Standard Operating Procedures (SOP) for Remote Jurisdictional Determinations and Classification of Freshwater Wetlands Pursuant to 6 NYCRR Part 664, Freshwater Wetland Jurisdiction and Classification

Last Revised: 14 January 2025

Contents:

I. Purpose

The purpose of these standard operating procedures is to guide the New York State Department of Environmental Conservation's implementation of 6 NYCRR Part 664, which was revised on January 1, 2025, based on statutory changes to the Freshwater Wetlands Act (Article 24 of NY Environmental Conservation Law) signed into law in April 2022. As a result of these statutory and regulatory changes, DEC has transitioned from a wetland protection model that relied upon field mapping of regulatory wetlands to a new model in which state jurisdictional wetlands are identified and classified according to spatial data analysis using a Geographic Information System (GIS). As of January 1, 2025, DEC determines the jurisdictional status of freshwater wetlands within areas of inquiry through remote analysis of GIS spatial data to quantify wetland acreage, assess wetland locations within watersheds, and identify wetland characteristics that meet classification and Unusual Importance criteria specified in 6 NYCRR Part 664.5 and 664.6.

This SOP provides a conceptual framework describing the data and methods DEC uses to remotely identify jurisdictional wetlands, assign wetland classifications, and make Parcel Jurisdictional Determinations. Given the diversity in land cover, land use history, and the scale of projects for which jurisdictional determinations are requested, DEC's application of elements within this SOP is dynamic, with variable methods used to best match available spatial data to conditions on the ground.

In consideration of ongoing advancements in GIS mapping and the increasing accuracy and availability of spatial data for use in natural resource protection, DEC will frequently update this SOP as additional spatial data and geoprocessing methods are identified and applied toward making jurisdictional determinations and assigning wetland classifications.

II. Standard Operating Procedures

The following procedural summaries present elements of the SOP corresponding with the identification of jurisdictional wetlands pursuant to Part 664.2 and Part 664.6, and the GIS methods applied in assigning classifications pursuant to Part 664.5. Each GIS-

based process is presented with an italicized quotation of the specific Part 664 jurisdictional or classification criterion it covers, a listing of associated GIS data sources, and a bulleted description of the GIS process the DEC applies to identify and assign classifications to jurisdictional wetlands.

A. Identification of Jurisdictional Wetlands by Acreage

Jurisdictional Criterion: 664.2 Definitions (n): *'Freshwater wetland' or 'wetland' means lands and waters of the state which meet the definition provided in section 24-0107(1) of the Act and have an area of at least 12.4 acres (approximately 5 hectares), or, beginning on January 1, 2028, 7.4 acres (approximately 3 hectares).*

GIS Data: Previously Mapped Freshwater Wetlands, National Wetlands Inventory, Informational Freshwater Wetland Mapping, National Land Cover Database (NLCD), Digital Elevation Modeling, United States Geological Survey (USGS) Soils Data, Hudson River Submerged Aquatic Vegetation, Database of Waterbodies with Large Areas of Submerged Aquatic Vegetation (See Appendix A), LiDAR data, Orthoimagery, Wetland Delineation Data (if available).

GIS Process:

- Load indicated GIS data;
- Identify and digitize all wetland areas within 100 feet of indicated parcel(s), including waterbodies using the process identified in Appendix A for submerged aquatic vegetation in water less than 6 feet deep;
- Calculate wetland acreage;
- Buffer wetland areas meeting or exceeding the current jurisdictional acreage threshold by 100 feet to generate a predictive extent for regulated adjacent areas;
- Identify and assign appropriate classifications for predicted jurisdictional wetlands according to steps outlined under Jurisdictional Wetland Classification.

B. Identification of Jurisdictional Wetlands of Unusual Importance (UI)

Jurisdictional Criteria: 664.6 Wetlands of Unusual Importance: *A freshwater wetland, regardless of size, is of Unusual Importance and, therefore, regulated if it possesses one or more of the following characteristics, as determined by the department pursuant to this Part:*

Overall GIS Process

- Using the wetlands identified and digitized in Section A, determine if any of the wetlands not meeting the acreage threshold meet any of the 11 Unusual Importance criteria described in subsections (a) through (k) below.
- For wetlands meeting UI criteria, assign classifications according to steps outlined in Section C. Classification of Jurisdictional Wetlands.

(a) <u>Significant Flooding</u>: *The freshwater wetland is located in a 12-digit Hydrologic Unit Code (HUC) that meets all of the following three criteria:*

GIS Data: Digitized wetland areas, HUC 12 watersheds identified in Appendix B.

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to the HUC 12 watersheds identified in Appendix B.
- Wetlands falling entirely or partially within the HUC 12 watersheds identified in Appendix B are jurisdictional.

(b) <u>Urban Areas</u>: *It is located within or adjacent to an urban area, as defined and identified by the United States Census Bureau.*

GIS Data: Digitized wetland areas, US Census Bureau 2020 Urban Areas.

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to the extent of US Census Bureau 2020 Urban Areas (see Appendix C).
- Wetlands falling entirely or partially within a US Census Bureau 2020 Urban Area are jurisdictional.
- Wetlands falling entirely outside of urban areas do not meet this criterion yet need to be screened for potential jurisdiction according to subsequent UI criteria.

(c) <u>Rare Plants</u>: *It contains a plant species occurring in fewer than 35 sites statewide or having fewer than 5000 individuals statewide, as documented by the department*.

GIS Data: Digitized wetland areas, NYNHP Element Occurrence Database

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to the known locations of rare plants mapped with a high and very high precision on NYNHP Element Occurrence Database that meet the criteria.
- Wetlands containing known locations of rare plants that meet the criteria are jurisdictional.

(d) <u>Rare Animals</u>: *It meets one or more of the following criteria, as documented by the department:*

(1) it contains habitat that is utilized for an essential behavior of a species listed as endangered in Part 182 of this Title or listed as endangered by the United States Department of the Interior in the Code of Federal Regulations (50 CFR Part 17);

GIS Data: Digitized wetlands, NYNHP Element Occurrence Database

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to the known locations of endangered species on NYNHP Element Occurrence Database.
- Wetlands containing known locations of endangered species are jurisdictional.

(2) it contains habitat that is utilized for an essential behavior of a species listed as threatened in Part 182 of this Title or listed as threatened by the United States Department of the Interior in the Code of Federal Regulations (50 CFR Part 17);

GIS Data: Digitized wetlands, NYNHP Element Occurrence Database

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to the known locations of threatened species on NYNHP Element Occurrence Database.
- Wetlands containing known locations of threatened species are jurisdictional.

(3) it contains habitat that is utilized for an essential behavior of species of special concern. Species of special concern are native species of fish and wildlife found by the department to be at risk of becoming threatened in New York based on the criteria for listing in Part 182 of this Title; or

GIS Data: Digitized wetlands, NYNHP Element Occurrence Database

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to documented locations of Species of Special Concern in the NYNHP Element Occurrence Database.
- Wetlands containing documented locations of these species are jurisdictional.

(4) it contains habitat that is utilized for an essential behavior of a species of greatest conservation need listed in the New York State Wildlife Action Plan (Sept. 2015) with

habitat loss having been identified by the department as a moderate to very high threat to New York populations.

GIS Data: Digitized wetlands, List of SGCN contained in Appendix D, NYNHP Element Occurrence Database

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to the documented locations of SGCN contained in Appendix D on NYNHP Element Occurrence Database.
- Wetlands containing know locations of these SGCN are jurisdictional.

(e) <u>Class I</u>: *It is classified by the department as a Class I wetland.*

GIS Data: Digitized wetlands, NYNHP Element Occurrence Database, Significant coastal fish and wildlife habitat areas database, DEC tidal wetlands maps, DIFRM maps, Water quality classification maps set forth in Parts 800-941.

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to known locations containing any of the 9 Class I characteristics contained in 664.5(a) depicted on the GIS datasets contained above.
- Wetlands containing known locations of meeting any of Class I characteristic are jurisdictional.
- For nutrient poor wetlands, evaluate the environmental conditions for potentially extending the regulated adjacent area as described in Section II. D.

(f) <u>Unusual Local Importance</u>: *It was previously classified and mapped by the department as a wetland of unusual local importance and contain wetland characteristics described in section 24-0107(1) of the Act.*

GIS Data: Digitized wetlands, NYS Freshwater Wetlands Maps promulgated prior to December 31, 2024 (previously mapped wetlands).

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to wetlands smaller than 12.4 acres depicted on the NYS Freshwater Wetlands Maps promulgated prior to December 31, 2024 (previously mapped wetlands).
- Wetlands depicted on these maps are jurisdictional.

(g) <u>Vernal Pools</u>: *It is a vernal pool that is known to be productive for amphibian breeding. A vernal pool is known to be productive for amphibian breeding within a region of the State (see Appendix E) where the department has determined one or more of the following exist in a particular vernal pool or vernal pool complex:*

(1) in the Hudson-Mohawk Region, 25 or more Spotted Salamander egg masses, or 10 or more Wood Frog egg masses;

(2) in the Great Lakes Region, two or more Spotted Salamander or Wood Frog egg masses;

(3) in the Lower Hudson-NYC-Long Island, Adirondack, and Southern Tier Regions, 10 or more Spotted Salamander egg masses or 15 or more Wood Frog egg masses;

(4) in the Lower Hudson-NYC-Long Island or Adirondacks Regions, one or more egg masses or larvae of Jefferson Salamander, Blue-Spotted Salamander, or hybrids of Jefferson and Blue-Spotted Salamander;

(5) in the Great Lakes, Southern Tier, or Hudson-Mohawk Regions, 20 or more egg masses or larvae of Jefferson Salamander, Blue-Spotted Salamander, or hybrids of Jefferson and Blue-Spotted Salamander; or

(6) in any Region, one or more egg masses or larvae of Eastern Tiger Salamander, or Marbled Salamander.

GIS Data: Digitized wetlands, List of vernal pools known to be productive for amphibian breeding**.**

GIS Process:

- Review the orientation of digitized wetland areas within 1000 feet of indicated parcels in relation to the list of vernal pools known to be productive for amphibian breeding.
- Wetlands on the list of vernal pools known to be productive for amphibian breeding are jurisdictional.
- Evaluate the environmental conditions for potentially extending the regulated adjacent area as described in Section II. D.

(h) <u>Floodways</u>: *It is located in an area designated as a floodway on the Digital Flood Insurance Rate Map (DFIRM) 'National Flood Hazard Layer', produced by the Federal Emergency Management Agency.*

GIS Data: Digitized wetlands, National Flood Hazard Layer

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to floodways depicted on National Flood Hazard Layer .
- Wetlands within floodways depicted on National Flood Hazard Layer are jurisdictional.

(i) <u>Previously Mapped Wetlands</u>: *It was previously included on the New York State Freshwater Wetland Maps by the department as a regulated wetland on or before December 31, 2024, and contain wetland characteristics described in section 24-0107(1) of the Act.*

GIS Data: Digitized wetlands, NYS Freshwater Wetlands Maps promulgated prior to December 31, 2024 (previously mapped wetlands).

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to wetlands depicted on the NYS Freshwater Wetlands

Maps promulgated prior to December 31, 2024 (previously mapped wetlands).

- Wetlands depicted on these maps are jurisdictional.

(j) <u>Local and Regional Significance</u>: *It has wetland functions and values that are of local or regional significance because it meets one or more of the following criteria:*

(1) the wetland is located within an area specifically designated, pursuant to Part 617 of this Title, as a Critical Environmental Area (CEA) with specific reference to wetland protection by a local agency in its written justification supporting the designation; or

(2) the wetland is partially located within the Adirondack Park and under the jurisdiction of the Adirondack Park Agency.

GIS Data: Digitized wetlands, List of Critical Environmental Areas with specific reference to wetland protection contained in Appendix F.

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to Critical Environmental Areas described in Appendix F.
- Wetlands occurring in Critical Environmental Areas described in Appendix F are jurisdictional.

(k) <u>Important for Protection of New York State's Water Quality</u>: *It has significant importance to protecting the State's water quality based on substantial evidence, as determined by the commissioner in writing. The commissioner's written determination shall describe the underlying reasons why the wetland is of significant importance to protecting the State's water quality. This may include a description of why the wetland is of significant importance in preventing exceedances of any water quality standards or guidance values derived pursuant to Part 702 of this Title. The commissioner's determinations pursuant to this subdivision shall be posted on the department's website.*

GIS Data: Digitized wetlands, Commissioner's written determinations pursuant to 664.6(k).

GIS Process:

- Review the orientation of digitized wetland areas within 100 feet of indicated parcels in relation to the Commissioner's written determinations pursuant to 664.6(k).
- Wetlands meeting the Commissioner's written determinations are jurisdictional.

C. Classification of Jurisdictional Wetlands

A jurisdictional wetland that meets the size threshold or an Unusual Importance criterion will be classified according to the highest class identified using the procedures described below. Staff will use the GIS data described for each criterion to determine whether the wetland contains data that supports the presence of the characteristic(s) outlined in the criterion. The criterion is not met if there are no data in the wetland to confirm the conditions outlined in the criterion.

(a) Class I:

(1) *it contains habitat for an essential behavior of a species listed as endangered or threatened in Part 182 of this Title or is listed as endangered or threatened by the United States Department of the Interior in the Code of Federal Regulations (50 CFR Part 17);*

GIS Data: Element Occurrences contained in the NYNHP Database.

(2) *it contains an endangered or threatened plant species as listed in Part 193 of this Title;*

GIS Data: Element Occurrences with high or very high precision contained in the NYNHP Database.

(3) *it falls within a Significant Coastal Fish & Wildlife Habitat Area, designated as such by the Department of State pursuant to Part 602 of Title 19 of the New York Code of Rules and Regulations;*

GIS Data: Significant Coastal Fish & Wildlife Habitat Area layer.

(4) *it is a tidally influenced wetland not regulated by the department pursuant to article 25 of the ECL;*

GIS Data: Hudson river tidal wetlands layer (Hudson River wetlands from the Tappan Zee to Troy Dam).

(5) *it is contiguous to a tidally influenced wetland that is regulated under article 25 of the ECL;*

GIS Data: NYSDEC tidal wetlands maps.

(6) *it contains a wetland plant community identified as critically imperiled;*

GIS Data: NYNHP Database.

(7) *it is a nutrient-poor wetland;*

GIS Data: NYNHP Database.

(8) *it is in an area designated as a floodway on the Digital Flood Insurance Rate Map (DFIRM) or 'National Flood Hazard Layer', produced by the Federal Emergency Management Agency (FEMA);*

GIS Data: National Flood Hazard Layer

(9) *it is contiguous to fresh surface waters having classifications of A, AA, AA-S, A-S, or N, as set forth in Parts 800-941 of this Title;*

GIS Data: Water Quality Classifications layer.

(b) Class II:

(1) *it contains an occurrence of an animal species identified as critically imperiled or imperiled;*

GIS Data: Element Occurrences contained in the New York Natural Heritage Program (NYNHP) Database.

(2) *it contains habitat for an essential behavior of a species of special concern as listed in Part 182 of this Title, or a species listed in the New York State Wildlife Action Plan (Sept. 2015) as a 'high priority' species of greatest conservation need;*

GIS Data: Element Occurrences contained in the NYNHP Database.

(3) *it contains an occurrence of a plant species identified as critically imperiled or imperiled;*

GIS Data: Element Occurrences with high or very high precision contained in the NYNHP Database.

(4) *it is a Great Lakes Coastal Wetland that is not part of a significant coastal fish and wildlife habitat area;*

GIS Data: Great Lakes Coastal Management Area boundary, Significant Coastal Fish & Wildlife Habitat Areas.

(5) *it is a vernal pool regulated pursuant to this Part;*

GIS Data: List of vernal pools known to be productive for amphibian breeding.

(6) *it contains a wetland plant community identified as imperiled;*

GIS Data: NYNHP Database.

(7) *it is located within a FEMA designated 100-year floodplain on the Digital Flood Insurance Rate Map (DFIRM) or 'National Flood Hazard Layer', produced by the Federal Emergency Management Agency (FEMA);*

GIS Data: National Flood Hazard Layer

(8) *it is within the boundary of a sole source aquifer as identified by the Environmental Protection Agency (EPA) in 'EPA Sole Source Aquifers' (August 2020);*

GIS Data: EPA Sole Source Aquifers layer (August 2020)

(9) *it is contiguous to fresh surface waters having classifications of B as set forth in Part 701 of this Title;*

GIS Data: Water Quality Classifications layer.

(10) *it is contiguous to fresh surface waters assigned a standard of A(t), A(ts), AA(t), AA(ts), A-S(t), A-S(ts), AA-S(t), AA-S(ts), B(t), B(ts), C(t), or C(ts) as set forth in Parts 800-941 of this Title;*

GIS Data: Water Quality Classifications layer.

(11) *it has all three wetland structural groups: woody, herbaceous, and open water;*

GIS Data: National Wetlands Inventory, National Land Cover Database, Orthoimagery, LiDAR data

(12) *it consists of floating and/or submerged aquatic vegetation (SAV) and is not dominated (≤ 50%) by invasive species identified by the department pursuant to Part 575 of this Title;*

GIS Data: National Wetlands Inventory, National Land Cover Database, Orthoimagery, Hudson River tidal wetlands (2018).

(13) *it is located wholly within, or is partially within, an urban area as defined and identified in the '2020 Census Qualifying Urban Areas and Final Criteria Clarifications By The United States Census Bureau' (December 2022);*

GIS Data: 2020 Census Qualifying Urban Areas and Final Criteria Clarifications.

(14) *the wetland is located in, or is partially located in, an area identified as a disadvantaged community as defined in the Climate Leadership and Community Protection Act (CLCPA) ECL 75-0101(5);*

GIS Data: Disadvantaged Communities layer

(15) *the wetland is located wholly within, or is partially located within, an area identified as a Potential Environmental Justice Area as determined by the department;*

GIS Data: Potential Environmental Justice Area layer.

(c) Class III:

(1*) it contains an occurrence of an animal species identified as vulnerable;*

GIS Data: Element Occurrences contained in the NYNHP Database.

(2) *it is located within a FEMA designated 500-year floodplain on the Digital Flood Insurance Rate Map (DFIRM) or 'National Flood Hazard Layer', produced by the Federal Emergency Management Agency (FEMA);*

GIS Data: National Flood Hazard Layer .

(3) *it is contiguous to fresh surface waters having classifications of C as set forth in Parts 800-941 of this Title;*

GIS Data: Water Quality Classifications layer.

(4) *it contains shrub-swamp and forested cover type(s);*

GIS Data: National Wetlands Inventory, National Land Cover Database, Orthoimagery, LiDAR data.

(5) *it is an emergent marsh or wet meadow and is not dominated by (≤ 50%) invasive species identified by the department pursuant to Part 575;*

GIS Data: National Wetlands Inventory, National Land Cover Database, Orthoimagery,

(6) *it contains a wetland plant community identified as vulnerable;*

GIS Data: NYNHP Database.

(7) *it is in a town in which wetland acreage is less than one percent (1%) of the total acreage;*

GIS Data: Previously Mapped Freshwater Wetlands, National Wetlands Inventory, Informational Freshwater Wetland Mapping, National Land Cover Database.

(d) Class IV:

(1) *it is contiguous to fresh surface waters having classifications of D as set forth in Part 701 of this Title;*

GIS Data: Water Quality Classifications layer.

(2) *it consists of floating and/or submerged aquatic vegetation (SAV) and is dominated (> 50%) by invasive species identified by the department pursuant to Part 575 of this Title;*

GIS Data: National Wetlands Inventory, National Land Cover Database, Orthoimagery, Hudson River tidal wetlands (2018),.

(3*) it is an emergent marsh or wet meadow and is dominated (> 50%) by invasive species identified by the department pursuant to Part 575.*

GIS Data: National Wetlands Inventory, National Land Cover Database, Orthoimagery.

D. Extending the Adjacent Area

The regulated adjacent area of nutrient poor wetlands identified by the department and vernal pools known to the department to be productive for amphibian breeding may be extended to protect and preserve the wetland pursuant to section 24-0701(2) of the Act. The distance and the arrangement of the extended adjacent area shall be determined by the department using an individual analysis of environmental conditions of each nutrient poor wetland or productive vernal pool.

GIS Data: Previously Mapped Freshwater Wetlands, National Wetlands Inventory, Informational Freshwater Wetland Mapping, National Land Cover Database, LiDAR, Digital Elevation Modeling, USGS Soils Data, Orthoimagery, List of vernal pools known to be productive for amphibian breeding, NYNHP Database

GIS Process:

- Load GIS data and consider all available data regarding the environmental conditions of each wetland and the surrounding land use and land cover.
- Conduct an individual analysis of the nutrient poor wetland or productive vernal pool and determine if an extended adjacent area is necessary.

- If an extended adjacent area is necessary, use best professional judgement to determine extent and arrangement of the extended adjacent area necessary to protect and preserve the wetland.

III. Terminology

The following terms are defined solely for the purposes of this document and are meant to aid reviewers in understanding DEC's application of GIS to remotely identify and classify wetlands in making Parcel Jurisdictional Determinations.

'Adirondack Park Blue Line' is the boundary of the Adirondack State Park.

'Contiguous' means physically touching or physically connected.

'Hydrologic Unit Code (HUC)' means a hierarchical land area classification system created by the United States Geological Survey described in 'U.S. Geological Survey, Water Supply Paper 2294' (1987) based on surface hydrologic features in a standard, uniform geographical framework. The department reviews wetlands within, or partially within, 12-digit HUC sub-watersheds when making jurisdictional determinations.
'Imperiled' means a wetland plant community, plant species, or animal species that, because of rarity, steep declines in population, or severe threats, are vulnerable to extirpation in the State, with generally 6 to 20 occurrences within the State.

'Layer' means a collection of geographic data that is represented by points, lines, shapes, or surfaces that can be visualized by symbols, text, graphics, or images.

'LiDAR' is an acronym for *Light Detection and Ranging.* LiDAR data is generated by compiling large datasets collected during flyovers whereby a pulsed laser is used to gather information about the height of objects on the earth's surface. Pulsed laser data can be used to generate a 3D model of the earth's surface and landcover.

'Mapping precision' refers to the accuracy of mapped NHP element occurrence (EO) polygons to an organism's actual location on the ground. High precision indicates the observed area for the organism is estimated to be 80% or more of the mapped EO polygon. Very High precision indicates the observed area of an organism has been

mapped to within 5 meters of its actual location on the ground and the resulting EO polygon is entirely comprised of observed occupied area.

‘Nutrient poor wetlands’ means the following wetland plant communities as identified by the department:

Black spruce-tamarack bog	Northern White Cedar Swamp
Coastal Plain Atlantic White Cedar Swamp	Perched Bog
Coastal Plain Pond Shore	Pitch Pine-Blueberry Peat Swamp
Coastal Plain Poor Fen	Red Maple Tamarack Peat Swamp
Dwarf shrub bog	Rich Graminoid Fen
Highbush Blueberry Bog Thicket	Rich Hemlock-Hardwood Peat Swamp
Inland Atlantic White Cedar Swamp	Rich Shrub Fen
Inland Poor Fen	Rich Sloping Fen
Marl Fen	Sea Level Fen
Medium Fen	Sedge Meadow

‘Orthoimagery’ is computer-generated imagery of aerial photography in which distortions caused by terrain relief and camera tilts have been removed. It has uniform scale, so it can be used as a base map onto which other map information is overlaid.

‘Parcel Jurisdictional Determination’ means a determination made by the department as to whether a given parcel of land includes freshwater wetlands or regulated adjacent areas within the parcel boundaries that are subject to State regulation. Conceptually, the definition is also applied when requests are submitted for groups of adjoining parcels or other spatially defined areal extents such as a DOT project area.

‘Predicted wetland’ means any wetland and its boundaries remotely identified using orthoimagery, aerial imagery, and wetland database sources (e.g., Informational Freshwater Wetland Mapping, NWI, NLCD, etc.).

‘Regulated adjacent area’ means regulated areas of land or water that are outside a wetland and within 100 feet (30.5 meters), measured horizontally, of the boundary of the wetland or beyond 100 feet (30.5 meters) pursuant to section 664.7.

‘Submerged Aquatic Vegetation (SAV)’ means rooted, floating-leaved vegetation; including, among others, water-lily (*Nymphaea odorata*), water shield (*Brasenia*

schreberi), and spatterdock (*Nuphar* spp.); free-floating vegetation; including, among others, duckweed (*Lemna* spp.), big duckweed (*Spirodela polyrhiza*), and watermeal (*Wolffia* spp.).

'Surficial hydrologic connectivity' means hydrology is shared by wetlands exceeding a distance of no greater than 50 meters.

'Vulnerable' means a wetland plant community, plant species, or animal species that, because of extreme rarity, steep declines in population, or severe threats, are at a moderate risk of extirpation in the State, with generally 21-100 occurrences, or a very restricted range within the State.

IV. Spatial Data:

'2020 Census Qualifying Urban Areas and Final Criteria Clarifications By The United States Census Bureau (December 2022)' are clarifications about delineated urban areas that are based on the 2020 Census of Population and Housing counts and density calculations. See DEC website for more information: https://dec.ny.gov/nature/waterbodies/wetlands/freshwater-wetlands-program

'Aerial imagery' is aerial photography of the earth's surface taken from aircraft, satellite, or another remote platform. Aerial photography is often used as a cartographic data source for basemaps, to locate geographic features, and to interpret environmental conditions.

'Color Infrared (CIR) imagery' is aerial imagery that uses color-infrared photography to view the surface of the Earth in colors other than natural colors, which allows a better understanding of what is happening on Earth's surface.

'Critical Environmental Areas (CEA)' are areas in the state which have been designated by a local or state agency to recognize a specific geographical area with one or more of the following characteristics: a feature that is a benefit or threat to human health; an exceptional or unique natural setting; an exceptional or unique social, historic, archaeological, recreational, or educational value; or an inherent ecological, geological, or hydrological sensitivity to change that maybe adversely affected by any physical

disturbance. For purposes within this SOP, the CEA list has been limited to those with specific references to wetland protection indicated by local agencies in their written justifications supporting their CEA designations.

Digital Elevation Model (DEM) is a representation of the bare ground topographic surface of the Earth surface excluding trees, buildings, and any other surface objects.

'Disadvantaged Communities' are defined in the Climate Leadership and Community Protection Act as communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high concentrations of low-moderate income households.

'Hudson River Submerged Aquatic Vegetation (SAV)' is rooted, floating-leaved vegetation; including, among others, water-lily (Nymphaea odorata), water shield (Brasenia schreberi), and spatterdock (Nuphar spp.); free-floating vegetation; including, among others, duckweed (Lemna spp.), big duckweed (Spirodela polyrhiza), and watermeal (Wolffia spp.) that is found in the Hudson River.

'Hudson River Tidal Wetlands' are typically salt marshes found in the near shore areas along the Hudson River south of the Troy Dam. These areas are dominated by grasses and other marsh plants which are adapted to the rise and fall of the tide and the salt water.

'Hydrologic Unit Code (HUC)' refers to HUC 12 scaled watersheds that meet the UI requirement. The department reviews wetlands within, or partially within, 12-digit HUC subwatersheds when making jurisdictional determinations.

'LiDAR (Light Detection and Ranging)' data are generated from a remote sensing method that uses light in the form of a pulsed laser to measure variable distances to the Earth, which aid in generating precise, three-dimensional information about the shape of the Earth and its surface characteristics.

'National Flood Hazard Layer' is a geospatial database that contains current effective flood hazard data and is provided by the Federal Emergency Management Agency (FEMA) to support the National Flood Insurance Program. The following bulleted items

are components of the National Flood Hazard data applied in making jurisdictional determinations:

- FEMA Digital Flood Insurance Rate Map (DFIRM) is an official map of a community on which FEMA has delineated the Special Flood Hazard Areas (SFHA), the Base Flood Elevations, and the risk premium zones applicable to the community.
- FEMA DFIRM 100-year floodplain is the SFHA that will be inundated by the flood event having a 1 percent chance of being equaled or exceeded in any given year. The 1 percent annual chance flood is also referred to as the base flood or 100-year flood.
- FEMA DFIRM 500-year floodplain is the area subject to flooding by the 0.2 percent annual chance flood.
- 'Floodway' is a Federal Emergency Management Agency determined channel of a river or other watercourse and the adjacent land areas that must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.
- Digital Flood Insurance Rate Map (DFIRM) is the digital insurance and floodplain management map produced by the Federal Emergency Management Agency, including the National Flood Hazard Layer, that identifies, based on detailed or approximate analyses, the area subject to flooding during a 1-percent annual chance (100-year) flood event in a community. Flood insurance risk zones, which are used to compute actuarial flood insurance rates, also are shown on Digital Flood Insurance Rate Maps. In areas studied by detailed analyses, the DFIRM shows base flood elevations to reflect the elevations of the 1-percent annual chance flood. For many communities, when detailed analyses are performed, the DFIRM also may show areas inundated by 0.2-percent annual chance (500-year) flood and regulatory floodway areas.

'National Land Cover Database (NLCD)' is land cover that is mapped at the national scale by the U.S. Geological Survey and the Multi-Resolution Land Characteristics Consortium for environmental, land management, and modeling applications.

‘National Wetland Inventory (NWI)’ are wetlands that are mapped by the National Wetlands Inventory, which is a U.S. Fish and Wildlife Service program, and was established to conduct a nationwide inventory of U.S. wetlands to provide biologists and others with information on the distribution and type of wetlands to aid conservation efforts.

‘New York Natural Heritage Element Occurrence (EO)’ is an area of land and/or water in which an ‘Element’ (i.e., a species or natural community) is, or was, documented as present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location. For species Elements, the EO often corresponds with the local population, but when appropriate may be a portion of a population (e.g., long distance dispersers) or a group of nearby populations (e.g., metapopulation). For community Elements, the EO may represent a stand or patch of a natural community, or a cluster of stands or patches of a natural community. EOs are typically represented spatially by bounded, mapped areas of land and/or water. EO records are most commonly created for current or historically known occurrences of natural communities or native species of conservation interest. They may also be created, in some cases, for extirpated occurrences.

‘Natural Heritage Animal EO’ layer is The New York Natural Heritage Program’s database used by the department to identify documented locations of rare and listed animals that are in, or in the vicinity of, a given wetland/parcel.

- Critically imperiled means an animal species that because of extreme rarity, steep declines in population, or severe threats are at a high risk of extirpation in New York State, with generally five or fewer occurrences within the State.
- Imperiled means an animal species that, because of rarity, steep declines in population, or severe threats, are vulnerable to extirpation in the State, with generally 6 to 20 occurrences within the State.
- Vulnerable means an animal species that, because of extreme rarity, steep declines in population, or severe threats, are at a moderate risk of extirpation in

the State, with generally 21-100 occurrences, or a very restricted range within the State.

'High Priority Species of Greatest Conservation Need' is a list of species where the status is known, they have an established breeding, wintering, or migratory population in New York, and they have experienced a population decline in New York. There are identified threats for these species that may put them in jeopardy, and they require timely management intervention to reverse or slow population declines and lead to recovery. Without the implementation of conservation actions over the next ten years, they are likely to reach critically low population levels in New York.

'Natural Heritage Plant EO' layer is The New York Natural Heritage Program's database which is used to identify documented locations of rare and listed plants that are in, or in the vicinity of, a given wetland/parcel.

- Critically imperiled means a plant species that because of extreme rarity, steep declines in population, or severe threats are at a high risk of extirpation in New York State, with generally five or fewer occurrences within the State.
- Imperiled means a plant species that, because of rarity, steep declines in population, or severe threats, are vulnerable to extirpation in the State, with generally 6 to 20 occurrences within the State.
- Rare (for UI) means a plant species occurring in fewer than 35 sites statewide or having fewer than 5000 individuals statewide, as documented by the department.

'Natural Heritage Wetland Communities EO' is The New York Natural Heritage Program's database which is used to identify documented locations of significant natural communities that are in, or in the vicinity of, a given wetland/parcel.

- Critically imperiled means a wetland community that because of extreme rarity, steep declines in population, or severe threats are at a high risk of extirpation in New York State, with generally five or fewer occurrences within the State.
- Imperiled means a wetland community that, because of rarity, steep declines in population, or severe threats, are vulnerable to extirpation in the State, with generally 6 to 20 occurrences within the State.

- Vulnerable means a wetland community that, because of extreme rarity, steep declines in population, or severe threats, are at a moderate risk of extirpation in the State, with generally 21-100 occurrences, or a very restricted range within the State.

'Previously Mapped Wetlands' are wetlands that were previously included on the New York State Freshwater Wetland Maps by the department as a regulated wetland on or before December 31, 2024. See DEC' Environmental Resource Mapper to view previously mapped wetlands: https://gisservices.dec.ny.gov/gis/erm

'NYS Regulatory Tidal Wetlands' are tidal wetlands that are regulated by New York State. Tidal wetlands are salt marshes that are found in the near shore areas on the Hudson River from the Troy Dam south to the southern tip of Staten Island, and along the entire shoreline of Long Island. DEC established the New York State Official Tidal Wetlands Inventory, which is a set of maps delineating and classifying all the tidal wetlands in New York. Multiple layers needed for tidal wetlands and tidally influenced wetlands. Above the Tappan Zee up to the Troy dam are tidally influenced freshwater wetlands but not regulated under the Tidal Wetlands Act (Article 25 of the ECL). See DEC website for more information: https://dec.ny.gov/nature/waterbodies/wetlands/tidal/information-and-materials

'Potential Environmental Justice Areas' (OEJ PEJA) are U.S. Census block groups of 250 to 500 households each that in the Census, had populations that met or exceeded at least one of the following statistical thresholds: at least 52.42% of the population in an urban area reported themselves to be members of minority groups; or at least 26.28% of the population in a rural area reported themselves to be members of minority groups; or at least 22.82% of the population in an urban or rural area had household incomes below the federal poverty level. The federal poverty level and urban/rural designations for census block groups are established by the U.S. Census Bureau. The thresholds are determined by a statistical analysis of the 2014-2018 American Community Survey (ACS) data, which is the most recent data available as of the time of the analysis in 2020. See DEC website for more information: https://dec.ny.gov/get-involved/environmental-justice/gis-tools

'Significant Coastal Fish and Wildlife Habitat' are coastal habitats determined by NY Department of State that provide economically important living and feeding areas for animals. Each designated Significant Coastal Fish and Wildlife Habitat site have a habitat map and narrative to provide site-specific information. The habitat narrative constitutes a record of the basis for the significant coastal fish and wildlife habitat's designation and provides specific information regarding the fish and wildlife resources that depend on the area. General information is also provided to assist in evaluating impacts of proposed activities on characteristics of the habitat which are essential to the habitat's values.

- EPA Watershed Index Online (WSIO): https://www.epa.gov/wsio
- USGS soils
- Vernal pool database/layer/map

See DOS website for more information: https://dos.ny.gov/significant-coastal-fish-wildlife-habitats

'Water Quality Classifications and Standards' are the basis for programs to protect the state waters. Standards set forth the maximum allowable levels of chemical pollutants and are used as the regulatory targets for permitting, compliance, enforcement, and monitoring and assessment of the quality of the state's waters. Waters are classified for their best uses (fishing, source of drinking water, etc.) and standards (and guidance values) are set to protect those uses. All waters in New York State are assigned a letter classification that denotes their "best uses" (e.g., fishing, swimming, source of drinking water). Letter classes such as A, B, C, and D are assigned to fresh surface waters, and SA, SB, SC, I, and SD to saline (marine) surface waters. Best uses include: source of drinking water, primary contact recreation (i.e., swimming), secondary contact recreation (i.e., boating), fishing, and shellfishing. Waterbodies with AA, A, B, and C classifications may also have "T" or "TS" classifications, meaning they support trout populations or trout spawning. See DEC' Environmental Resource Mapper to view maps depicting water quality classifications and standards: https://gisservices.dec.ny.gov/gis/erm

V. Appendices

Appendix A - Waterbodies with Large Areas of Submerged Aquatic Vegetation

Appendix B - HUC 12 Watersheds with Significant Flooding

Appendix C – Urban Areas

Appendix D - List of Species of Greatest Conservation Need listed in the New York State Wildlife Action Plan (Sept. 2015) with habitat loss having been identified by the department as a moderate to very high threat to New York populations.

Appendix E – Vernal Pool Regions

Appendix F - Critical Environmental Area (CEA) with specific reference to wetland protection by a local agency in its written justification supporting the designation.

Appendix A - Waterbodies with Large Areas of Submerged Aquatic Vegetation

The following is a list of waterbodies outside the Hudson River that DEC has determined include areas of submerged aquatic vegetation regulated under Article 24. The list was developed using available DEC data on the extent of submerged vegetation and will be updated regularly. When making jurisdictional determinations, DEC staff will first consult the most recent version of this list and then use best professional judgement to determine:

1) if an area of the waterbody is regulated under Article 24 because of the presence of submerged aquatic vegetation, and
2) if the area that is subject to the jurisdictional request is less than six feet deep and includes regulated wetland.

WATERBODY NAME	COUNTY
3 PONDS	WYOMING
AFTON LAKE	CHENANGO
ALCOVE RESERVOIR	ALBANY
ALPINE LAKE	SARATOGA
BARKLEY LAKE	WASHINGTON
BARKLEY POND	WASHINGTON
BEAR GULCH POND	SCHOHARIE
BEAVER DAM LAKE	ORANGE
BEAVER LAKE	BROOME
BEAVER POND	COLUMBIA
BEDFORD HOWLANDS LAKE	WESTCHESTER
BIG BOWMAN POND	RENSSELAER
BIG MOHICAN LAKE	SULLIVAN
BLACK POND	JEFFERSON
BLUE HERON LAKE	WESTCHESTER
BLYTHEA LAKE	ORANGE
BOWERS POND	SULLIVAN
BOWKER POND	MADISON
BOYD POND	ST. LAWRENCE
BRADDOCK BAY	MONROE
BUCKHORN LAKE	OTSEGO
BURDEN LAKE	RENSSELAER
CAMP KIWI POND	PUTNAM
CAMPFIRE LAKE	WESTCHESTER
CAZENOVIA LAKE	MADISON
CEDAR LAKE	HERKIMER
CHAUTAUQUA LAKE	CHAUTAUQUA
CHINA POND	PUTNAM
CHRYSLER POND	COLUMBIA
COLLINS LAKE	SCHENECTADY

WATERBODY NAME	COUNTY
CONIFER LAKE	GREENE
CONVERSE LAKE	WESTCHESTER
COPAKE LAKE	COLUMBIA
COSSAYUNA LAKE	WASHINGTON
CRANBERRY POND	SULLIVAN
CREST VIEW LAKE	ORANGE
CROOKED LAKE	RENSSELAER
CRYSTAL LAKE	OTSEGO
CRYSTAL LAKE	RENSSELAER
DEANS POND	CORTLAND
DENTON LAKE	DUTCHESS
DUCK LAKE	CAYUGA
DUTCHESS LAKE	DUTCHESS
EAST BAY	WAYNE
EAST POND	SULLIVAN
ECHO LAKE	SULLIVAN
ELLIS POND	DUTCHESS
EMADINE POND	DUTCHESS
EVENS/ EVANS LAKE	SULLIVAN
FAUN LAKE	WYOMING
FOREST GLEN LAKE	SULLIVAN
FOUR CORNER ROAD POND	COLUMBIA
FRESH POND (SHELTER ISLAND)	SUFFOLK
FRESH POND (EAST HAMPTON)	SUFFOLK
FRESH POND (HUNTINGTON/SMITHTOWN)	SUFFOLK
FURNACE BROOK POND	WESTCHESTER
GAUIS MEMORIAL PARK	CHENANGO
GLASS LAKE	RENSSELAER
GLEN BROOK POND	GREENE
GLEN LAKE	WARREN
GLENBROOK POND	GREENE
GRASMERE LAKE	RICHMOND
GREEN LAKE	ERIE
GREEN MOUNTAIN LAKE	DUTCHESS
GREENWOOD LAKE	ORANGE
HEMPSTEAD LAKE, NORTH PONDS	NASSAU
HILLSIDE LAKE	DUTCHESS
HORSESHOE LAKE	GENESEE
HOWLANDS LAKE	WESTCHESTER
HUDSON FARMS WETLANDS	ONONDAGA
HUNNS LAKE	DUTCHESS
HUNTER LAKE	SULLIVAN
INDIAN FALLS LAKE	GENESEE
INDIAN LAKE	DUTCHESS
KASOAG LAKE	OSWEGO

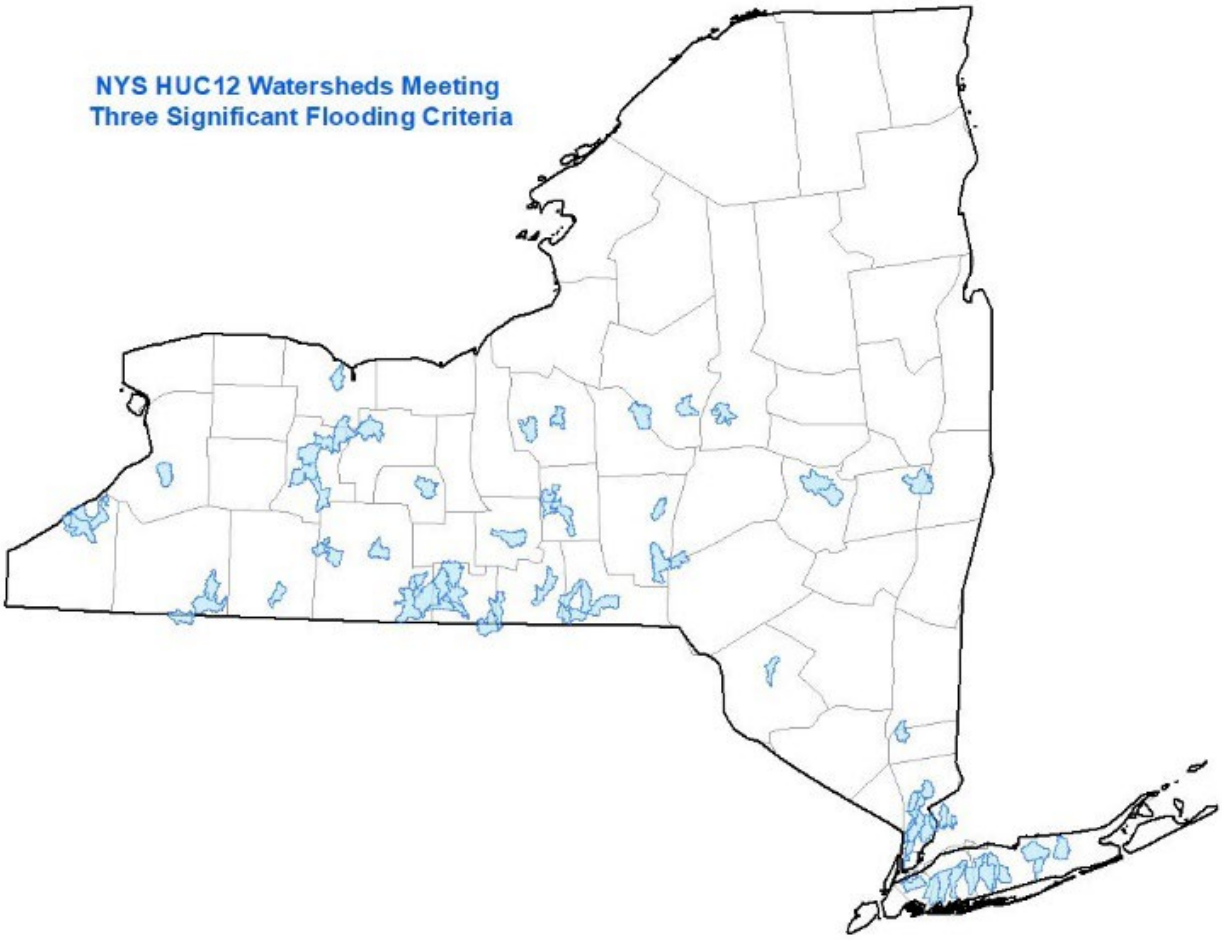
WATERBODY NAME	COUNTY
KAZENS POND	SULLIVAN
KENOZIA LAKE	ULSTER
KEUKA LAKE	YATES
KINDERHOOK LAKE	COLUMBIA
KNICKERBOCKER POND	SULLIVAN
L.BUCK MT.PD.	PUTNAM
LAKE BOYCE	ROCKLAND
LAKE CARMEL	PUTNAM
LAKE CASSE	PUTNAM
LAKE COMO	CAYUGA
LAKE DEFOREST RESERVOIR	ROCKLAND
LAKE DUTCHESS	DUTCHESS
LAKE GERRY	CHENANGO
LAKE HUNTINGTON	SULLIVAN
LAKE KATONAH	WESTCHESTER
LAKE KITCHAWAN	WESTCHESTER
LAKE LACOMA	MONROE
LAKE LAUDERDALE, SCHOOLHOUSE LAKE	WASHINGTON
LAKE LEBANON	SULLIVAN
LAKE LINCOLNDALE	WESTCHESTER
LAKE LONELY	SARATOGA
LAKE LUCILLE	ROCKLAND
LAKE MARLING	ORANGE
LAKE MEAHAGH	WESTCHESTER
LAKE MOHEGAN	WESTCHESTER
LAKE MORAINE / MADISON RESERVOIR	MADISON
LAKE NEATAHWANTA	OSWEGO
LAKE ONDERDONK	ALBANY
LAKE ONIAD	DUTCHESS
LAKE SAPPHIRE	ORANGE
LAKE SEBAGO	ROCKLAND
LAKE SUNNYSIDE	WARREN
LAKE SURPRISE	PUTNAM
LAKE TIBET	PUTNAM
LAKE VALHALLA	PUTNAM
LAKE WELCH	ROCKLAND
LAKE WINHAM	PUTNAM
LAKESHORE CC MARINA, ONEIDA LAKE	ONONDAGA
LAMOKA LAKE	SCHUYLER
LAMOKA LAKE AND MILL POND	SCHUYLER
LAMOKA WANETA LAKE	SCHUYLER
LATHS POND	PUTNAM
LAWSON LAKE	ALBANY
LEBANON LAKE	SULLIVAN
LILY POND	COLUMBIA

WATERBODY NAME	COUNTY
LIME LAKE	CATTARAUGUS
LOCH LYALL	PUTNAM
LONG POND	COLUMBIA
LOST LAKE	PUTNAM
LOWER APPLE LAKE	DUTCHESS
LOWER RHODA POND	COLUMBIA
LYONS LAKE	ULSTER
LYONSVILLE POND	ULSTER
MADISON RESERVOIR	MADISON
MALLARD LAKE	WESTCHESTER
MASTEN LAKE	SULLIVAN
MASTENS LAKE	SULLIVAN
MEADOW LAKE	QUEENS
MELCHER POND	COLUMBIA
MILL LAKE	WESTCHESTER
MILLER POND	DUTCHESS
MILLSITE LAKE	JEFFERSON
MINOR LAKE TRIBS TO UPPER MIANUS RIVER / GIFFORD LAKE	WESTCHESTER
MINOR LAKES IN UPPER PECONIC WATERSHED / TARKILL POND	SUFFOLK
MOHEGAN LAKE	WESTCHESTER
MONROE POND	ORANGE
MORNINGSIDE LAKE	SULLIVAN
MUD LAKE	JEFFERSON
NASSAU LAKE	RENSSELAER
NEW CROTON RESERVOIR	WESTCHESTER
ONDERDONK LAKE	ALBANY
ONEIDA LAKE	OSWEGO
ONONDAGA LAKE, NORTHERN END	ONONDAGA
ORANGE ROCKLAND LAKE	ORANGE
OX CREEK	OSWEGO
PALMER LAKE	PUTNAM
PICKENS POND	OTSEGO
PINE POND	PUTNAM
PLEASANT LAKE	OSWEGO
PLEASANT LAKE	JEFFERSON
PLEASURE LAKE	SULLIVAN
POND LILY POND (UPPER)	COLUMBIA
PUTNAM LAKE	PUTNAM
RESERVOIR NO.1 (LAKE ISLE) / LAKE INNISFREE	WESTCHESTER
ROBINSON POND	COLUMBIA
ROSELAND WAKE PARK	ONTARIO
ROUND LAKE	ORANGE
ROUND POND	ORANGE
SAGAMORE LAKE	PUTNAM
SAND POND	ORANGE

WATERBODY NAME	COUNTY
SAPPHIRE LAKE	ORANGE
SARATOGA LAKE	SARATOGA
SEPASCO LAKE	DUTCHESS
SEVEN HILLS LAKE	PUTNAM
SHADOWMERE LAKE	ORANGE
SHOOKS POND	DUTCHESS
SILVER LAKE	SULLIVAN
SLEEPY HOLLOW LAKE	GREENE
SNYDERS LAKE	RENSSELAER
SODUS BAY	WAYNE
SONG LAKE	CORTLAND
SPARKLE LAKE	WESTCHESTER
SWAN LAKE	SULLIVAN
TEATOWN LAKE	WESTCHESTER
THUNDER LAKE	CHENANGO
TOMAHAWK LAKE	ORANGE
TORPY POND	MADISON
TREASURE LAKE	SULLIVAN
TRINITY LAKE	WESTCHESTER
TRUESDALE LAKE	WESTCHESTER
TRUITT POND / THUNDER LAKE	CHENANGO
TUXEDO LAKE	ORANGE
TWIN LAKES / ROCK GARDEN LAKE	WESTCHESTER
VLY CREEK RESERVOIR	ALBANY
WALLS POND	ORANGE
WANAKSINK LAKE	SULLIVAN
WANETA LAKE	SCHUYLER
WEE WAH LAKE	ORANGE
WESTMINSTER LAKE	PUTNAM
WHATMORE LAKE	WESTCHESTER
WHITE BIRCH LAKE	BROOME
WOLF LAKE	SULLIVAN
WOLF RESERVOIR	SULLIVAN
WOODLAND LAKE	SARATOGA

Appendix B – HUC 12 Watersheds with Significant Flooding

DEC has determined that the HUC 12 watersheds depicted on the following map meet all three criteria under 664.6(a).



DEC used the following methods and GIS datasets to make the determination of which HUC 12 watersheds met all three criteria under 664.6(a).

(1): it has two percent or more impervious surface based on recent land cover data;

GIS Process:

- Using the EPA WSIO data, identify HUC 12 watersheds having two percent or greater impervious surface.

(2) less than five percent of its surface area is comprised of floodwater storage zones in the form of lakes, ponds, reservoirs, or wetlands based on recent land cover data; and

GIS Process:

- Using the EPA WSIO data, identify HUC 12 watersheds having < 5% floodwater storage zones.

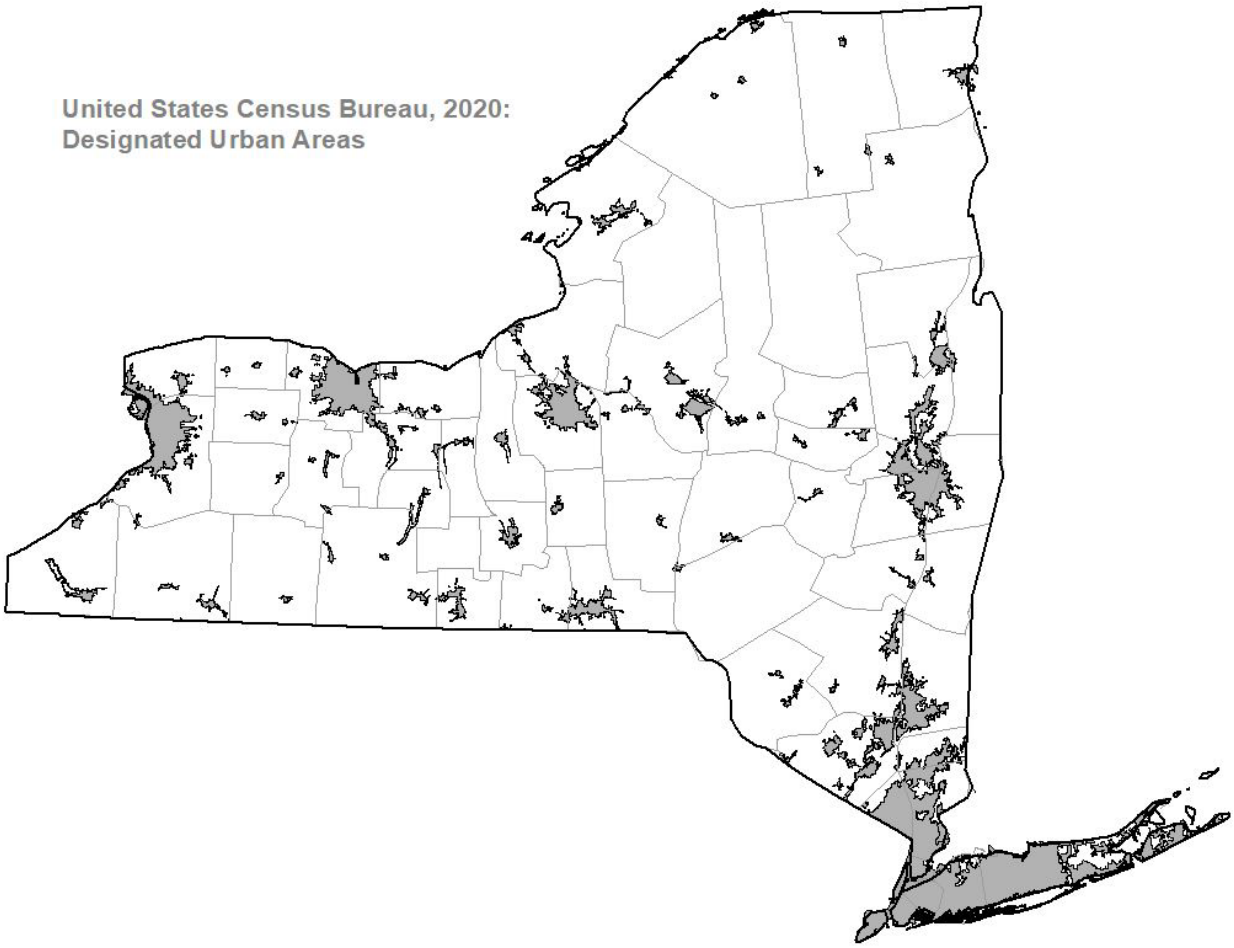
(3) it is located within an urban area or within 4 kilometers (2.48 miles) of an urban area as defined and identified by the United States Census Bureau.

GIS Process:

- Using US Census Bureau 2020 Urban Areas layer, buffer Urban Areas by 4km;
- Merge Urban Areas and the Urban Areas 4km buffer to generate a combined search area;
- Identify the HUC 12 Watersheds within the combined Urban Areas and Urban Areas 4km buffer.

GIS Data sets used in analysis: HUC 12 Watersheds, US Census Bureau 2020 Urban Areas, HUC 12 Watersheds within 4km of US Census Bureau 2020 Urban Areas, EPA Watershed Index Online (WSIO), Previously Mapped Freshwater Wetlands, National Wetlands Inventory, Informational Freshwater Wetland Mapping, National Land Cover Database, Digital Elevation Modeling, USGS Soils Data, Orthoimagery.

Appendix C – Urban Areas



Appendix D – List of Species of Greatest Conservation Need listed in the New York State Wildlife Action Plan (Sept. 2015) with habitat loss having been identified by the department as a moderate to very high threat to New York populations.

American Black Duck
Golden-winged warbler
Kentucky Warbler
Louisiana waterthrush
Northern harrier
Northern Pintail
Sedge wren
Short-eared owl
Yellow-breasted chat
Blanding's turtle
Bog turtle
Eastern hog-nosed snake
Queen snake
Spotted turtle
Eastern/Northern cricket frog
Atlantic coast leopard frog
Northern metalmark
Four-spotted pennant
Double-ringed pennant
Seaside dragonlet

Appendix E - Vernal pool regions

Map depicting major regions of New York State for productive vernal pools.

Appendix F - Critical Environmental Area (CEA) with specific reference to wetland protection by a local agency in its written justification supporting the designation.

Name of Critical Environmental Area	County	Town or City	Acres	Designation Date	Object ID#
Accabonac Harbor	Suffolk	East Hampton	919.1	2/10/1988	104
All State Wetlands	Ulster	Woodstock	268.8	11/24/1993	78
Bontecou Lake	Dutchess	Stanford, Washington	139.8	4/8/1987	83
Buttercup Farm Sanctuary	Dutchess	Stanford	310.6	4/8/1987	108
Carlls River	Suffolk	Babylon	109.7	2/10/1988	125
Cazenovia Lake	Madison	Cazenovia	1,164.0	4/12/2011	157
Cazenovia Village Wellhead	Madison	Cazenovia	247.5	4/12/2011	91
Cedar Swamp	Ulster	Wawarsing	8,331.7	8/7/2019	228
Central Suffolk Pine Barrens	Suffolk	Brookhaven, Riverhead, Southampton, Southold	125,688.0	2/10/1988	175
Chittenango Creek	Madison	Cazenovia, Fenner, Nelson	370.1	4/12/2011	5
Coastal Zone Area South	Suffolk	Brookhaven, Southampton	15,245.6	5/18/1987	32
Coastal Zone Area South	Suffolk	Brookhaven	2,614.1	5/18/1987	58
Coastal Zone Area South	Suffolk	Brookhaven, Islip	324.9	5/18/1987	241
Deuel Hollow Area	Dutchess	Dover	1,006.7	6/20/1986	209
Fishers Island	Suffolk	Southold	758.1	3/16/1990	74
Glen Lake	Warren	Queensbury	638.7	11/30/1989	82
Great Swamp	Dutchess, Putnam	Dover, Patterson, Pawling	1,981.8	2/8/1992	29
Great Swamp	Putnam	Patterson, Southeast	2,261.0	10/23/1988	121
Hogback Hill	Dutchess	Hyde Park	2,329.9	6/7/2009	154
Hudson River	Bronx, Kings, New York, Richmond,	Cortland, Greenburgh, Mount Pleasant, New	9,986.5	1/31/1990	28

Name of Critical Environmental Area	County	Town or City	Acres	Designation Date	Object ID#
	Queens, Westchester	York, Ossining, Peekskill, Yonkers			
Hurd's Corner	Dutchess	Dover, Pawling	496.1	8/27/1988	218
Indian Brook Reservoir	Westchester	Cortlandt, New Castle, Ossining	353.7	1/31/1990	217
Indian Kill	Dutchess	Hyde Park	85.1	6/7/2009	44
Jamaica Bay	Nassau, New York, Bronx, Kings, Richmond, Queens	New York, Hempstead	3,961.4	2/1/1990	76
Juhring Estate	Westchester	Greenburgh	78.8	1/27/1996	21
Ketcham's Creek	Suffolk	Babylon	3.3	10/30/1988	152
Lake George	Warren, Washington, Essex	Bolton, Dresden, Fort Ann, Hauge, Lake George, Putnam, Queensbury, Ticonderoga	34,803.2	11/16/1988	142
Larchmont Reservoir Sheldrake Leatherstocking	Westchester	Mamaroneck	673.3	9/30/1989	153
Magid Pond	Westchester	Rye	8.2	12/25/1980	210
Maritje Kill	Dutchess	Hyde Park	157.6	6/7/2009	23
Marl Fen	Warren	Queensbury	0.8	11/2/2015	189
Marl Fen	Warren	Queensbury	0.2	11/2/2015	232
Marl Fen 100-foot Buffer	Warren	Queensbury	3.7	11/2/2015	233
Marl Fen 100-foot Buffer	Warren	Queensbury	2.2	11/2/2015	234
Mianus River	Westchester	Bedford, North Castle, Pound Ridge	1,573.7	1/31/1990	26
Millbrook Meadow	Dutchess	Stanford	100.9	4/8/1987	166
Mud Creek	Suffolk	Babylon	13.7	10/30/1988	73

Name of Critical Environmental Area	County	Town or City	Acres	Designation Date	Object ID#
Pacama Vly Watershed	Ulster	Olive	179.1	12/30/2023	244
Peconic Bay and Environs	Suffolk	Brookhaven, East Hampton, Riverhead, Shelter Island, Southampton, Southold	300,737.0	7/12/1988	239
Premium River-Pine Brooks	Westchester	Mamaroneck, New Rochelle	18.2	9/30/1989	67
Queen Catharine Wildlife management Area	Schuyler	Dix, Hector, Montour	1,018.3	12/2/2009	177
Rush Pond	Warren	Queensbury	158.6	3/16/1987	213
Ryder Pond & Cagney Marsh	Dutchess	Stanford	110.5	4/8/1987	178
Sandy Pond	Oswego	Richland, Sandy Creek	8,453.3	3/3/1987	18
Santapogue Creek FWW	Suffolk	Babylon	19.0	10/30/1988	103
Scallop Pond	Suffolk	Southampton	2,231.9	2/10/1988	77
Shawangunk Ridge	Ulster, Sullivan	Gardiner, Mamakating, Shawangunk, Wawarsing	9,311.9	10/1/1989	36
Snake Hill	Dutchess	Stanford	157.3	4/8/1987	146
South Setauket Woods	Suffolk	Brookhaven	2,775.6	2/10/1988	173
Sumpwams Creek	Suffolk	Babylon, Islip	7.1	10/30/1988	60
Texas Hollow	Schuyler	Catharine, Hector	835.6	3/31/2011	143
The Cool Ravines CEA	Columbia	New Lebanon	51.3	12/27/2023	224
Tidal Wetlands	Suffolk	Southampton	2,683.2	1/17/1985	41
Town of Greenport Source Water	Columbia	Greenport, Livingston	2,109.5	4/13/2005	208
Upper Wappinger	Dutchess	Pine Plains, Stanford	3,700.5	10/16/1992	156
Vanderburgh Cove	Dutchess	Hyde Park, Rhinebeck	59.9	6/7/2009	80
Water Recharge	Suffolk	East Hampton, Southampton	10,431.3	2/12/1988	119
Wetlands	Erie	Cheektowaga	234.8	8/30/1979	16

Name of Critical Environmental Area	County	Town or City	Acres	Designation Date	Object ID#
Wetlands	Washington	Easton	88.7	3/27/1984	51
Wetlands	Washington	Easton	319.3	3/27/1984	52
Wheatly Heights	Suffolk	Babylon, Huntington	292.0	10/30/1988	182
Zena Woods CEA	Ulster	Hurley, Kingston, Saugerties, Ulster, Woodstock	2,286.9	7/5/2023	222