

# MEMORANDUM

**TO:** Robyn A. Steinberg, AICP, CPESC  
Town of Yorktown, New York

**FROM:** Daniel P. Biggs, RLA, ISA, CERP

**DATE:** September 20, 2022

**SUBJECT:** **Dell Ave Solar – Habitat Evaluation**  
Town of Yorktown, New York

As requested, the Weston & Sampson PE, LS, LA, ARCHITECTS, PC (Weston & Sampson) team completed a review of the habitat evaluation completed by TRC Companies for the Dell Ave Solar project. Weston & Sampson reviewed the Habitat Evaluation Report (dated August 2022 by TRC Companies), Tree Mitigation Plan (Preliminary) (dated June 15, 2022 by TRC Companies), for the Dell Ave Solar project located at parcels 70.11-1-16 and 70.15-1-2 in the Town of Yorktown.

The project site consists of converting 12.3 acres of existing woodland into a solar array within meadow (9.1 acres), stormwater management features (4.3 acres), gravel access roads (0.6 acres), and concrete equipment pads (0.1 acres).

The following existing resources were reviewed for this project:

## **Wetland & Streams**

A field verification of existing wetlands and streams was completed in the field with TRC and Weston & Sampson staff on August 24, 2022. A verification memo has been issued under separate cover.

## **Biodiversity Assessment**

The Project Site consists of a temperate deciduous forest and forested wetland, and is surrounded by forested and residential lands. The forest area has minimal understory, due to the dense canopy. Based on the criteria in the Biodiversity Assessment Manual for the Hudson River Estuary Corridor, the habitats present at the Project Site can be classified as mature mesophytic lowland forest, nontidal hardwood swamps, perennial stream, and intermittent streams. Saw Mill River Road and Dell Avenue extend along the western border of the Project Site. In addition, a chain-link fence extends along the western border and is the primary barrier between the Project Site and other natural areas to the west. There are no

roadways or fences along the north, south or eastern boundaries of the Project Site, therefore there are no restrictions to the adjacent lands.

In addition, steep slopes exist in the northeastern portion of the Project Site, while five streams connect and flow through Wetland W-MJR-1, which is located on the eastern boundary of the site. Stream S-MJR-1 flows off-site to the northwest and goes through a culvert underneath Saw Mill River Road before flowing into Cornell Brook. An artificial impoundment area separates two pond sections from each other in the wetland and one of the streams.

Further review of threatened and endangered species onsite was completed for the following species:

### **Indiana Bat**

According to TRC, during site visits, no potential hibernacula were observed; however, several trees were found onsite with exfoliating bark, hollows, or deep furrows, including 59 shagbark hickories. The trees present characteristics suitable for summer roosting habitat for bat species, including the Indiana Bat (USFWS). In addition, the forest area is part of a larger forest patch, thus providing connectivity to more foraging and roosting habitat. However, it should be noted that according to the Hudson Valley Natural Resource Mapper, the Project Site is not part of an important bat foraging area. In addition, since no hibernacula were identified within the vicinity of the Project Site, no impacts to Indiana bat wintering habitat are anticipated due to the Project.

Per the TRC report, tree clearing will be performed during the winter, between October 1 and March 31, in order to avoid impacts to potentially roosting bats. Based on the factors considered herein and confirmed with USFWS, no “take” of Indiana bat is anticipated at the Project Site.

### **Bog Turtle**

TRC herpetologists performed a Phase 1 bog turtle habitat survey on June 18, 2021 and no bog turtles were observed. However, two potential bog turtle habitat areas were identified onsite. A 0.35-acre area of the north-central portion of Wetland W-MJR-1 and a 0.05-acre portion of Wetland W-MJR-1 located in the southwestern portion of the Project Site could provide low-quality potential habitat, based on the surrounding dense canopy cover from the adjacent forest and hydrology disturbances caused by the impoundment.

The USFWS designated three bog turtle conservation zones to protect and help recovering bog turtle populations within their northern range.

No direct impacts to Wetland W-1 are anticipated; therefore, there will be no activities in Conservation Zone 1 at the Project Site. The Project’s LOD will be within two of the three USFWS Conservation Zones for bog turtles. Conservation Zone 2 is the area within the 300-foot adjacent buffer from the limits of wetland W-1. Conservation Zone 3 is the area within a 0.5-mile buffer of this 300-foot adjacent area from

the limits of wetland W-1 (USFWS). Since a portion of the Project's LOD will be within Conservation Zone 2, best management practices are proposed to be followed to avoid indirect impacts that may adversely affect the species. The Project will not impact ground and surface water recharge zones within Conservation Zone 3.

According to the TRC Report, the USFWS concurred that take of bog turtle is not reasonably certain to occur

### **Bald Eagle**

Based on TRC's correspondence with the NYNHP, there is a known bald eagle nest within 0.5 mile of the Project Site. No nests were observed on the Project Site during the site visits and based upon available bald eagle nesting habitat in the vicinity, it is unlikely that there are any eagle nests within 660 feet of the Project Site. Eagles are unlikely to rely on resources onsite but may be supported by the Croton Reservoir and other nearby large waterbodies.

TRC consulted with the NYSDEC regarding potential impacts to bald eagles from noise from construction activities. TRC assumes construction noise levels at the bald eagle nest will not be significantly greater than ambient noise levels. Based on previous studies, it is not expected that the project construction noise will disturb nesting bald eagles. Bald eagles foraging at the Project Site may be disturbed, but only temporarily and during active construction.

The project is planning to comply with the Migratory Bird Treaty Act (MBTA) and Bald and Gold Eagle Protection Act (BGEPA) during construction. As a result, the Project will comply with the MBTA and BGEPA, specifically so that no "takes" of bald eagles, nests, or eggs are anticipated to occur.

### **Tree Inventory**

The existing forest area within the project site is a part of an unfragmented forest patch greater than 100 acres. The project is located within the core of the forest patch, and according to the Hudson River Estuary Program, the forest condition index of the Project Site is in the bottom 20<sup>th</sup> percentile of forest patches within the Hudson River Estuary. This forest condition index indicates that while the Project Site is part of a larger forest patch with a core forest, in comparison to larger forests removed from surrounding development, it has limited connectivity with other large forest patches, provides limited habitat and ecosystem value, and has experienced environmental stressors from surrounding human activity and development.

The subject parcel primarily consists of a mature forest with trees ranging from 8 to 92-in diameter at breast height (dbh), with an average dbh of 15.6-in. A majority of the trees on site are equal to or greater than 12 in dbh. Sugar Maple (*Acer saccharum*) (14.1-in. dbh) and Northern Red Oak (*Quercus rubra*) (avg. 20.2" dbh) were the most common species, followed by White Oak (*Quercus alba*) (avg. 18.7" dbh) and Black Birch (*Betula lenta*) (avg. 15.3" dbh).

According to TRC, 1,007 protected trees are proposed to be removed from the Project Site. Of the 1,007 trees to be removed, 959 of the trees are in good/fair condition, while the remaining 48 are in dead/poor condition. The project proposes to provide 66 evergreen trees around the perimeter of the solar array, primarily for screening purposes. In addition, a contribution to the Yorktown Tree Bank is proposed for removal of the remaining unmitigated trees, and forest area to be cleared.

The following summarizes the total protected trees to be removed and associated mitigation costs.

Attached to this memo is a copy of the Tree Removal/Mitigation Calculations:

• Total Protected Trees to be Removed (Fair-Good)	959
• Mitigation Ratio	5.20
• Total Replacement Trees to be Planted	66
• Total Protected Trees to be Mitigated (deduction of replacement trees planted)	946

#### Tree Fund Calculations

• Total Cost for Protected Trees Removed	\$ 94,630.77
• <u>Total Cost for Woodland Tree Removal</u>	<u>\$ 32,147.28</u>
Total Tree Bank Fund Payment	\$ 126,778.05

Based upon the requirements included in Chapter 270 – Trees of the Town Code, as well as the Total Protected Trees to be Removed (Fair-Good), Total Replacement Trees to be Planted and the Total Tree Bank Fund Payment, we believe the mitigation measures proposed for this project are adequate for the anticipated loss of forested areas.

#### **Overall Recommendations:**

- Forest Area & Indiana Bat - Tree clearing shall be performed during the winter, between October 1 and March 31, in order to avoid impacts to potentially roosting bats.
- Bog Turtles – Protective Procedures and Measures should be followed during and after construction, including:
  - Bog Turtle Conservation Plan
  - Double Row of Silt Fence
  - Encounter and Education Plan including Future Property Maintenance
- Bald Eagles – The project shall comply with the Migratory Bird Treaty Act (MBTA) and Bald and Gold Eagle Protection Act (BGEPA) during construction.
- Forest Area – To the extent feasible, applicant shall increase number of total replacement trees to be planted, particularly along segments of fence immediately adjacent to roadways or viewable from adjacent properties.
- It is recommended that the area beneath the solar array be planted with wildlife/pollinator species (per TRC Plan). In addition, areas anticipated to receive stormwater runoff or drainage

swales shall be planted with seed species suitable for wet soils, while also providing habitat benefits onsite.

Please do not hesitate to reach out with any comments or questions regarding our findings and summary of work for this project.

**Certification**

I certify that all the statements of fact in this assessment are true, complete, and correct to the best of my knowledge and belief, and that they are made in good faith.



9/20/2022

Daniel P. Biggs, RLA, ISA (MA-5119A), CERP  
Registered Landscape Architect NY-002443-01

Date  
exp. 1/31/2023

Attachments: Attachment A- Tree Removal/Mitigation Calculations Table

Dell Avenue  
Solar Farm  
Town of Yorktown

Dell Avenue Solar Project - Per TRC August 2022 memo		
<b>Tree Removal Calculations</b>		
Total Trees Surveyed	Average dbh 15.6 in.	Qty 1055
<b>Total Trees Removed</b>		<b>1007</b>
<i>Invasives - Deduction</i>		0
<i>Dead/Poor Native - Deduction</i>		48
<b>Total Protected Trees Removed (Fair-Good)</b>		<b>959</b>
Average DBH of Protected Trees (Fair-Good)		15.60 in.
 <b>Tree Mitigation Calculations</b>		
Avg. DBH of trees to be removed		15.60 in.
Avg. DBH of replacement trees		3 in.
<b>Mitigation Ratio</b>		<b>5.20</b>
Total Protected Trees Removed		959
<b>Total Replacement Rqd. (based upon Ratio)</b>		<b>4987</b>
Replacement Trees to be Planted		66
<b>Total Trees to be Mitigated</b>		<b>4921</b>
<b>Total Protected Trees to be Mitigated (deduction of replacement trees planted)</b>		<b>946</b>
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<b>Tree Fund Calculations</b>		
<u>Payment to Tree Bank Fund (per Total Protected Trees Removed)</u>		
<i>Cost per Lost Tree</i>	\$ 100.00	
<i>Total Protected Trees to be Mitigated (deduction of replacement trees planted)</i>	946	
<b>Total Cost for Protected Trees Removed</b>		<b>\$ 94,630.77</b>
<u>Payment to Tree Bank Fun (per Total sf of protected woodland removal)</u>		
<i>Cost per 5,000 sf</i>	\$ 300.00	
<i>Total Protected Woodland Removal (per TRC Report)</i>	535,788 sf	
<b>Total Cost for Woodland Tree Removal</b>		<b>\$ 32,147.28</b>
<b>Total Tree Bank Fund Payment</b>		<b>\$ 126,778.05</b>