

June 21, 2021

TO: Loretta Taylor, Thomas Bianchi, Robert Foley, Stephen Kessler, George Kimmerling, Jeffrey Rothfeder, Suzanne Decker, Robert Mayes

CC: Michael Preziosi, Chris Kehoe, Rosemary Lasher, Michelle Robbins

RE: Comments & Questions for Public Hearing - CVE North America "Cortlandt Mill Solar Farm"

Dear All,

The project proposed by CVE North America located on a property just south of Mill Court will contribute 5 MW towards the CLCPA target of 6,000 MW by 2025. The Town will receive increased tax revenue. In addition, the developer will contribute \$80,000 to \$90,000 donation to the Town's environmental fund plus \$12,000 to a local environmental agency.

The proposed site is located within a 164- acre forest patch and development will remove approximately 3,400 trees from its core adjacent to two recognized wetlands and in close proximity to a third as yet unmapped wetland. All three wetlands are part of a complex that feeds the Peekskill Hollow Brook.

These types of energy systems are critical to meeting goals to reduce carbon and while a solar farm is more efficient at carbon sequestration than trees, installation at this particular site has the potential to do irrevocable harm to a natural resource that performs functions well beyond the carbon service.

The following comments and questions seek to answer two overarching questions:

1. Are the impacts to this natural resource sufficiently quantified and completely minimized to the greatest extent possible?
2. Is the trade-off in natural resources of this particular project a fair exchange for the stated benefits?

We respectfully request that these comments and questions be relayed to the applicant for response.

Sincerely,

North Cortlandt Residents | Vision Committee

Wendy Talio (Chair)
 Michael J. Fleming
 Emil Moussa
 Sue Radzilowicz
 Marlene Sauer
 Tom Walsh

Copies 8 Planning Board
 Town Board
 Zoning Board
 Legal Dept.
 DOTS Director
 C.A.C.
 A.R.C.
 Applicant
 TAC
 Jared Lusk, Esq.
 Sent 6/24/21

Q#	Applicant Statement Biodiversity Documents	Question/Comment
1	<p>Section 1.1</p> <p><i>The Hudson Valley is part of a high-demand or high “load” area in New York that does not have access to many major hydropower resources or wind energy projects.</i></p> <p><i>However, there is still unutilized land in the Hudson Valley, such as the Project Site, available for developing SGFs (Scenic Hudson, 2019).</i></p> <p><i>Therefore, SGFs, such as the Project, can help reach the goal “to rapidly transition the Hudson Valley to a sustainable, low-carbon region increasingly powered by renewable energy in order to mitigate climate change, while protecting and preserving the region’s invaluable scenic, historic, agricultural, environmental, and economic resources (Scenic Hudson, 2018).”</i></p>	<p>The first sentence is an accurate paraphrasing from Scenic Hudson’s “A Regional Response to Climate Change 2019”</p> <p>The paper argues that due to the imbalance of demand where there is no space and space where there is no demand, “to reach the state energy goals, rooftop, community- and grid-scale solar must all be constructed in the Hudson Valley” and “With respect to large-scale solar, availability of sufficient and unutilized land to site grid-scale projects is key”</p> <p>The yellow highlighted quote is actually taken from Scenic Hudson’s vision statement on the title page of chapter one of their 2018 siting guide – Clean Energy, Green Communities: A Guide to Siting Renewable Energy in the Hudson Valley.</p> <p>A primary message of Scenic Hudson’s guide is that siting of Solar Energy Systems prioritize:</p> <ol style="list-style-type: none"> 1. Co-location opportunities in the built environment or in agricultural areas 2. Large unforested open areas (i.e., unutilized) 3. Abandoned open areas that can provide renewed use for the land and stimulate local economy. <p>In support of identifying appropriate sites, Scenic Hudson has developed a freely available mapping tool. It does NOT choose sites but rather provides data that environmental organizations, municipalities, and developers alike can use to spot locations of interest.</p> <p>As example, please refer to Figure 1 which shows a partial picture of sites that may meet the criteria for previously disturbed sites.</p> <p><i>Clearly, CVE is aware of these guidelines. Please describe your process for site selection and your rationale for selecting this particular location despite obvious impact to the natural resources that climate actions seek to protect. What other sites did you consider?</i></p>
2	<p>Section 1.1</p> <p>The Project will contribute electrical power from a renewable resource to the local grid, providing electricity to residences and business in Cortlandt. The Project will also provide increased tax revenue for the Town of Cortlandt.</p>	<p><i>Please quantify the increased tax revenue and any other DIRECT benefits to the community.</i></p>

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3	<p data-bbox="237 268 448 300">3.1 Project Setting</p> <p data-bbox="237 331 768 636">The Project Site is located within the Hudson Highlands Major Zone, which does not have any Minor Zones. The Hudson Highlands are a significant biodiversity area of the Hudson River Estuary corridor (Penhollow et al. 2006) (Figure 3) and one of the largest unfragmented landscapes in the state and a landscape corridor between the MidAtlantic and New England.</p> <p data-bbox="237 678 740 804">Applicant concludes “The Project Site is forested and part of a core forest; however, this forest is young and overall has a low forest condition index”</p> <p data-bbox="237 846 756 1150">Section 3.2. page 13 states: “low forest condition index indicates that while the Project Site is part of a larger forest patch with a core forest, it has limited connectivity with other large forest patches and has experienced environmental stressors from surrounding development, as demonstrated by the developed land uses in its immediate vicinity”</p>	<p data-bbox="792 268 1442 331"><i>Please explain why the low index and the classification of “young” means this section of core forest is disposable.</i></p> <p data-bbox="792 373 1515 531">The ratings of this forest patch have to do with fragmentation effects – i.e., the distance between this whole 164-acre forest patch from the larger matrix. (See Figure 2). Fragmentation causes conditions lower its ability to support abundant wildlife, carbon sequestration. (See Figure 3).</p> <p data-bbox="792 573 1523 667">However, the index is a comparative measure and considers ALL forests in the Hudson Valley, including 700,000 acres in the Catskills.</p> <p data-bbox="792 709 1515 804">The index ranking does not mean this forest is not supporting wildlife and sequestering carbon, it just has less ability than the comparative forests.</p> <p data-bbox="792 846 1450 909">The quality of the forest as assessed in the Tree Inventory describes a healthy forest:</p> <p data-bbox="792 951 1515 1045">“The site has very few invasive species with only 126 Norway Maples and 28 Ailanthus. It is rather unique to find a site in this area that is not primarily dominated by invasive species.</p> <p data-bbox="792 1087 1515 1182">There are even very few if any invasive vines on site. The site overall has an excellent make up of native trees, but they are all on the young side.”</p> <p data-bbox="792 1224 1507 1308">165-acre forests in healthy condition in a densely populated area is unusual and any impact to it should be minimized if not avoided.</p>

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4	<p>Trees Tree clearing will convert a portion of core forest to edge forest.</p> <p>Edge forest is defined as forested land within 100 meters of the edge of a forest (Conlely et al., 2019).</p> <p>Wetland & Streams There were site visits on Oct/Nov 2019 and the Town's wetland consultant, HVEA field verified and performed a wetland and stream functions and value assessment.</p> <p>From HVEA Both W1 and W2 is suitable for 4 different function-values:</p> <ul style="list-style-type: none"> • Floodflow Alteration, • Nutrient Removal, • Product Export, • Wildlife Habitat <p><i>Both function as wildlife habitat because the wetland is not fragmented with its surrounding upland areas remaining undeveloped and forested and scrub-shrub classes are present within the wetland.</i></p>	<p><i>Please quantify the areas of existing core that will become new forest edge after clearing and the effect of creating both fragmentation and new edges. How does CVE plan to avoid, minimize or mitigate these effects?</i></p> <p>Referring to Figure 4, it appears that the area being conserved to protect the wetlands will convert to an edge forest. The forest continues to the North and West of the site and will be completely fragmented off this patch. It should be noted that there is another complex of streams and wetland in this section which also feed Peekskill Hollow Brook. (See Figure 5)</p> <p>While the project will not directly touch the wetlands on the site, indirect consequences need to be well understood.</p> <p>According to land use training information available on the DEC site and feedback from their instructors:</p> <ul style="list-style-type: none"> • Clearing forest next to a wetland could have profound effects on the wetland--increasing the summer temperatures of wetland water and soils, reducing the amount and quality of organic detritus feeding the wetland, altering the surface runoff and groundwater feeding the wetland, aiding the incursion of non-native invasive plants, and altering the upland habitats available to wetland-associated wildlife, for example. • A forest and wetland complex in the midst of the suburban neighborhood probably has outsized importance to the local community, both for its seen and its unseen ecological services (moderating local air temperatures, carbon storage, maintenance of groundwater and surface water resources, wildlife habitat, scenic values). Effects will be most immediate to the residences nearest the cleared areas. • This land is on a divide, draining both north (via swales or possible unmapped streams) and south (via mapped and unmapped streams), but it all drains ultimately to Peekskill Hollow Creek. Clearing 20 acres of forest is likely to affect the patterns of runoff and the quantity and quality of water in the streams and their associated wetlands, and the water reaching PH Creek. <p>The Coleman Study in 2005 also found the following:</p> <ul style="list-style-type: none"> • There would be significant alteration and loss of existing species diversity and abundance currently present. • A majority of these species require upland habitat adjacent to the wetlands. • To reduce overall disturbance...design to lessen the amount of fragmentation and edges. • Of particular importance are 10 forest interior [avian] species that require large tract of relatively mature forest canopy and are extremely sensitive to forest fragmentation.

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5	<p>Visual Simulations</p> <p>Page 15 of SEQR “In its application to the Town Board, CVE requests that the setback on the south side be reduced to 150 feet and on the west side be reduced to 100 feet from the property boundary. The Project will be set back 200 feet from neighboring residences. This reduced setback is needed to avoid impacting wetlands and minimize impacts to steep slopes on the Project Site. Due to the topography and existing vegetation, the Project is well buffered from adjacent residential properties. The Project meets all other dimensional requirements under Section 317-17 of the zoning bylaw and Chapter 255 (Solar Bylaw).</p> <p>Photo Location 10 (leaf-off conditions) Photo Location 10 is located on Cordoza Avenue approximately 513 feet to the south of the Project during leaf-off conditions. Figure 13a shows existing conditions and Figure 13b shows proposed conditions, at five years. The fence line and trees planted as part of the landscaping plan are visible. Some of the solar panels may be visible through the fence during leaf-off conditions.</p> <p>Photo Location 11 (leaf-off conditions, Amherst Road) Photo Location 11 is located approximately 81 feet southeast of the Project Site on Amherst Road. Figure 14a shows existing, leaf-off conditions and Figure 14b shows proposed conditions, at five years. The fence and solar panels are potentially visible during leaf-off conditions.</p> <p>Due to terrain, buildings, and vegetation the Project has limited potential visibility within the 2-mile study area.</p> <ul style="list-style-type: none"> • Piano Mountain. • Tanglewylde Road, west of Lake Peekskill; • Jones Hill between Lake Mohegan and Mohegan Highlands Park. 	<p>It’s clear that properties immediately adjacent to the north of the facility will be looking at fences and panels as shown in Locations 12 and 13.</p> <p>The simulations also show that the fence and panels will be visible from some locations south and west of the site.</p> <p>The developer requests a reduction in buffer for the west and south sides in order to avoid wetland and steep slope impact.</p> <p>Photo location 10 is taken from the boundary of the property looking north into the site. The southern boundary of the site’s parcel is the northern boundary of the Cortlandt Colony tennis court. The LOD is only 150 feet from this point.</p> <p>Likewise, Photo location 11 at 81 feet southwest (not southeast) will see fence and panels.</p> <p>The viewshed report shows potential, albeit limited visual impact between 1.5 and 2 miles away. Two of the viewpoints are from public park land.</p> <p><i>Please explain specifically how the reduced buffer mitigates environmental impact. If the 200-foot buffer were maintained would the panels still be visible? Did the photo simulations consider the reduced buffers?</i></p> <p><i>The original submission as described in the Planning Board Agenda from 6/1/2021 states that this installation would provide 3 MW. Now it’s proposing 5 MW. Would a smaller footprint eliminate the need for buffer reductions? Likewise, would a smaller footprint eliminate visual impact not only in the immediate area but in the larger 2-mile viewshed?</i></p> <p>These locations are described having no visual impact but were only done with leaf-on simulation and 5-years after installation.</p> <p>2 – Mill Court End 3 – Mt View 4 – Amherst near Armstrong 5 – high point in Cortlandt Colony on Cordoza</p> <p>#3 appears to be from in front of the house. On the site visit on May 23, the back deck was clearly visible through the trees.</p> <p><i>Would a leaf-on simulation show a visual impact?</i></p>

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6	<p>Wildlife CVE/TRC doc 4.2 Wildlife – “It is likely that upland species using the area, such as forest mammals and forest birds, have the greatest potential to be impacted.”</p> <p>An 8.5-foot-tall wildlife-friendly perimeter fence will surround the solar arrays.</p> <p>An extensive list of BMP actions is described in the Biodiversity Enhancement plan.</p> <p>Final Stamped Biodiversity The area supports a healthy and diverse wildlife and plant community that consist of several environmentally sensitive forest interior species and populations.</p> <p>It is likely that the study area and the larger acreage immediately surrounding the proposed project areas contribute to the attractiveness and use of this area by resident forest interior breeding birds.</p> <p>A low height fence is recommended to protect the box turtle.</p>	<p>The Hudson Valley Natural Resource mapper layers show the whole site is in a “Significant Biodiversity” zone (see Figure 6) meaning this is an area in the Hudson River estuary watershed that contains high concentrations of biodiversity or unique ecological features.</p> <p>This is confirmed in several of the studies submitted with the application. Items of concern being the box turtle, an elusive vernal pool and potential bats passing through.</p> <p>The Weston & Sampson report indicates that the presence of this wildlife may be due to the fact that this site is embedded in a much larger forest patch.</p> <p><i>Please explain why the impact to this wildlife from further fragmentation to the forest patch, (albeit non-endangered or threatened wildlife) is acceptable?</i></p> <p><i>Does the low height fence protecting the box turtle conflict with the elevated fencing to allow other wildlife to pass?</i></p> <p><i>Does the mitigation, such as a meadow help the specific species that currently utilizing the forest? or may be using the wetland for laying eggs but live in the upland?</i></p> <p><i>Could the vernal pool suggested by presence of the wood frog be located in the wetland just north and west of the site? If yes, is it protected or will placing it in a forest edge damage it?</i></p>
7	<p>Storm Water It is estimated that 165 trees on slopes greater than 25 percent will be removed.</p> <p>The Project will not result in a major increase in impervious features and these features are considered when modeling the water runoff and designing the SWPPP. Stormwater will flow off panels and drain to the ground as normal.</p> <p>Modeling conducted for preparation of the SWPPP demonstrates that the Project will not alter the hydrological or hydraulic characteristics of the site; therefore, no negative impacts to neighboring properties or downstream areas are anticipated.</p>	<p>The storm water prevention plans seem to be focused on mitigating needed changes in steep slopes and the trees removed in those small sections.</p> <p>The water may “flow off the panels and drain to the ground as normal”, but the root system of thousands of trees will not be present to slow down and filter the water.</p> <p><i>Does the SWPPP address the water related impacts of changes to the total site, not just the steep slopes? How? If not, what does?</i></p> <p><i>Does a meadow and some new trees and shrubs sufficiently address all these potential impacts? How long does it take for the root systems of new trees of a newly seeded meadow to establish itself.</i></p>

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8	<p>Execution and ongoing Care CVE's website states: Through its proficiency in all steps of the construction process and its careful selection of subcontractors, CVE ensures that its facilities <i>achieve technical and financial performance</i> for as long as they last.</p> <p>Quality: The facilities are constructed by leading businesses that can boast solid references and a training policy suitable for the challenges of these new construction trades. Furthermore, all projects are subjected to a <i>technical control related to the structure and electrical wiring.</i></p> <p>CVE's responsibilities</p> <ul style="list-style-type: none"> • Facilities management: Tracking production, billing EDF and managing relations with EDF and ERDF, tracking supplier guarantees, etc. • Arranging service visits: In order to ensure maximum plant uptime: Planning annual preventive maintenance visits, arranging curative maintenance, and monitoring the resolution of non-compliances. • Production optimization: Analyzing production one inverter at a time, technological monitoring, identifying solutions for improving returns. • administrative and accounting management for the production companies. 	<p>CVE North America expansion into the US is fairly recent (2017) and while there is a solid history of energy installations internationally, the website only provides description of construction and maintenance support from the perspective of the solar energy system itself and the business of running it optimally.</p> <p><i>Who will install the environmental mitigation aspects of the site? Will CVE ensure BMP's applied will function as expected and monitor their ongoing effectiveness.</i></p> <p><i>What will happen in the event of a failure – for example, the run-off is not contained by the swales and water damages surrounding properties or wetlands?</i></p>

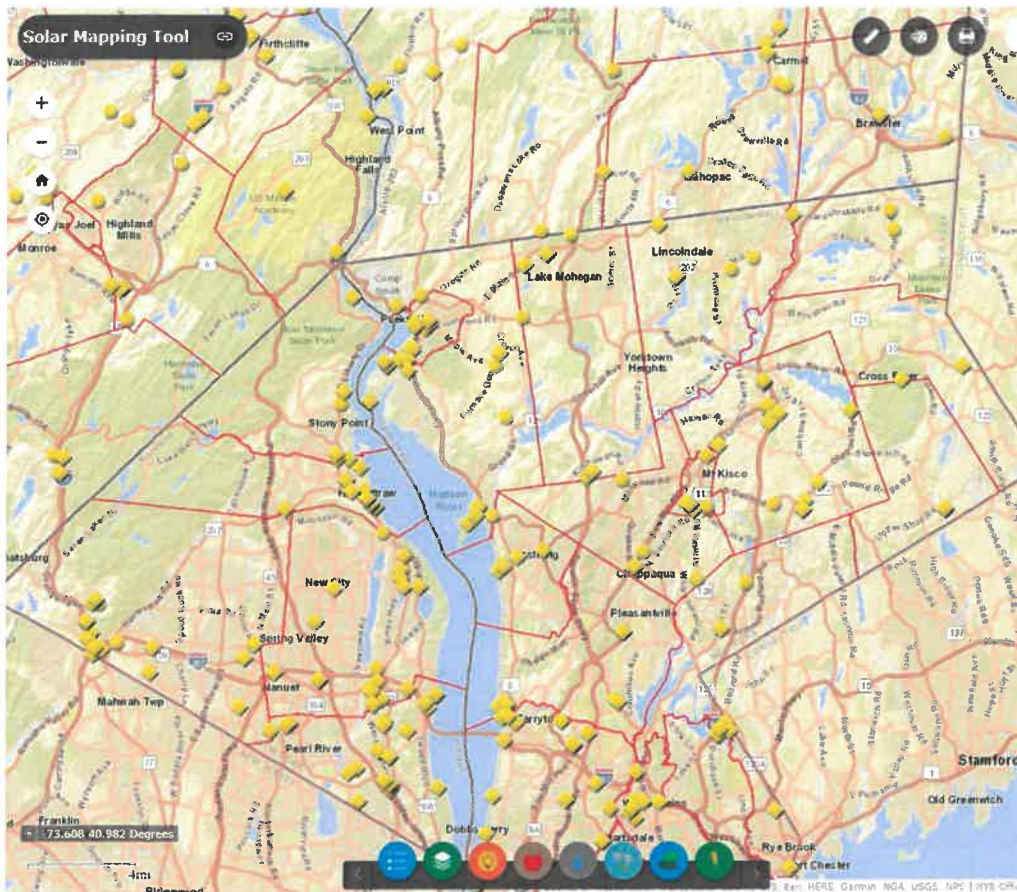


Figure 1 – Scenic Hudson Solar Mapping Tool Opportunity Layer

YELLOW DIAMONDS signify Pre-Screened RE-Powering America Sites - Through its RE-Powering America’s Land Initiative, the U.S. Environmental Protection Agency (EPA) encourages renewable energy development on current and formerly contaminated lands, landfills, and mine sites when such development is aligned with the community’s vision for the site. The reuse of under-utilized properties for solar may represent an opportunity for cost savings, new revenue, and local job growth.

YELLOW CIRCLES signify Surface mines. These areas have often been flattened and cleared of vegetation during mining activities—both solar-friendly conditions. They may be unsuitable or expensive to develop for housing or other buildings, and difficult to restore as natural areas, but solar provides an opportunity to make new use of the land. This data layer displays the approximate locations of surface mines permitted by New York State. Many of the mines are “reclaimed,” meaning mining activities have stopped and the land has been turned to another use (some have already become parks or new developments). The Aerial Imagery base map can assist in evaluating a potential site within the Solar Mapping Tool, but local knowledge is needed to interpret whether a given mine site is suitable for solar.

Other Previously Disturbed Areas - You can use the Aerial Imagery and local knowledge to identify other opportunity areas for solar energy development, such as parking lots, abandoned commercial or industrial sites, and other previously disturbed sites.

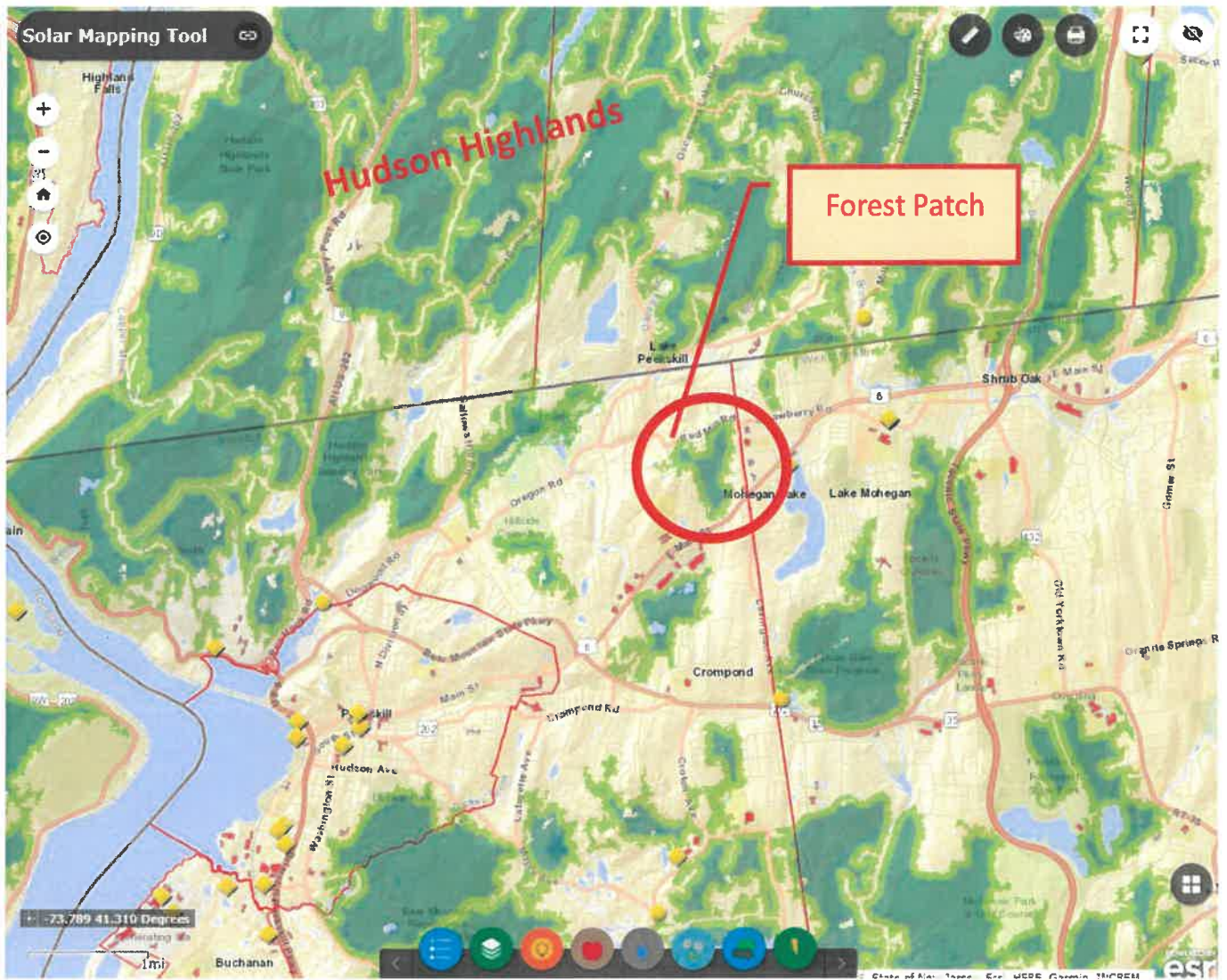


Figure 2 – Mill Court Forest Patch Location

Estimating Forest Patch Condition for Forest Patches in the Hudson Valley.

To quantify the condition of forest patches within the Hudson River Estuary Watershed, we assessed each patch for multiple aspects of condition, connectivity, stress, and ecosystem value and then ranked the patches according to the results.

Table 5. Components of the forest index and their weightings. An asterisk (“*”) indicates components for which lower raw values indicate better quality habitat. The calculation of the raw value is also provided (“Prop” = proportion), along with the maximum points that could be assigned to each component. The category field indicates which sub-indexes the component is a part of (HEV = Habitat and Ecosystem Value).

Component Name	What the raw value represents:	Max Points	Category
Patch Size	Area in acres	24	Size
Core Area Index	Prop. area core	6	Fragmentation
Edge density*	Prop. area edge	6	Fragmentation
Distance to nearest large patch*	Distance in km	12	Connectivity
Local connectedness	Mean value	12	Connectivity
Forested landscape	Prop. 1.5 mi buffer forested	12	Connectivity
Landscape context (Regional Flow)	Maximum value	12	Connectivity
Landscape Condition Assessment*	Mean value	24	Stressor
Road Density*	km / acre	12	Stressor
Building Density*	Square feet / acre	12	Stressor
Impervious surfaces*	Mean value	12	Stressor
Forest Damage*	Present/Absent	0 or 2	Stressor
Older Forest	Prop. undeveloped in 1974	12	HEV
Landform diversity	Mean Value	12	HEV
Brook Trout	Absent/Present	0 or 2	HEV
Migratory fish	Absent/Present	0 or 2	HEV
Rare species and significant natural communities	Mean Value	12	HEV
Stream condition (BAP)	Mean Value	6	HEV
Riparian habitat	Prop. area riparian	6	HEV
Wetlands (NWI)	Prop. area wetland	6	HEV
Community diversity (Landfire)	Count unique habitats	12	HEV
Carbon sequestration	Mean	12	Carbon Sequestration



Forest Condition Index (Percentile)

Description:
This forest patch scores in the 2.5 percentile of Hudson Valley forests.

Forest Condition Index Value (Max 228 points): 47.5

Area in acres: 164.29

Notable rankings:

- Size Score (Max 24 points):** 6
- Fragmentation Sub-Index (Max 12 points):** 4
- Connectivity Sub-Index (Max 48 points):** 8
- Environmental Stress Sub-Index (Max 62 points):** 13
- Habitat and Ecosystem Value Sub-Index (Max 70 points):** 11.5
- Carbon Sequestration Score (Max 12 points):** 5

[Forest Index Progress Report](#)

Zoom to

Figure 3 – Forest Quality Index for site’s forest patch

Source <https://www.nynhp.org/projects/hudson-valley-forest-patches/>

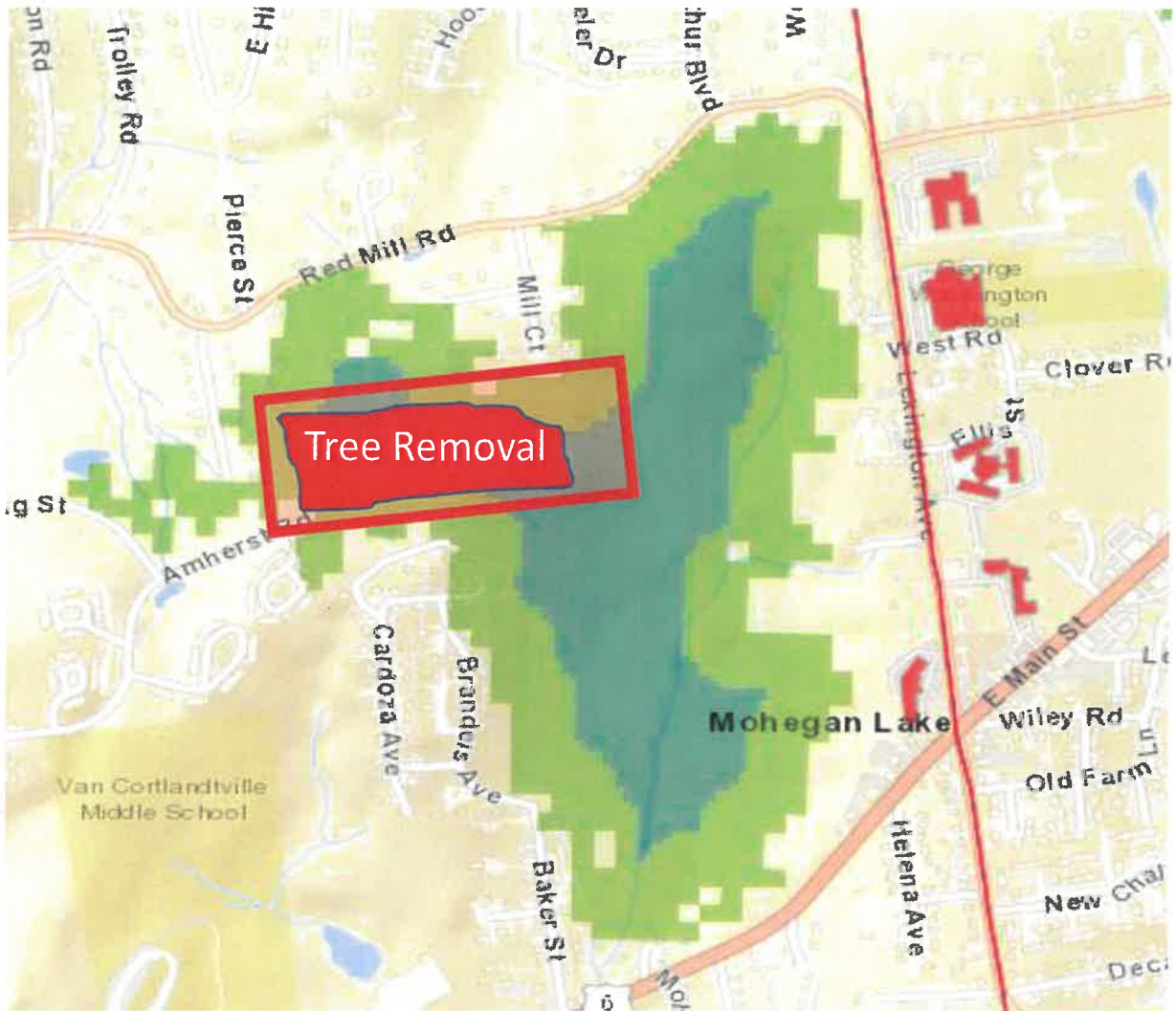


Figure 4 – Core Tree Removal



Pan out to the bigger picture - there may be unmapped wetlands immediately north and west of the area

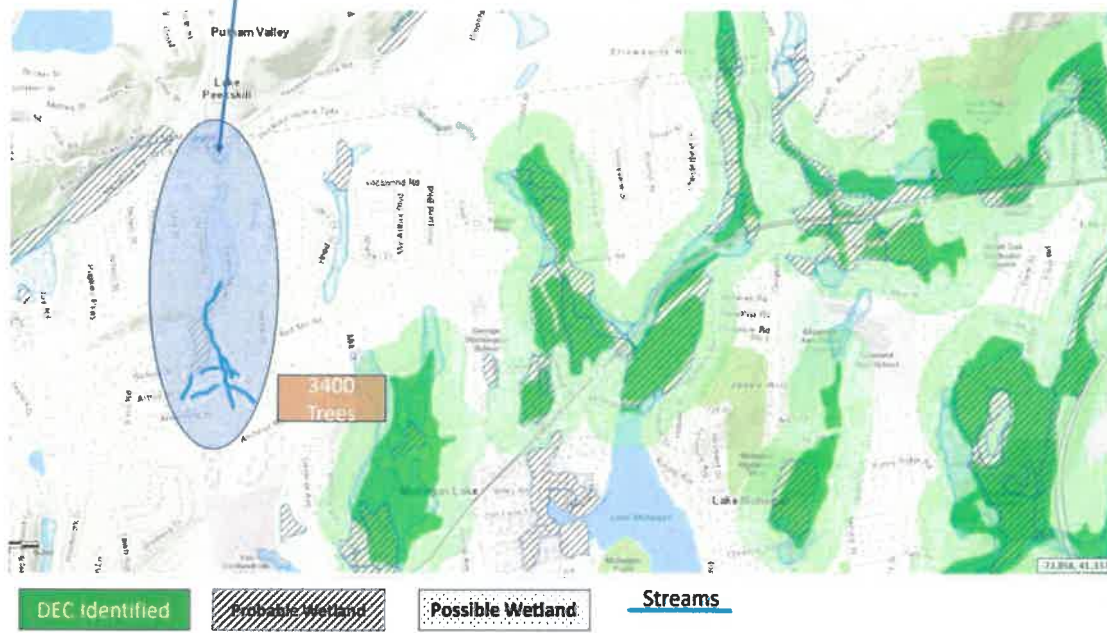


Figure 5 – Probable Wetlands – Source: Hudson Valley Natural Resource Mapper

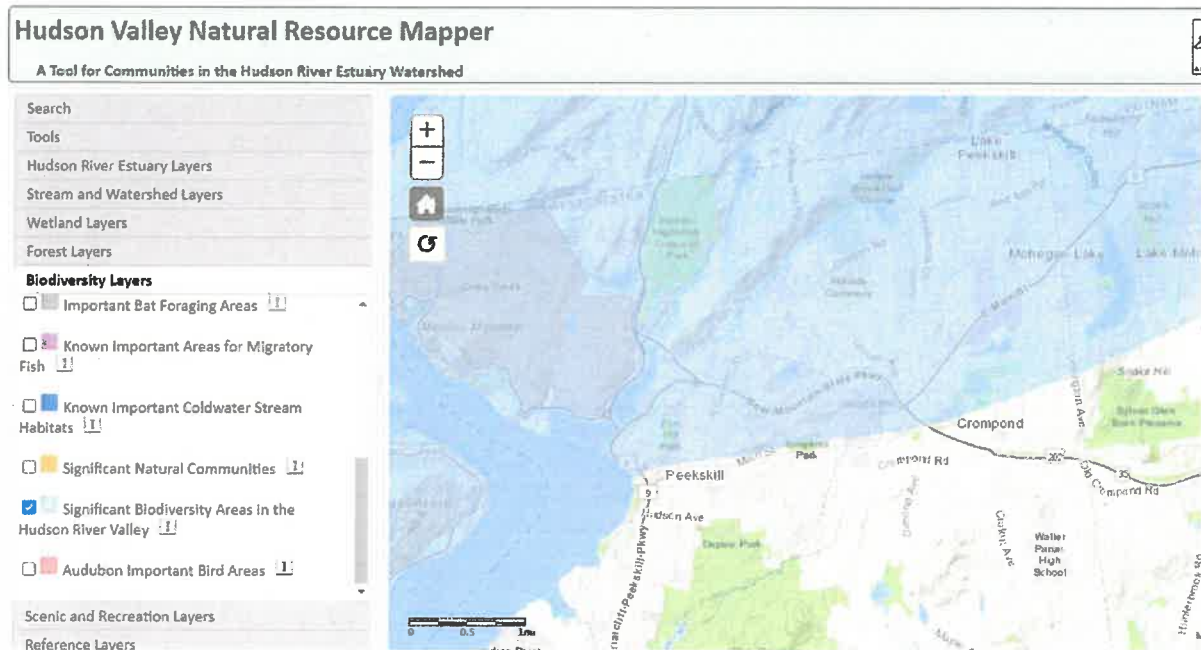


Figure 6 – Significant Biodiversity Areas - <https://gisservices.dec.ny.gov/gis/hvnm/layerInfo.html#pwl>