



ERS CONSULTANTS, INC.
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February 7, 2019

Jeremy Valentine
Lehman & Getz Engineering, P.C.
17 River Street
Warwick, NY 10990

RE: Endangered Species Habitat Assessment on the Tin Barn Brewery Project

Dear Jeremy;

The New York State Department of Environmental Conservation (NYSDEC) New York Natural Heritage Program has identified one federal and state listed species, the bog turtle (*Glyptemys muhlenbergii*), that occurs in the vicinity of the subject property.

ERS Consultants, Inc. conducted an endangered species habitat assessment on February 6, 2019 at the Tin Barn Brewery Project located at 62 Kings Highway (County Highway 13A) in the Town of Chester, Orange County, New York. The subject property consists of approximately 4.8 +/- acres and is known as Section 13, Block 1, Lot 44.22. The site is developed with a 12,000 square foot 1-story metal building and approximately 158 parking spaces. The site is shown on the Warwick, NY US Geological Survey Quadrangle. Prior to conducted field investigations the National Resource Conservation Service (NRCS) Soils Maps, the US Fish & Wildlife Services (USFWS) National Wetland Inventory Maps (NWI) and the NYSDEC Freshwater Wetlands Maps were reviewed. The NRCS Soils Maps show two soil units including Mardin and Erie soils. Mardin soils occur on about 85% of the site and Erie soils about 15%. Erie soils are considered hydric soils. The USFWS NWI Maps show no wetlands on the subject site. The NYSDEC Freshwater Wetland Maps also show no State regulated wetlands on site but state wetlands (WR-19, Class 1) do exist to the west.

The applicant, Dale Van Pamelen, is proposing to utilize the existing structure and parking lot for a brewery including beer production, tasting room and some food preparation. The existing well and the on-site septic system will be abandoned and the facility will be supplied by the Town of Chester municipal water and sewer.

Habitats occupied by bog turtles in the Hudson Valley are wet meadows, sedge meadows, and red maple swamps (New York Natural Heritage Program, NYSDEC Bog Turtle Fact Sheet, USFWS 2001). Bog turtles have specific habitat requirements that include spring-fed, open-canopy wetlands with shallow, slow-moving water, deep mucky soils, and tussock-forming herbaceous vegetation. For example, tussock sedge (*Carex stricta*) or moss (*Sphagnum* spp.) covered hummocks are typical habitat for these species. A diversity of microhabitats within these wetlands provide areas that the turtles require for basking, foraging, nesting, and hibernation.

The methodology used to conduct this habitat evaluation followed the guidelines of the USFWS Bog Turtle Habitat (Phase 1) Survey Report. The bog turtle survey consisted of an evaluation of the wetlands for potential suitable bog turtle habitat. The survey is completed by assessing the presence and suitability of three key habitat criteria: hydrology, soils, and vegetation. Suitable hydrology is identified by the presence of springs or seeps, year-round saturated soils, and shallow surface water, particularly slow-moving rivulets; although, the wetland can be interspersed with both wet and dry pockets. Suitable soils are generically described as mucky. The term “mucky” does not refer to a technical soil type, rather mucky soils are described as soft and penetrable to a depth equal to or greater than 3 inches. Suitable vegetation includes shrub and herbaceous species, primarily sedges, grasses, and rushes.

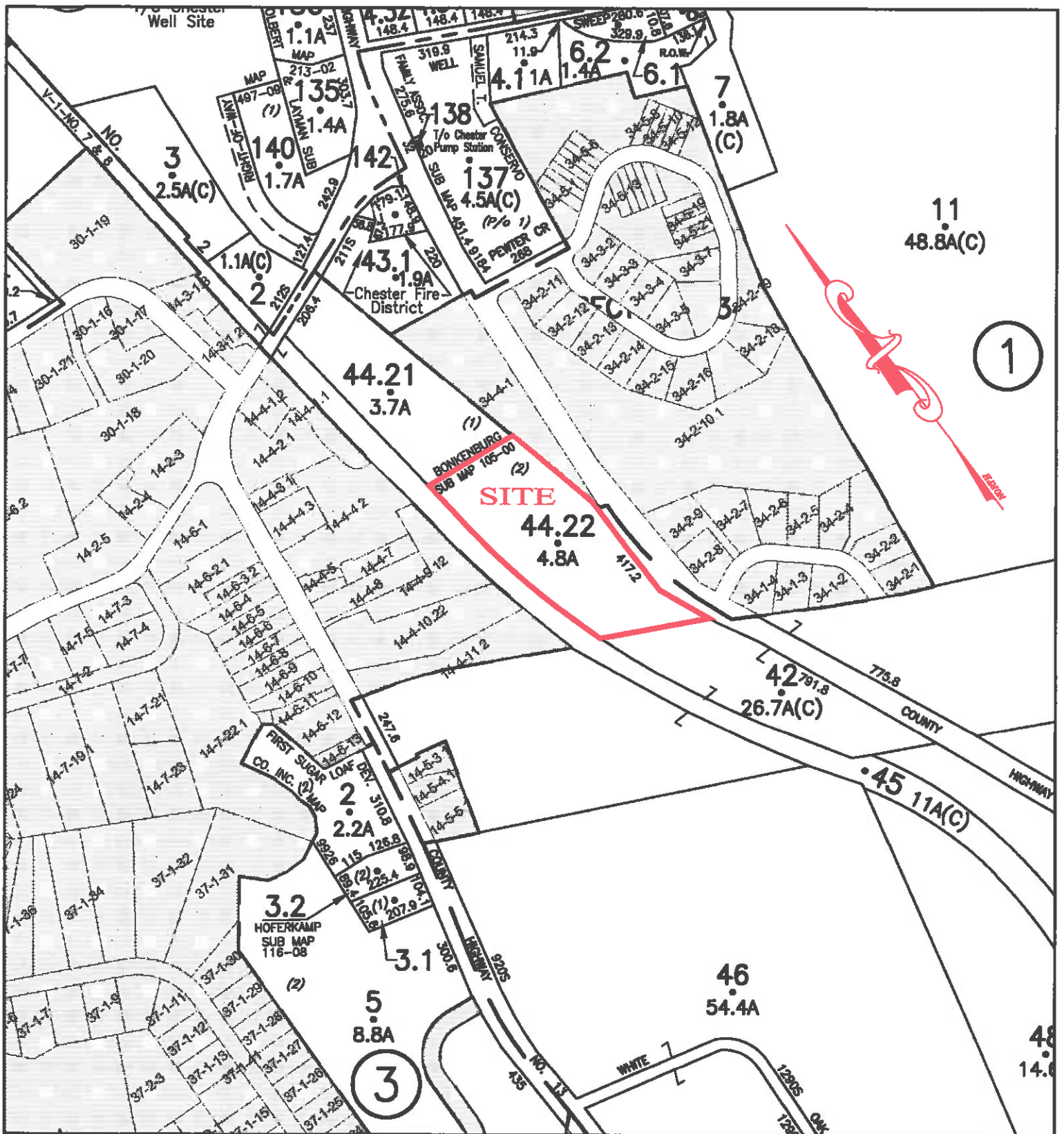
Based upon observations of hydrology, soils, and vegetation, no suitable bog turtle habitat existed within the offsite wetlands on the east side of the railroad line. No mucky soils were identified on-site. Herbaceous vegetation is dominated by purple loosestrife (*Lythrum salicaria*) and cattail (*Typha latifolia*). Potential suitable habitat does exist on the west side of the railroad line and mucky soils are identified there. There does not appear to be a hydrologic connection between the wetlands on the east and west sides of the railroad line.

In reviewing the current site plan for Tin Barn Brewery, Inc. prepared by Lehman & Getz P.C. Consulting Engineers and dated 1/08/19, the only site disturbance proposed would be the location of a 2 inch pvc water line and a 2 inch sewer line to be placed in the lawn area on the east side of the existing driveway. Based upon this habitat assessment, the proposed construction activity will not result in an impact to this reptile species.

Very truly yours,
ERS Consultants, Inc.



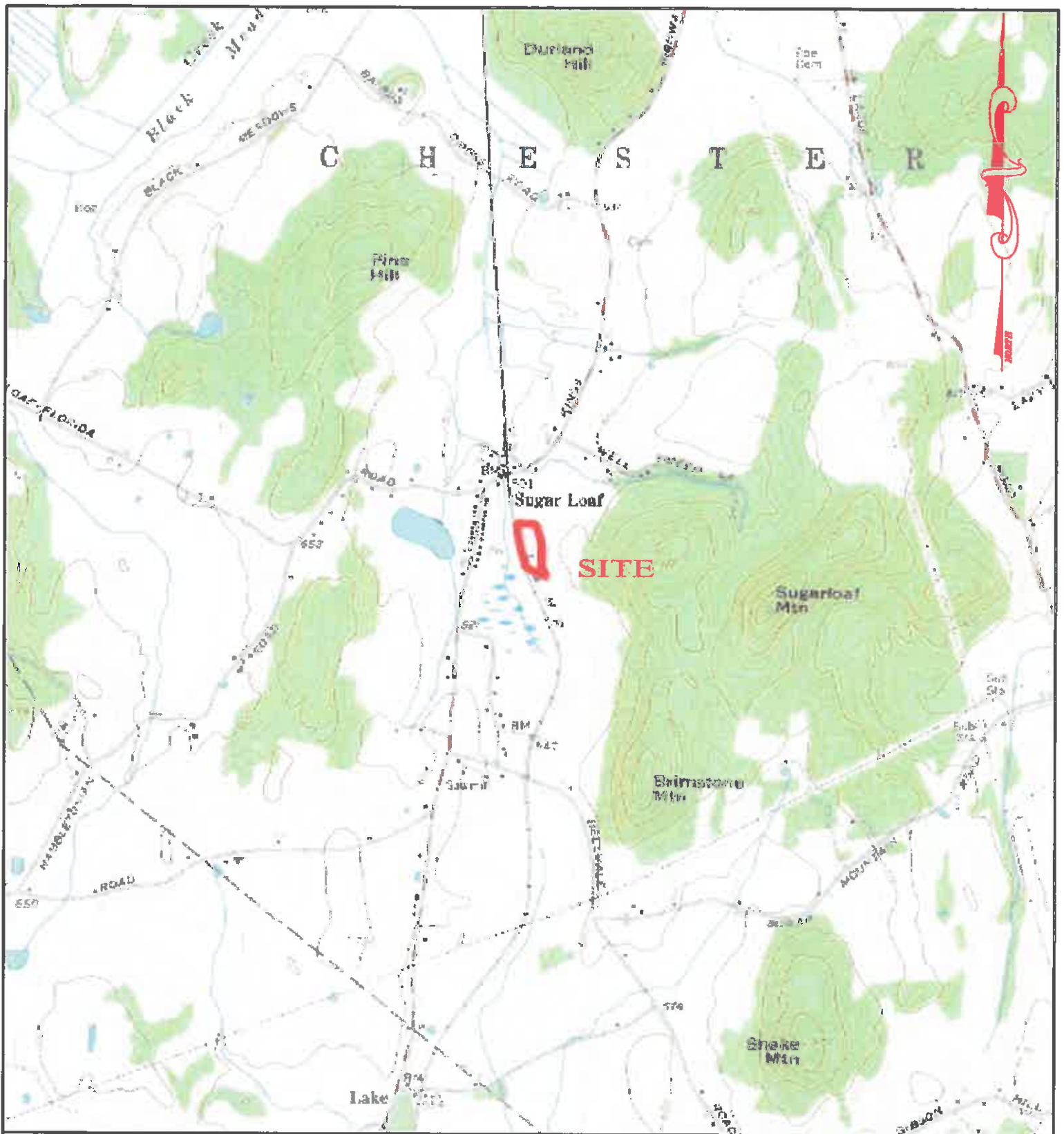
David Griggs
Senior Scientist



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TAX MAP

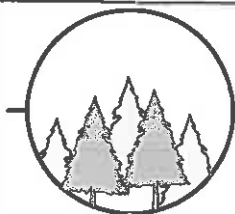
SECTION 13, BLOCK 1, LOT 44.22
 TOWN OF CHESTER - ORANGE COUNTY - NEW YORK
 SCALE: 1"=400'



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USGS 7.5 MIN. QUADRANGLE WARWICK

SECTION 13, BLOCK 1, LOT 44.22
 TOWN OF CHESTER - ORANGE COUNTY - NEW YORK
 SCALE: 1"=2,000'

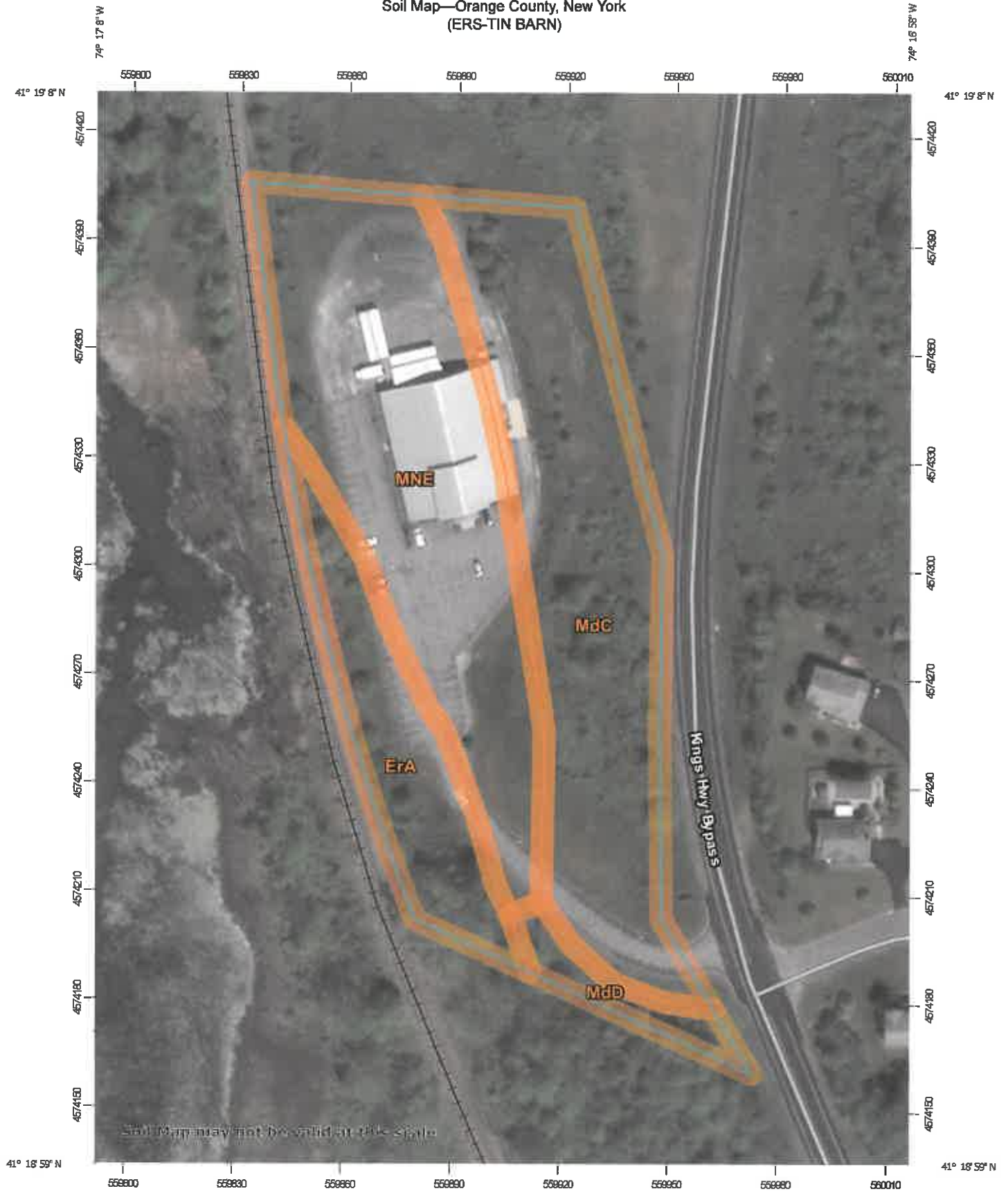


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2018 COLOR AERIAL PHOTO

SECTION 13, BLOCK 1, LOT 44.22
TOWN OF CHESTER - ORANGE COUNTY - NEW YORK
SCALE: 1"=500'

Soil Map—Orange County, New York (ERS-TIN BARN)



MAP LEGEND

	Area of Interest (AOI)		Spoil Area
	Area of Interest (AOI)		Stony Spot
	Soils		Very Stony Spot
	Soil Map Unit Polygons		Wet Spot
	Soil Map Unit Lines		Other
	Soil Map Unit Points		Special Line Features
	Special Point Features		Water Features
	Blowout		Streams and Canals
	Borrow Pit		Transportation
	Clay Spot		Rails
	Closed Depression		Interstate Highways
	Gravel Pit		US Routes
	Gravelly Spot		Major Roads
	Landfill		Local Roads
	Lava Flow		Background
	Marsh or swamp		Aerial Photography
	Mine or Quarry		
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

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

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

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ErA	Erie gravelly silt loam, 0 to 3 percent slopes	0.7	14.7%
MdC	Mardin gravelly silt loam, 8 to 15 percent slopes	1.9	40.3%
MdD	Mardin gravelly silt loam, 15 to 25 percent slopes	0.2	3.7%
MNE	Mardin soils, steep	2.0	41.4%
Totals for Area of Interest		4.8	100.0%

TIN BARN



February 7, 2019



TIN BARN CHESTER NWI WETLANDS

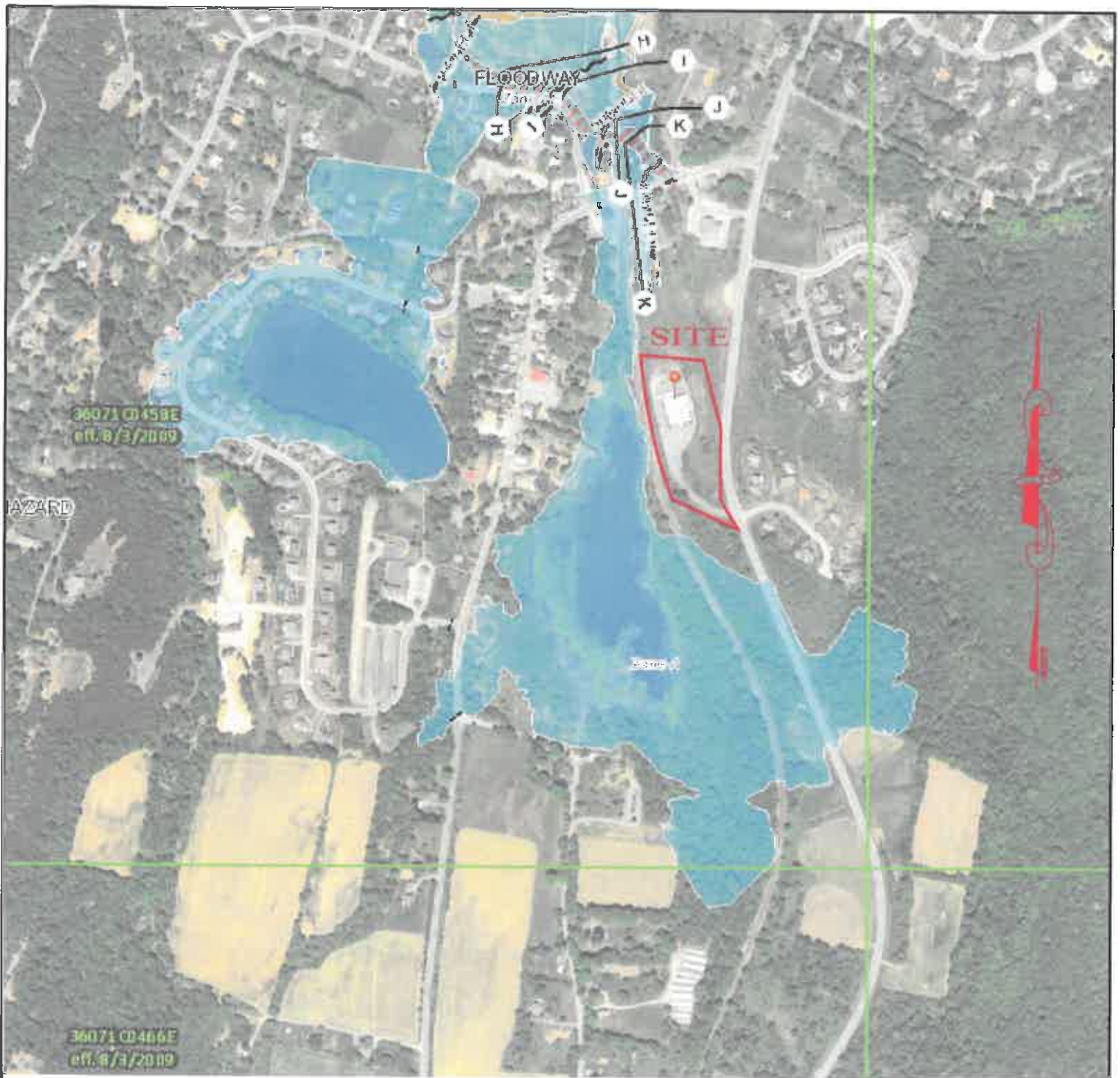


February 6, 2019

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The U.S. Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Flood Hazard Zones

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard

- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levees



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FEMA FLOODPLAIN MAPPING

SECTION 13, BLOCK 1, LOT 44.22
 TOWN OF CHESTER - ORANGE COUNTY - NEW YORK

SCALE: 1"=650'



Photo 1: Looking north from parking lot at 1-story metal structure.



Photo 2: Looking north from driveway at 1-story metal structure. Lawn area is where proposed water and sewer line would be located.



Photo 3: Looking southeast along driveway toward Kings Highway. Lawn area is where water and sewer lines are proposed.



Photo 4: Looking north at 18 inch storm water pipe located at toe of slope off the parking lot.



Photo 5: Looking north along property boundary at wetlands on both sides of the railroad line.



Photo 6: Looking west at wetlands on both sides of the railroad line.