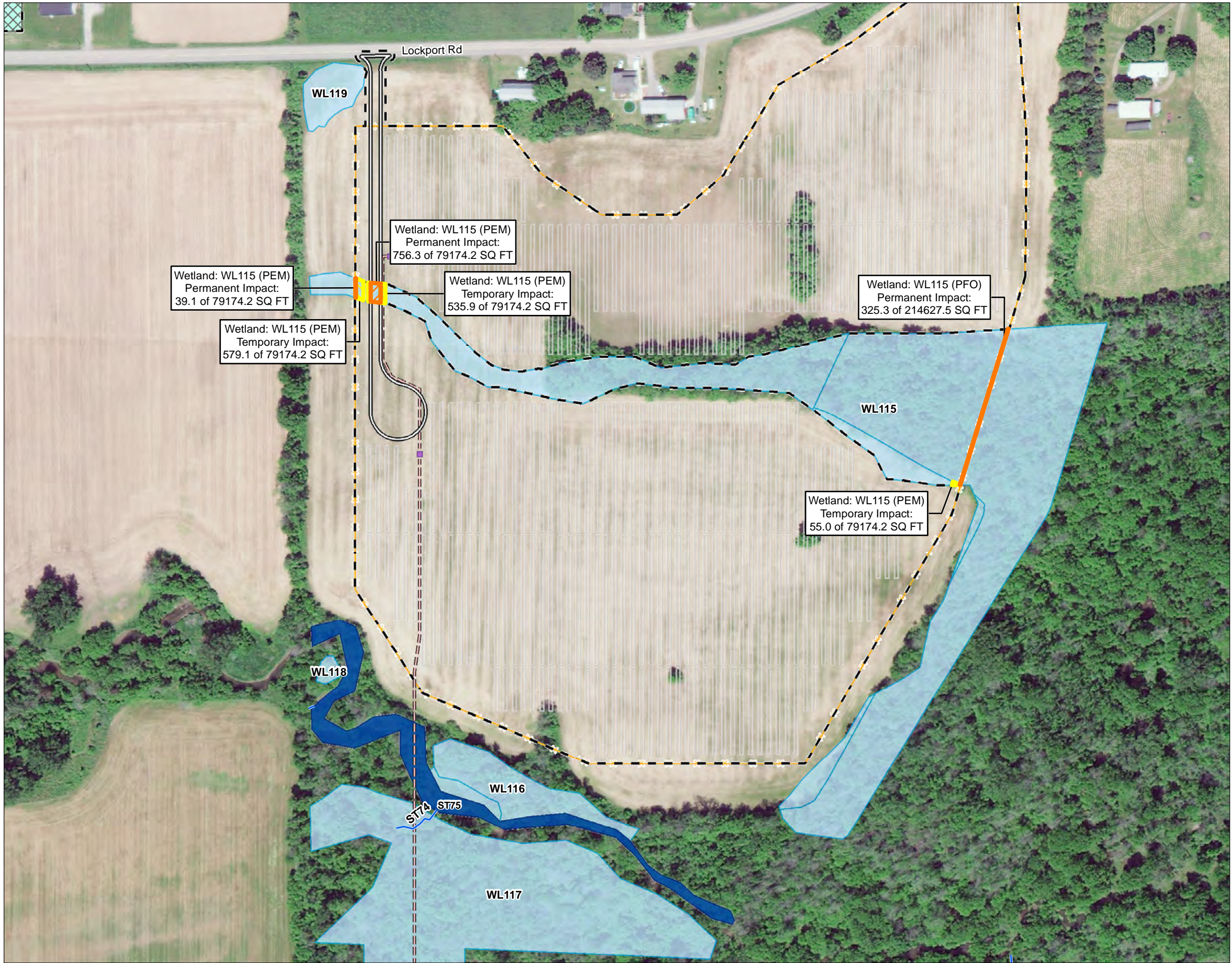
190502038 REV B

Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 3 of 19



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

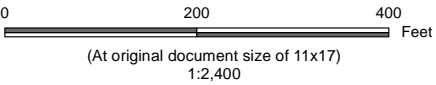
- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

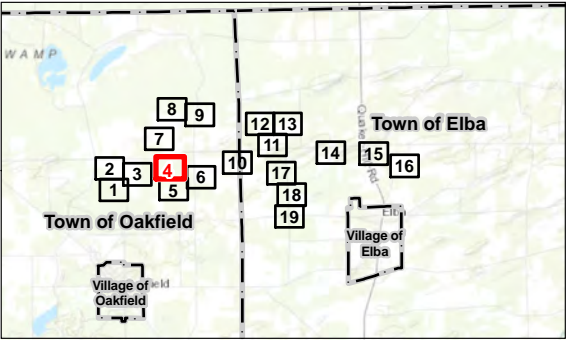
- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

- Municipal Boundary



- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV8

Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 4 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eeshenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

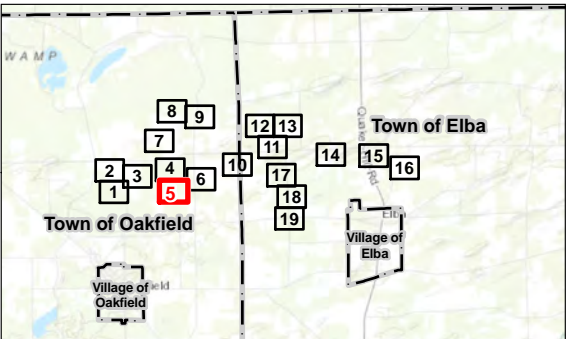
- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

Notes

- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
- Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
- Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

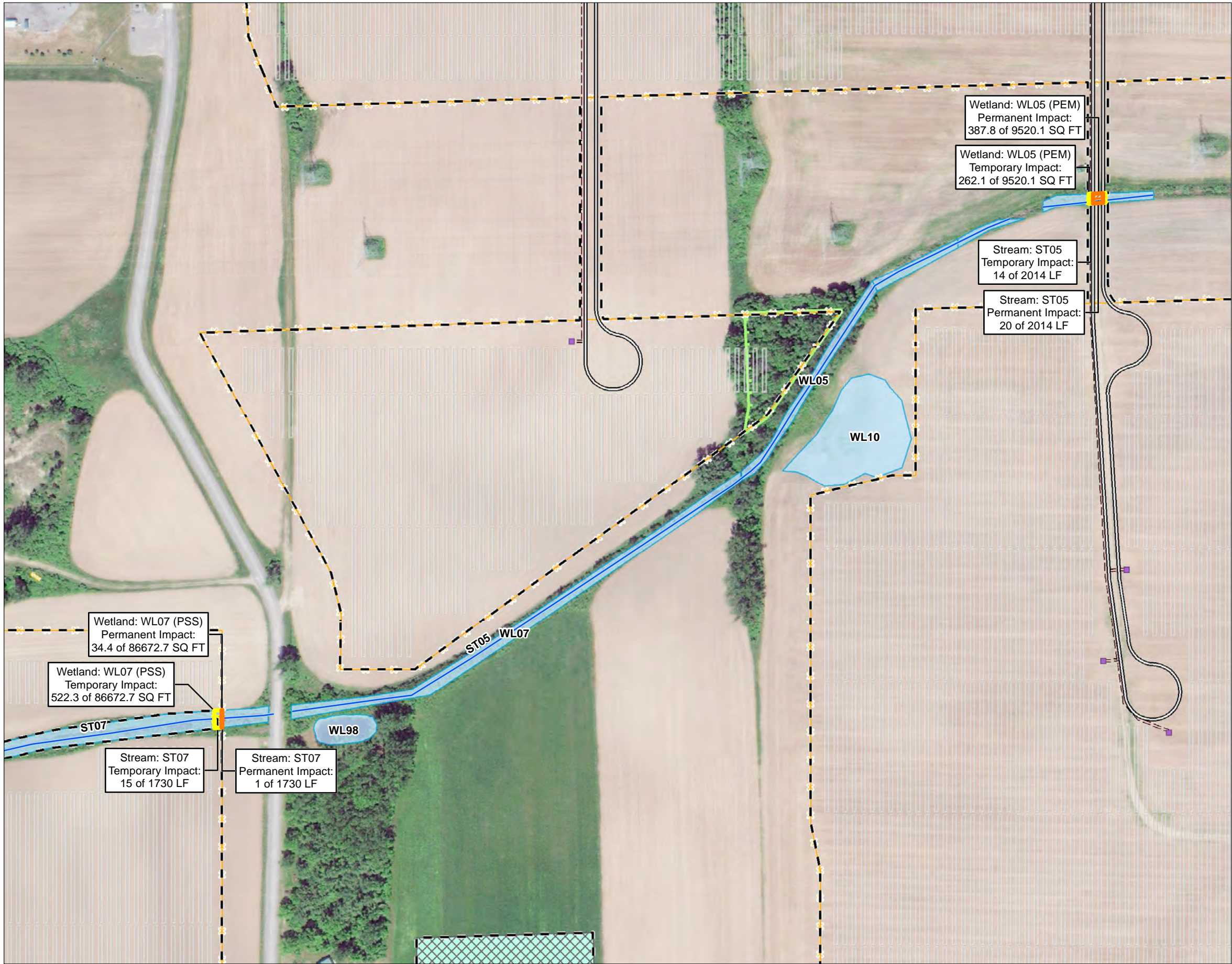
Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 5 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eashenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

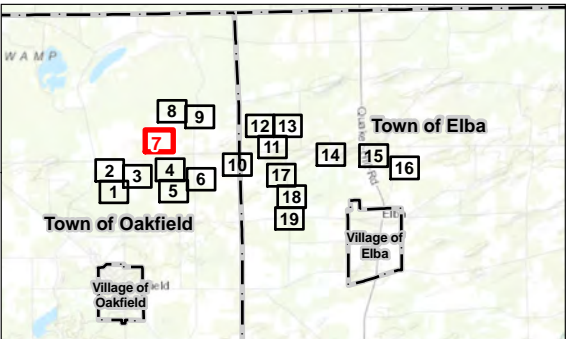
- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

Notes

- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
- Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
- Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV8

Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 7 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eeshenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

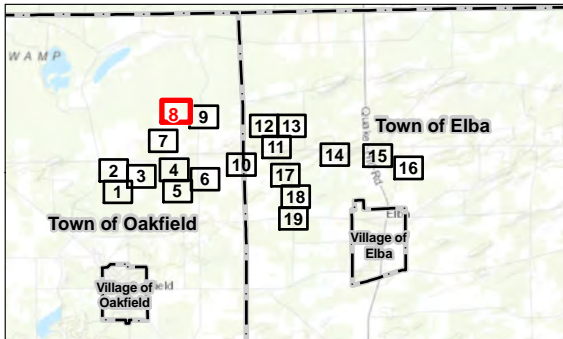
Existing Features

- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV8

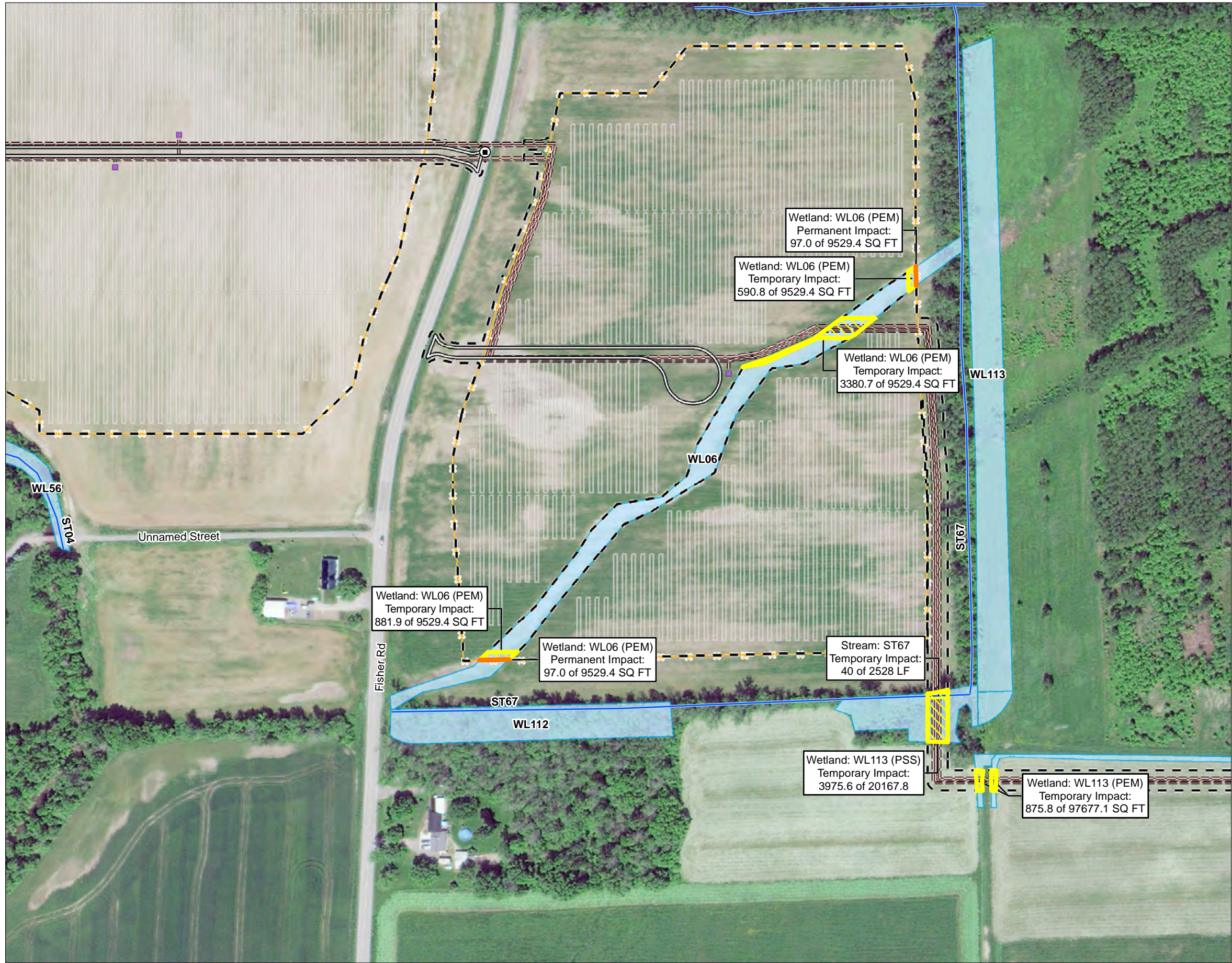
Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 8 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eeshenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

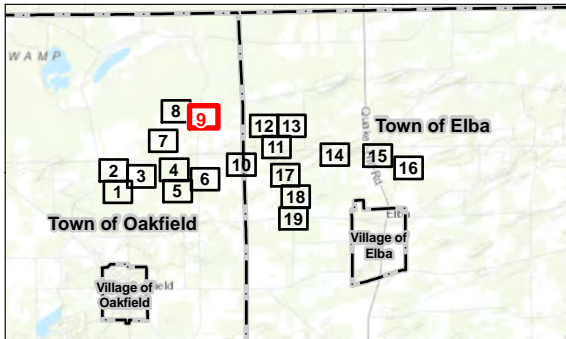
- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

Notes

- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
- Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
- Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV9

Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 9 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eeshenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

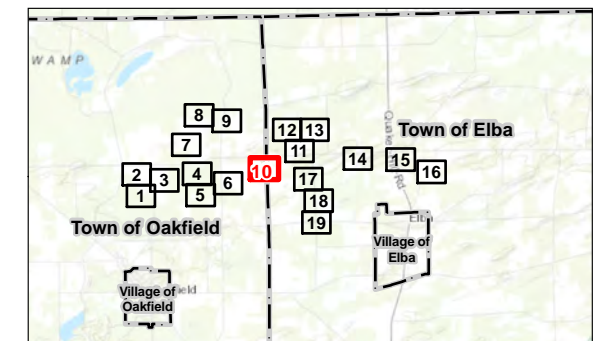
- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

Notes

- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
- Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
- Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV8

Figure No.

14-2

Title

**Delineated Wetland & Stream Impacts
Map 10 of 19**

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eeshenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

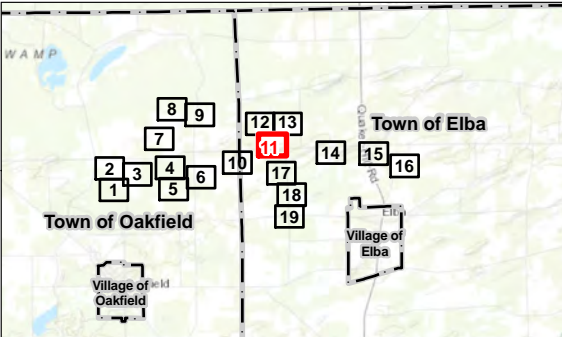
Existing Features

- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV8

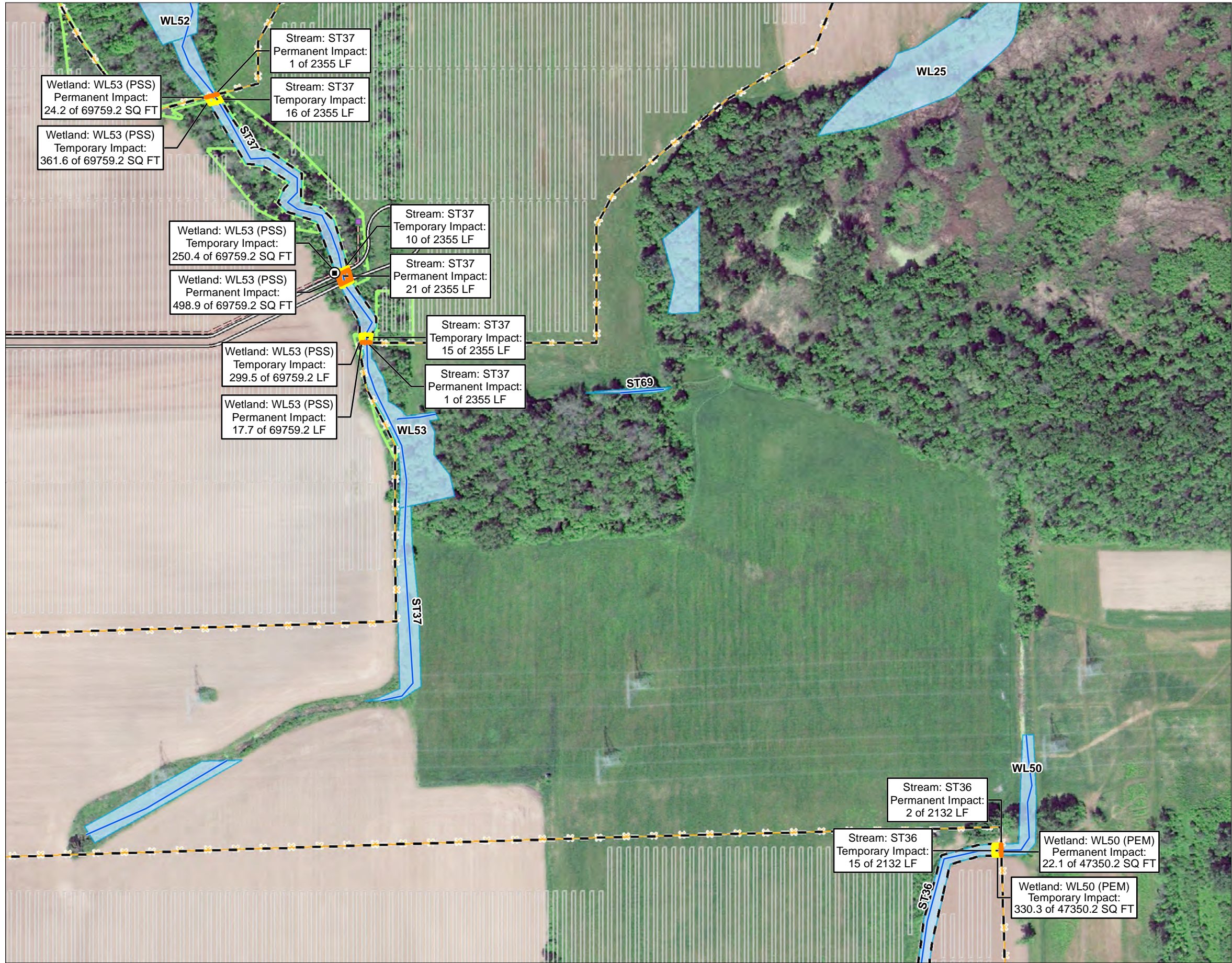
Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 11 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eashenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

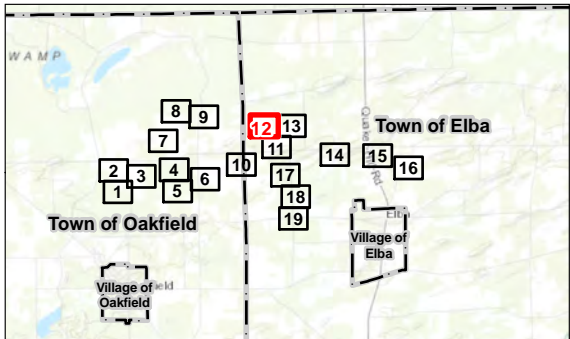
- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

Notes

- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
- Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
- Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 12 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eeshenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

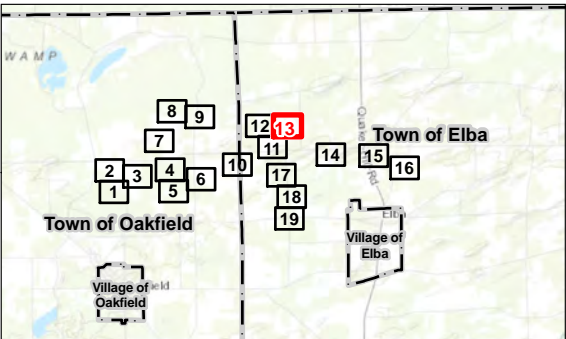
- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

Notes

- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
- Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
- Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV8

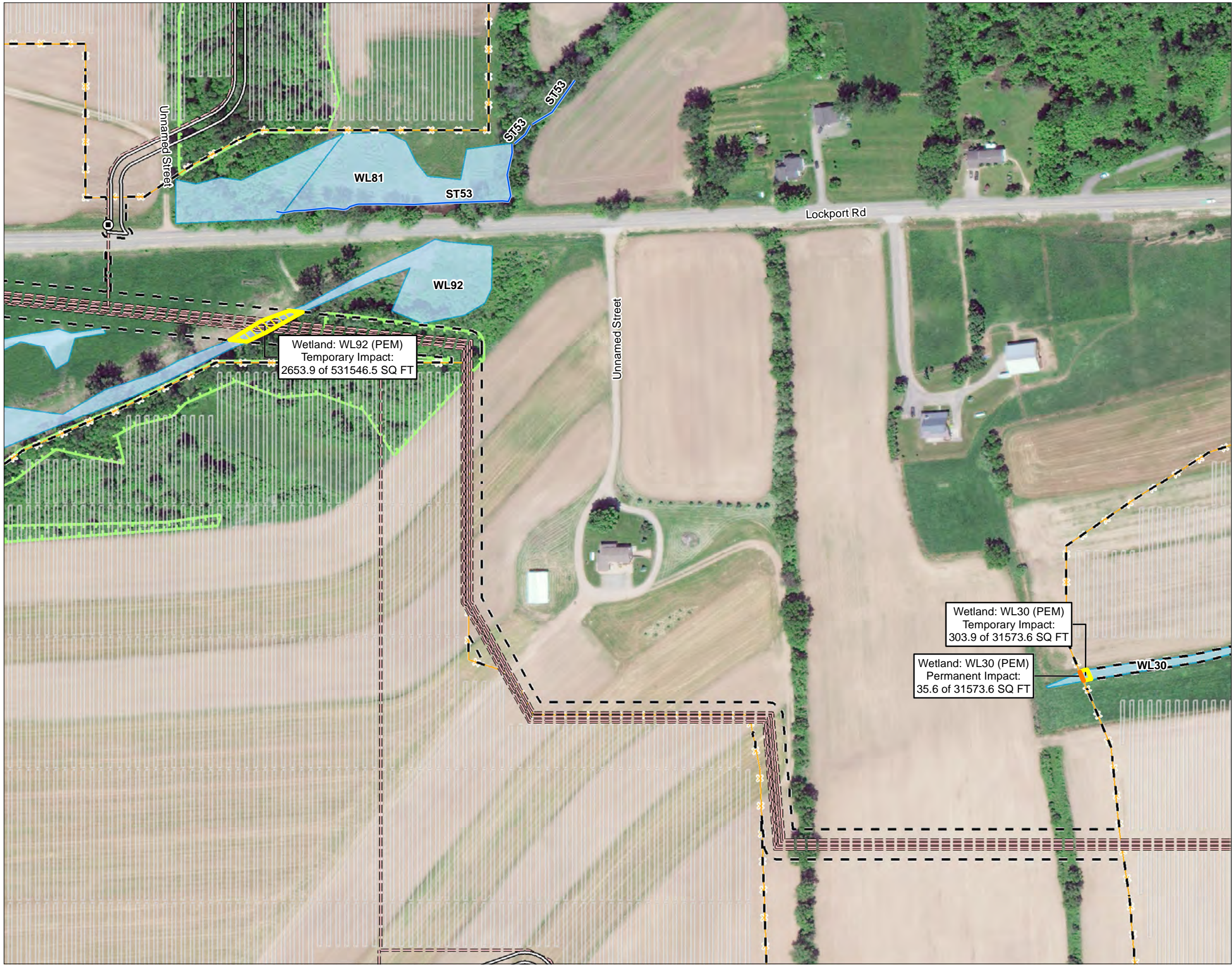
Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 13 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eastenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

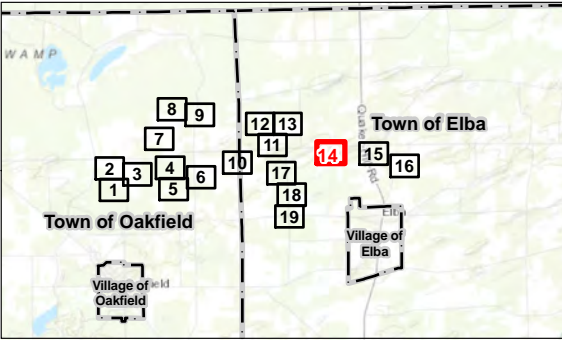
Existing Features

- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV8

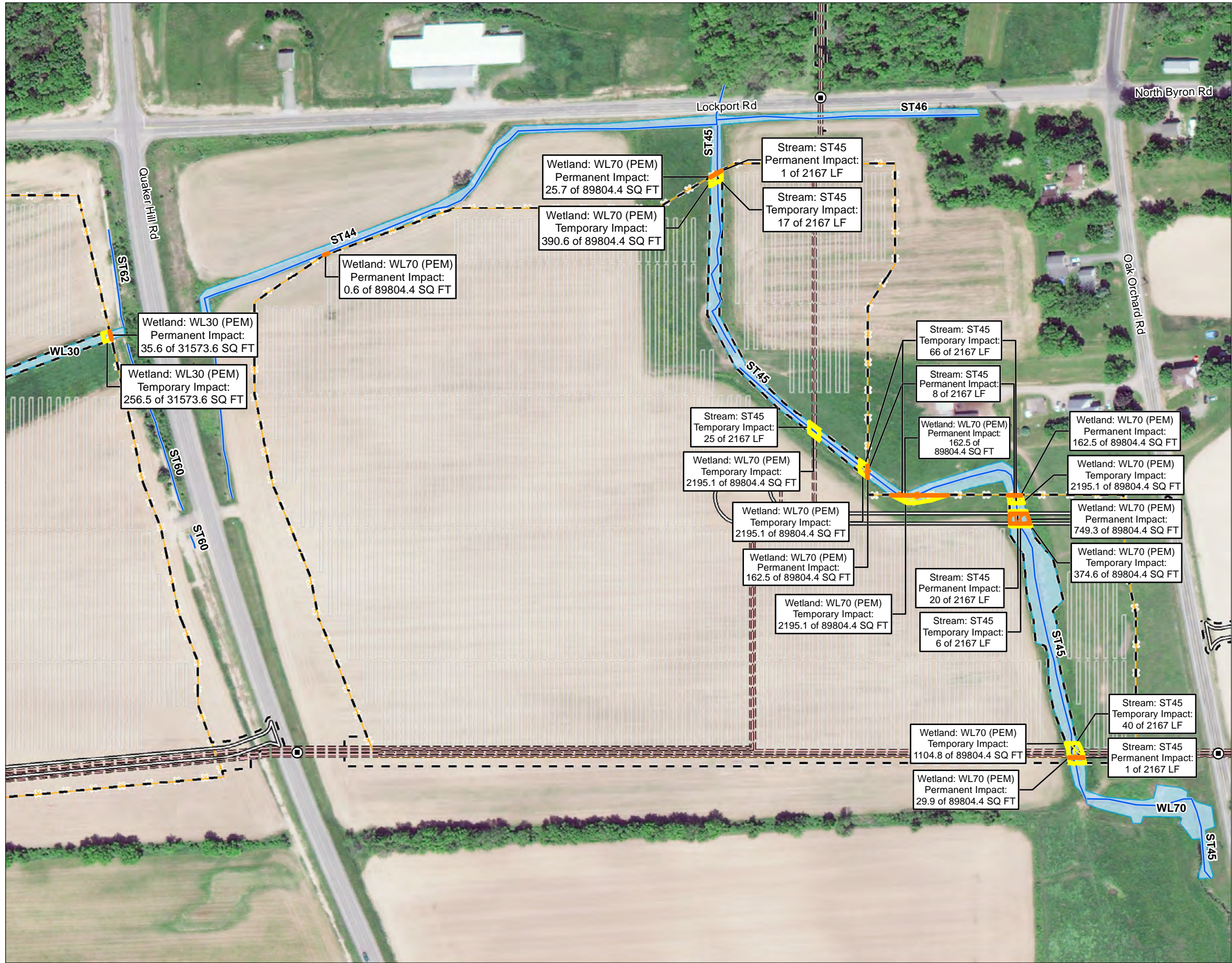
Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 14 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eashenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

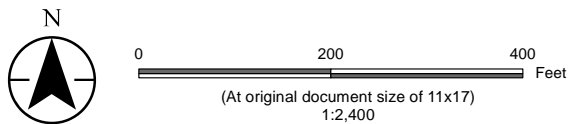
- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

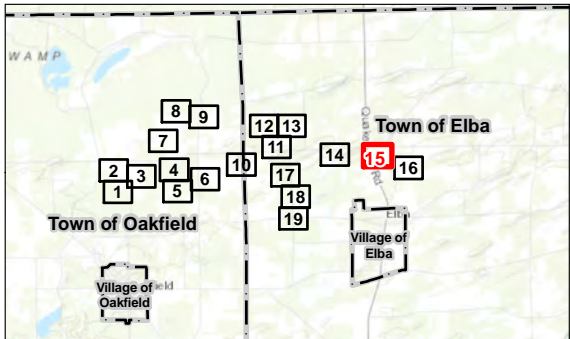
- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

- Municipal Boundary



- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

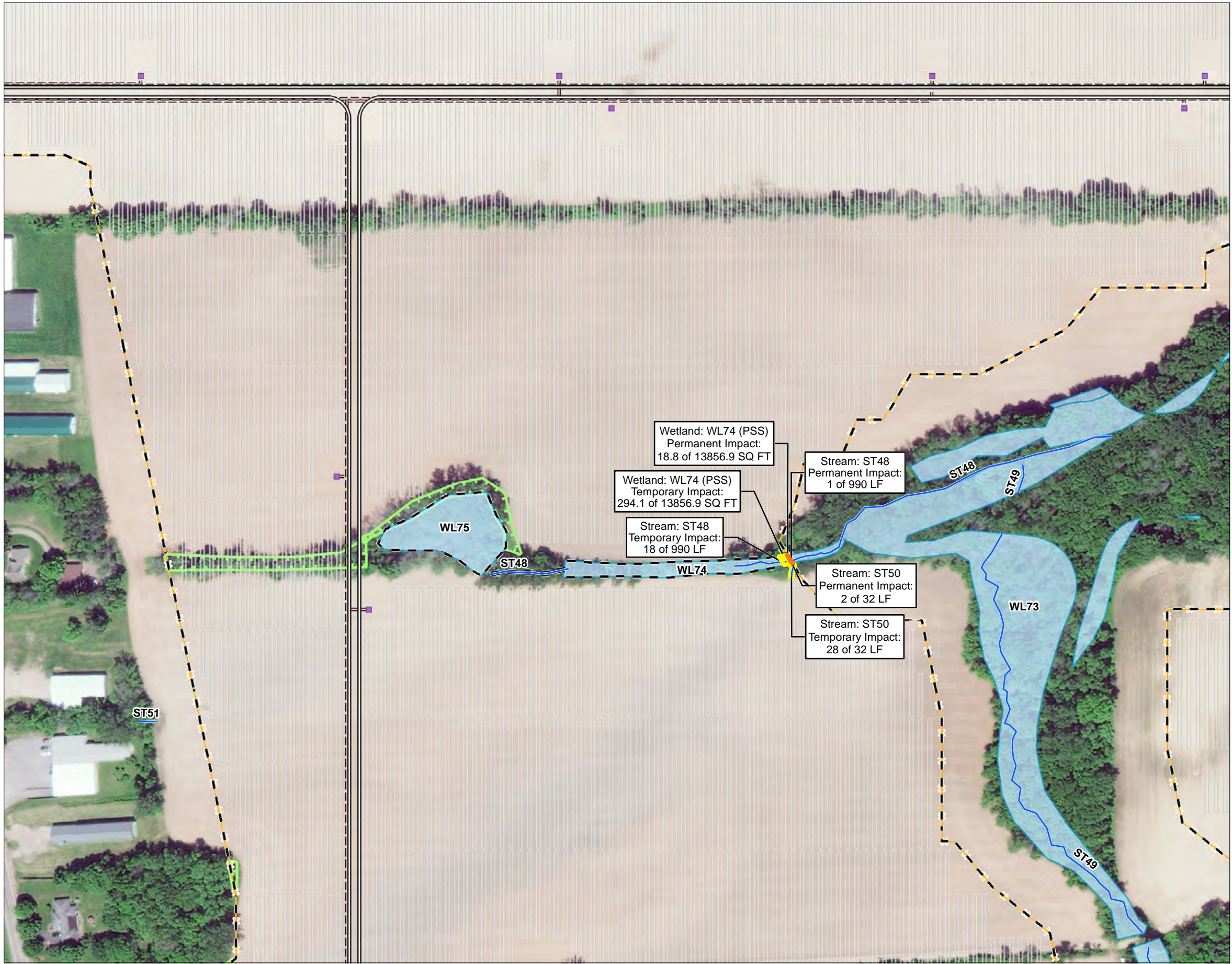
Figure No.

14-2

Title

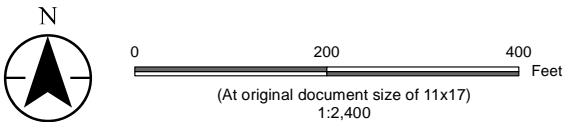
**Delineated Wetland & Stream Impacts
Map 15 of 19**

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eeshenour

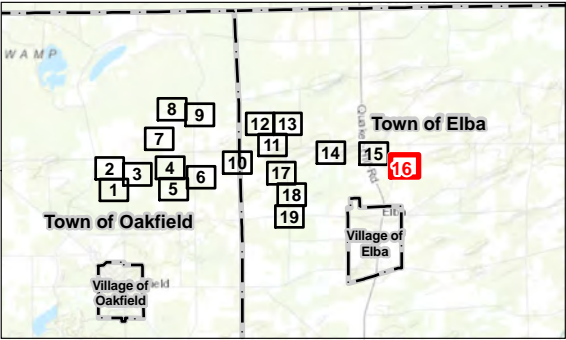


Legend

- Permanent Impact
- Temporary Impact
- Proposed Project
 - Substation and Switchyard
 - Inverter
 - HDD
 - PV Panel Array
 - Collection Line
 - Fence Line
 - Access Road
 - Laydown Area
 - Limit of Disturbance
 - Limit of Tree Clearing
- Delineated Features
 - Delineated Stream - Linear
 - Delineated Stream - Area
 - Delineated Wetland
- Existing Features
 - Municipal Boundary



- Notes
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project
Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REVB

Figure No.
14-2

Title
**Delineated Wetland & Stream Impacts
Map 16 of 19**



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

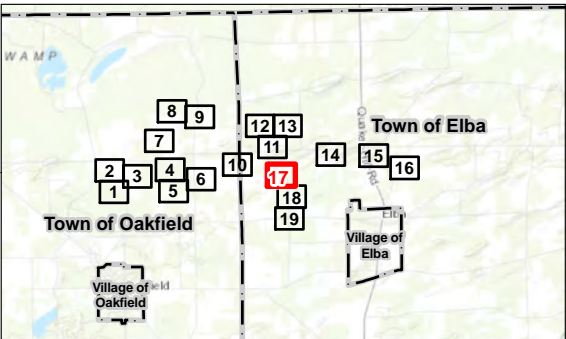
Existing Features

- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV B

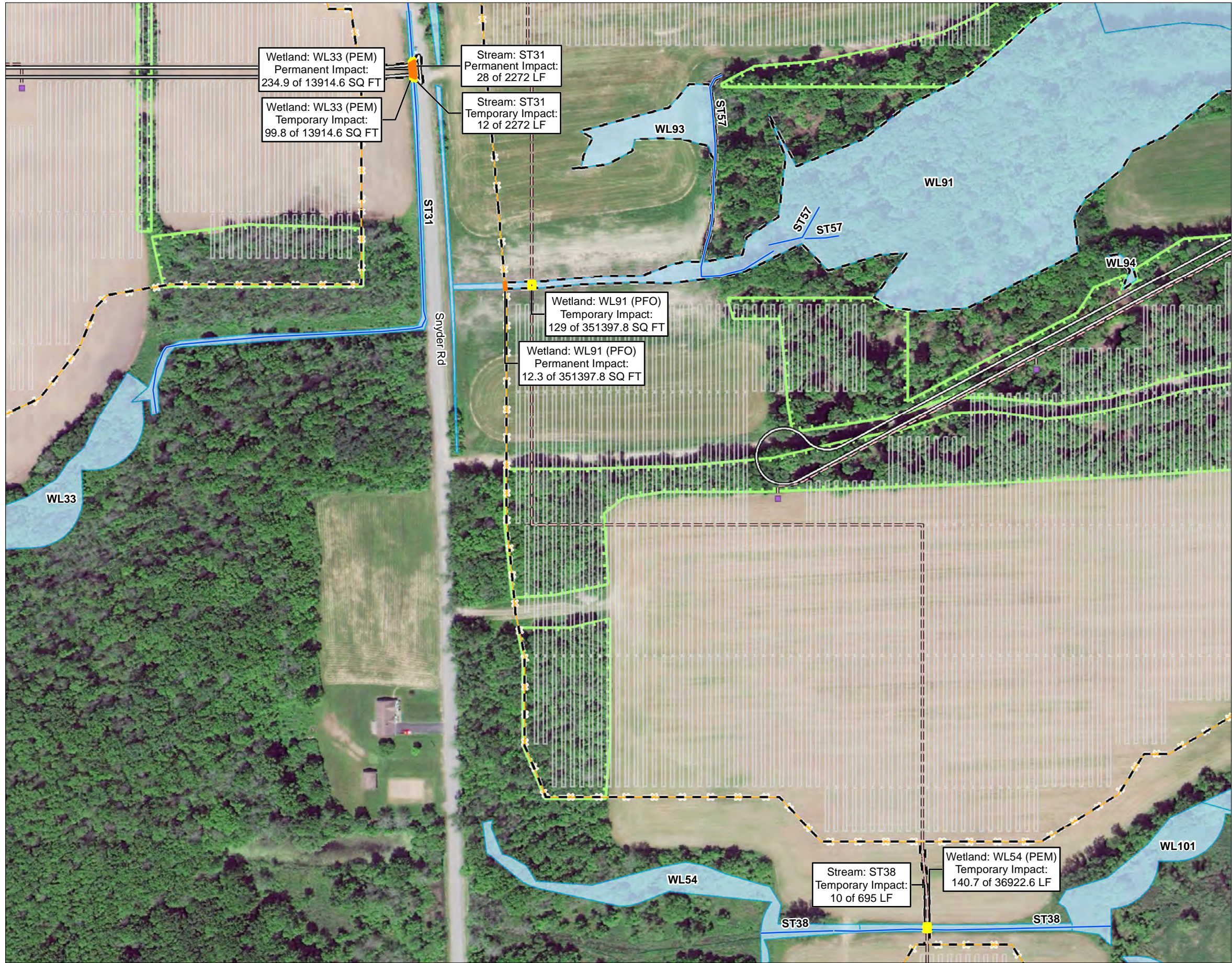
Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 17 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eastenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

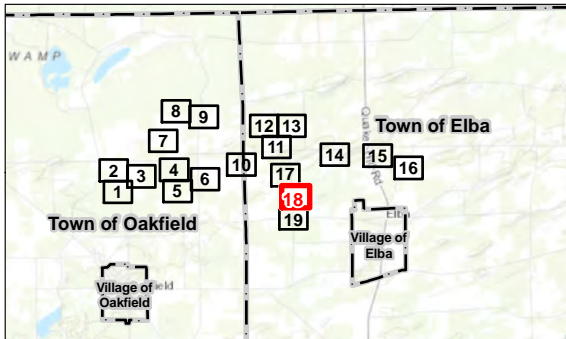
- Municipal Boundary



0 200 400 Feet
(At original document size of 11x17)
1:2,400

Notes

- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
- Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
- Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV8

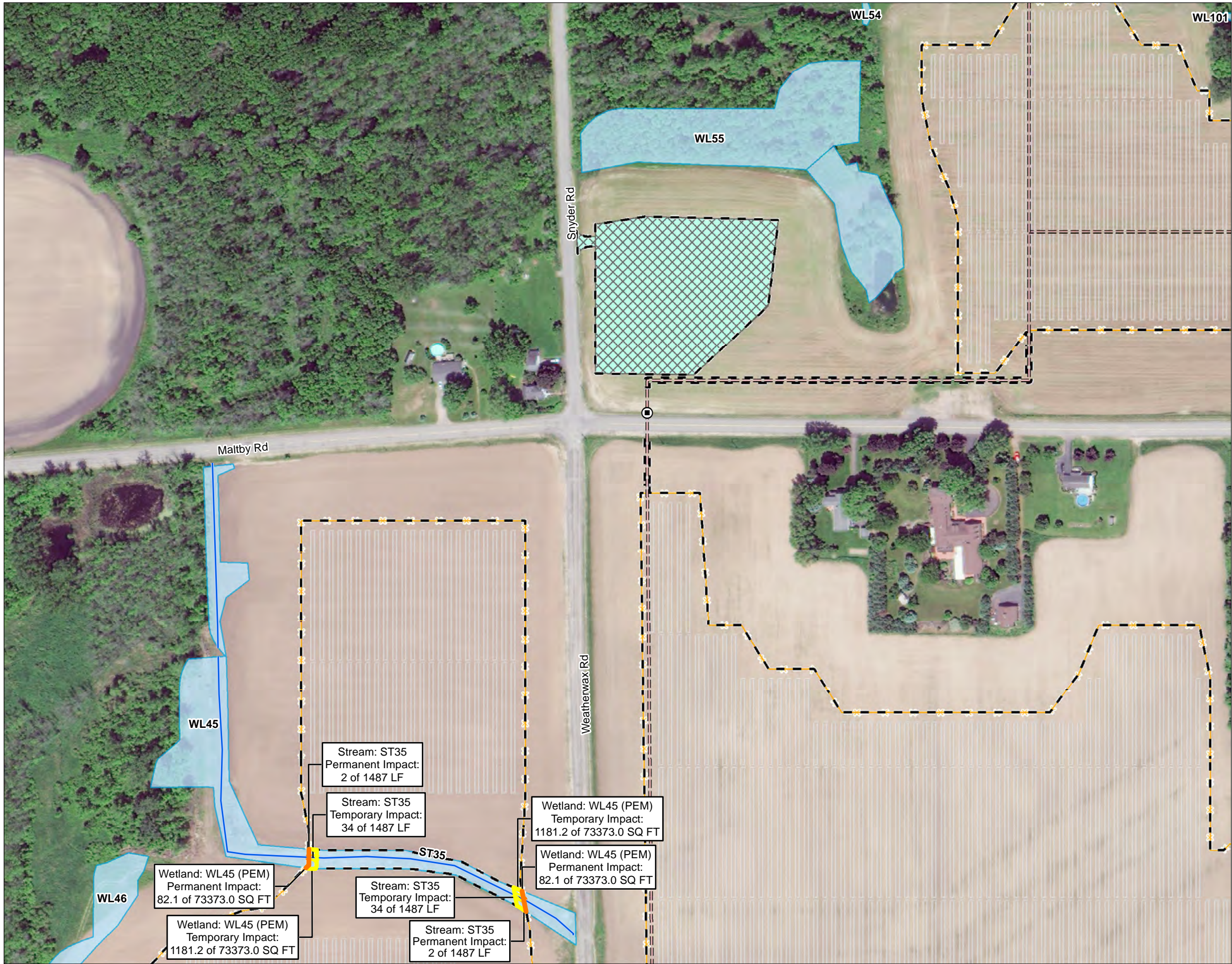
Figure No.

14-2

Title

Delineated Wetland & Stream Impacts
Map 18 of 19

U:\190502038\03_data\gis\mxd\Application\Exhibit14\Fig_14-2_WetlandStreamImpacts_CSF.mxd Revised: 2021-05-24 By: eeshenour



Legend

- Permanent Impact
- Temporary Impact

Proposed Project

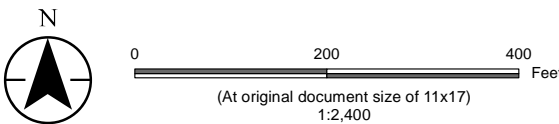
- Substation and Switchyard
- Inverter
- HDD
- PV Panel Array
- Collection Line
- Fence Line
- Access Road
- Laydown Area
- Limit of Disturbance
- Limit of Tree Clearing

Delineated Features

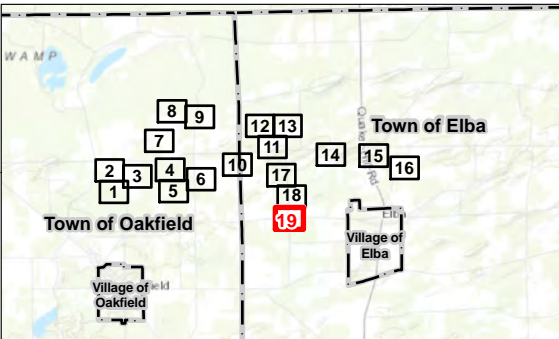
- Delineated Stream - Linear
- Delineated Stream - Area
- Delineated Wetland

Existing Features

- Municipal Boundary



- Notes**
- Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
 - Data Sources: NYS OITS GIS Program Office (GPO) Civil Boundaries, 2018; NYS Department of Taxation and Finance's Office of Real Property Tax Services (ORPTS), 2019; USGS NED Contours For Toronto E, NY, 2019
 - Background: WorldView-3 satellite imagery purchased on June 6, 2020



Project Location
Towns of Elba and Oakfield
Genesee County, NY

Prepared by EE on 2021-05-21
TR by AS on 2021-05-21
IR by JK on 2021-05-21

Client/Project

Hecate Energy Cider Solar LLC
Cider Solar Farm

190502038 REV8

Figure No.

14-2

Title

**Delineated Wetland & Stream Impacts
Map 19 of 19**