

May 6, 2020

SWEB Development USA, LLC Attn: Mike Carey 209 West Central Street, Suite 306 Natick, MA 01760

Re: Visual Impact Site Analysis | Silver Maple Wind Project | Clifton, Maine

Dear Mike:

As requested, over the past several months, CES INC has been investigating the following locations in and around the proposed project site regarding potential visual impacts:

Mountainy Pond Second Pond Jellison Hill Pond Half Mile Pond West Branch Union River Middle/East Branch Union River

Based on the results of our investigations, we are presenting the following summary of our findings of each location as well as the attached support information.

<u>Mountainy Pond</u> – Mountainy pond is located in Dedham, Maine and is approximately 698 acres in area. The entire land area around the pond is privately owned and maintained by The Mountainy Pond club. The club is made up of the camp owners which operate approximately 6 camps on the pond. There is only one access road, which is gated, and all access is highly restricted. The State of Maine considers the pond to not have any public access and it is not part of any Inland Fisheries and Wildlife management activities. We contacted the club property manager to attempt to gain access but were told that if access would be granted it would not be until the access road had time to become stable after the spring season. We were able to walk the three miles into the pond and get photographs from the private boat landing only.

The proposed Silver Maple Wind Project is located to the northeast of the pond resulting in the best opportunity for view from the westerly shoreline. As shown on the attached USGS topographic map, there is a significant mountain/ridge line running along the easterly side of the pond which blocks views of the project site.

The bearing of the project site from the lake is at an approximate heading of 31° (from north) and the distance was calculated to be approximately 16,000 linear feet. Mountainy pond is listed as having a water surface elevation of 267 feet and the easterly mountain/ridge line was estimated at elevation 500. Accounting for a forest height of 40 feet the total elevation of the mountain/ridge line was calculated to be approximately 273 feet above the pond surface and estimated to be approximately 3500 feet from the westerly shoreline. Utilizing this information, the line of site view

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angle from the westerly shoreline over the mountain/ridge line was calculated as 4°-27'-36" to see over. Based on this view angle, and the distance to the site of 16,000 linear feet, an object at the project site would need to have an elevation greater than 1515 feet to be viewed from the westerly shoreline of the pond. The highest proposed wind tower has a hub elevation of 1120 feet and a maximum rotor tip elevation of 1343 feet. This is several hundred feet below the view from the pond.

Additionally, a google earth model was prepared for the site. This included accurate placement of all proposed wind towers, to scale, into the model and analyzing ground views from the pond. This analysis also indicated that none of the towers are visible from the westerly shoreline of the pond.

<u>Second Pond</u> – Second Pond is located in Dedham, Maine and is approximately 56 acres in area. The entire area around the pond is privately owned and there are no camps or residences located on the pond. This pond also serves as the water source for the local community. The only access is by a wood's road maintained by the public water company. Use of the pond is also highly regulated and no swimming or camping is permitted. The pond is open for fishing from shore or by carried in boats. There is no public boat launch or public camping or recreational areas.

The proposed Silver Maple Wind Project is located to the northeast of the pond resulting in the best opportunity for view from the westerly shoreline. As shown on the attached USGS topographic map, there is a significant mountain/ridge line running along the easterly side of the pond which blocks views of the project site.

The bearing of the project site from the lake is at a heading of approximately 38° (from north) and the distance was calculated to be approximately 27,500 linear feet. Second Pond is listed as having a water surface elevation of 411 feet and the easterly mountain/ridge line was estimated at elevation 700. Accounting for a forest height of 40 feet the total elevation of the mountain/ridge line was calculated to be approximately 329 feet above the pond surface and estimated to be approximately 3000 feet from the westerly shoreline. Utilizing this information, the line of site view angle from the westerly shoreline over the mountain/ridge line was calculated as 6°-06'-48" to see over. Based on this view angle, and the distance to the site of 27,500 linear feet, an object at the project site would need to have an elevation greater than 3364 feet to be viewed from the westerly shoreline of the pond. The highest proposed wind tower has a hub elevation of 1120 feet and a maximum rotor tip elevation of 1343 feet. This is well below the view from the pond.

Additionally, a google earth model was prepared for the site. This included accurate placement of all proposed wind towers, to scale, into the model and analyzing ground views from the pond. This analysis also indicated that none of the towers are visible from the westerly shoreline of the pond.

<u>Jellison Pond</u> – Jellison Pond is located in Amherst, Maine and is approximately 33 acres in area. The entire area around the pond is privately owned and there are only a few seasonal camps located on the pond. The only access is by a wood's road maintained by the camp owner and is gated at all times. The pond is open for fishing from shore or by carried in boats. There are no public camping or recreational areas. We were able to walk the two miles into the pond along the private road and get photographs from the end of the road which terminates at the shoreline.





The proposed Silver Maple Wind Project is located to the southwest of the pond resulting in the best opportunity for view from the northeasterly shoreline. As shown on the attached USGS topographic map, there is a significant mountain/ridge line running along the southwesterly side of the pond which blocks views of the project site.

The bearing of the project site from the lake is at an approximate heading of 234° (from north) and the distance was calculated to be approximately 29,250 linear feet. Jellison Hill Pond is listed as having a water surface elevation of 404 feet and the easterly mountain/ridge line was estimated at elevation 660. Accounting for a forest height of 40 feet the total elevation of the mountain/ridge line was calculated to be approximately 296 feet above the pond surface and estimated to be approximately 2500 feet from the northeasterly shoreline. Utilizing this information, the line of site view angle from the northeasterly shoreline over the mountain/ridge line was calculated as 6°-45′-09″ to see over. Based on this view angle, and the distance to the site of 29,250 linear feet, an object at the project site would need to have an elevation greater than 3867 feet to be viewed from the northeasterly shoreline of the pond. The highest proposed wind tower has a hub elevation of 1120 feet and a maximum rotor tip elevation of 1343 feet. This is well below the view from the pond.

Additionally, a google earth model was prepared for the site. This included accurate placement of all proposed wind towers, to scale, into the model and analyzing ground views from the pond. This analysis also indicated that none of the towers are visible from the westerly shoreline of the pond.

<u>Half Mile Pond</u> – Half Mile Pond is located in Amherst, Maine and is approximately 28 acres in area. The entire area around the pond is regulated by the Maine Bureau of Public Lands and there are no camps or residences located on the pond. The only access is by a wood's road maintained by the State of Maine. The pond is open for fishing from shore or by carried in boats. There is a public boat access area, as well as, public camping/recreational areas on the lower southerly shoreline.

The proposed Silver Maple Wind Project is located to the southwest of the pond resulting in the best opportunity for view from the northeasterly shoreline. As shown on the attached USGS topographic map, there is a significant mountain/ridge line running along the southwesterly side of the pond which blocks views of the project site.

The bearing of the project site from the lake is at a heading of 217° (from north) and the distance was calculated to be approximately 39,000 linear feet. Half Mile Pond is listed as having a water surface elevation of 392 feet and the easterly mountain/ridge line was estimated at elevation 720. Accounting for a forest height of 40 feet the total elevation of the mountain/ridge line was calculated to be approximately 368 feet above the pond surface and estimated to be approximately 2200 feet from the northeasterly shoreline. Utilizing this information, the line of site view angle from the westerly shoreline over the mountain/ridge line was calculated as 9°-29'-46" to see over. Based on this view angle, and the distance to the site of 39,000 linear feet, an object at the project site would need to have an elevation greater than 6915 feet to be viewed from the northeasterly shoreline of the pond. The highest proposed wind tower has a hub elevation of 1120 feet and a maximum rotor tip elevation of 1343 feet. This is well below the view from the pond.





Additionally, a google earth model was prepared for the site. This included accurate placement of all proposed wind towers, to scale, into the model and analyzing ground views from the pond. This analysis also indicated that none of the towers are visible from the westerly shoreline of the pond.

<u>West Branch – Union River</u> – The West Branch of the Union River includes a winding river channel which travels from the southerly end of Great Pond to the northerly end of Graham Lake. This includes approximately 23 miles of river channel running through the towns of Great Pond, Aurora, Amherst and Mariaville. The river channel varies in width from approximately 25 feet to 75 feet along its length. The shoreline along its entire length would be characterized as mature forest with tree heights exceeding 40 feet in most areas. This results in a dense vegetation buffer on both sides. The river also does not flow through any lakes, ponds or significant flooded areas in any location.

We were able to access several locations along this river channel to assess the existing conditions. This included state, municipal and private roadway crossings as well as areas assessable by foot. While the entire river corridor was not physically examined, we believe consistent conditions exist along its entire length. This verified the conditions described and no views of the project site occur due to the dense forest vegetation along the shoreline.

<u>Middle/East Branch - Union River</u> – The other Union River segment located within the project study area is the Middle Branch. This river flows from the southerly end of Lower Middle Brook Pond to the northerly end of Graham Lake. This includes approximately 25 miles of significantly winding river channel flowing through the towns of Aurora, Osborn and Mariahville. The lower 3-5 miles of channel are also referenced as the East Branch, it is however one continuous river. Unlike the West Branch this river flows through several flowage and emergent wetland areas. There are however no significant rivers or lakes throughout its length.

We were able to access several locations along this river channel to assess the existing conditions. This included state, municipal and private roadway crossings as well as areas assessable by foot. While the entire river corridor was not physically examined, we believe we understand the conditions throughout its length. Much of the river channel is densely forested like the west branch. Where the channel flows through flooded and wetland areas, there is still brush and tree growth along the shoreline which blocks views of the project site.

<u>Summary</u> – We have attached USGS location maps, site photos and image views of the google earth analysis completed for this investigation which provides information on the areas analyzed.

If you have any questions, or need additional information, please let us know.

Sincerely, CES, Inc.

Tim Brochu, Project Manager Senior Vice President

TRB/ Enc.







Photo No. 1

Photo Date: 4/29/2020

Site Location: Second Pond (Site Photo)

Description:

Directional view of project site from westerly shoreline. (See Analysis Map for position)

Photo By: CES



(Google Earth Model

Directional view of project site from westerly shoreline. (See Analysis Map for







Photo No. 3

Photo Date: 5/5/2020

Site Location: Halfmile Pond (Site Photo)

Description:

Directional view of project site from easterly shoreline. (See Analysis Map for position)

Photo By:



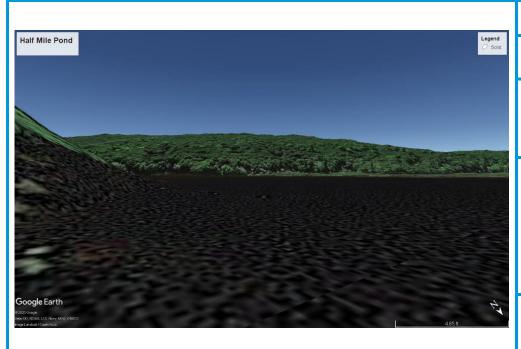


Photo No. 4

Photo Date:

N/A

Site Location:

Half Mile Pond (Google Earth Model View)

Description:

Directional view of project site from easterly shoreline. (See Analysis Map for position)

Photo By: CES







Photo No. 5

Photo Date: 5/5/2020

Site Location: Jellison Hill Pond (Site Photo)

Description:

Directional view of project site from northerly public access location. (See Analysis Map for Location)

Photo By: CES



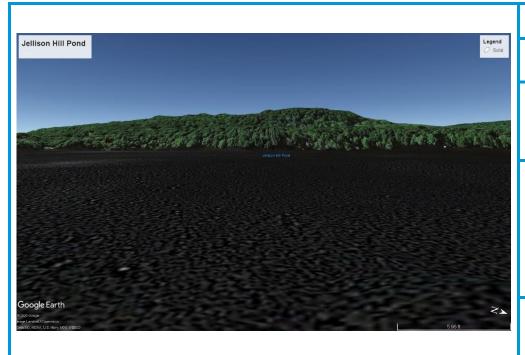


Photo No. 6

Photo Date: N/A

Site Location:

Jellison Hill Pond (Google Earth Model View)

Description:

Directional view of project site from easterly shoreline. (See Analysis Map for position)

Photo By: CES







Photo No. 7

Photo Date: 5/5/2020

Site Location:

Mountainy Pond (Site Photo)

Description:

Directional view of project site from northwesterly private boat landing. (See Analysis Map for position)

Photo By: CES





Photo No. 8

Photo Date:

N/A

Site Location:

Mountainy Pond (Google Earth Model View)

Description:

Directional view of project site from westerly shoreline. (See Analysis Map for position)

Photo By: CES





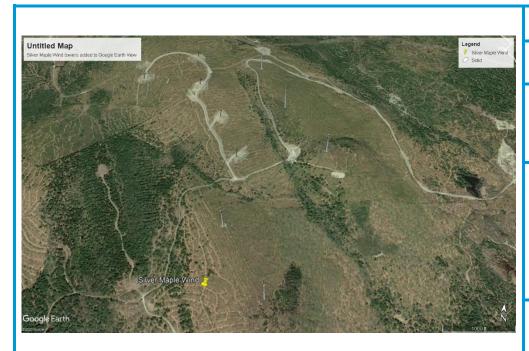


Photo No. 9

Photo Date:

N/A

Site Location:

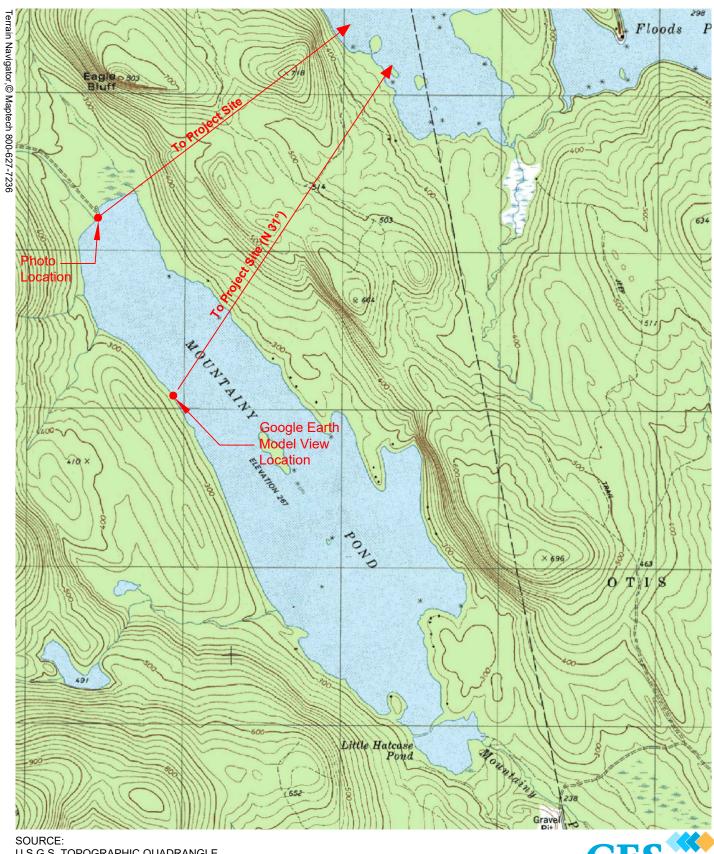
Silver Maple Wind Project

Description:

View of Proposed Towers Inserted into Google Earth Model for Analysis

Photo By: CES

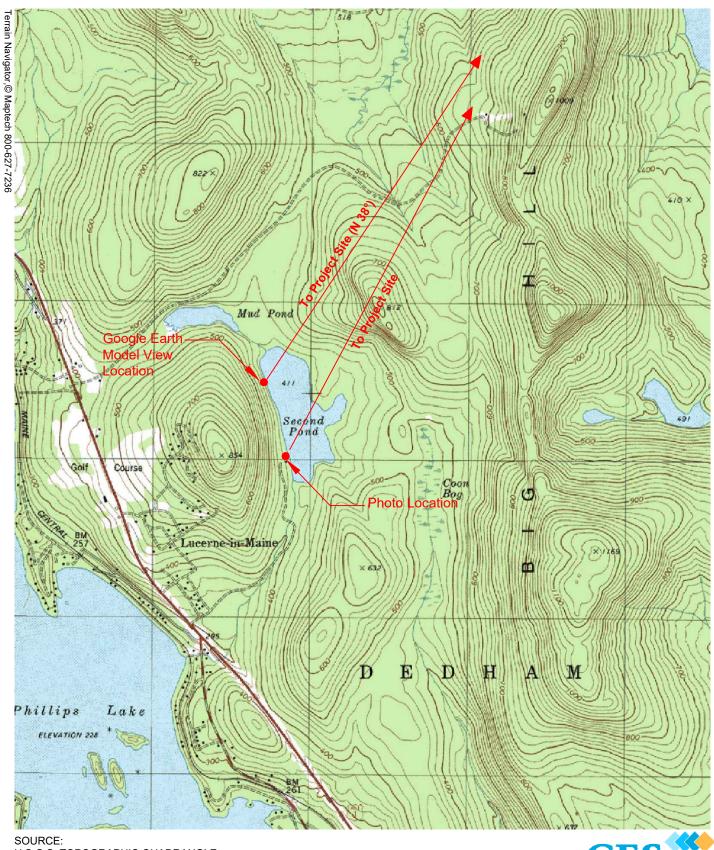




SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE GREEN LAKE @ 1:24,000



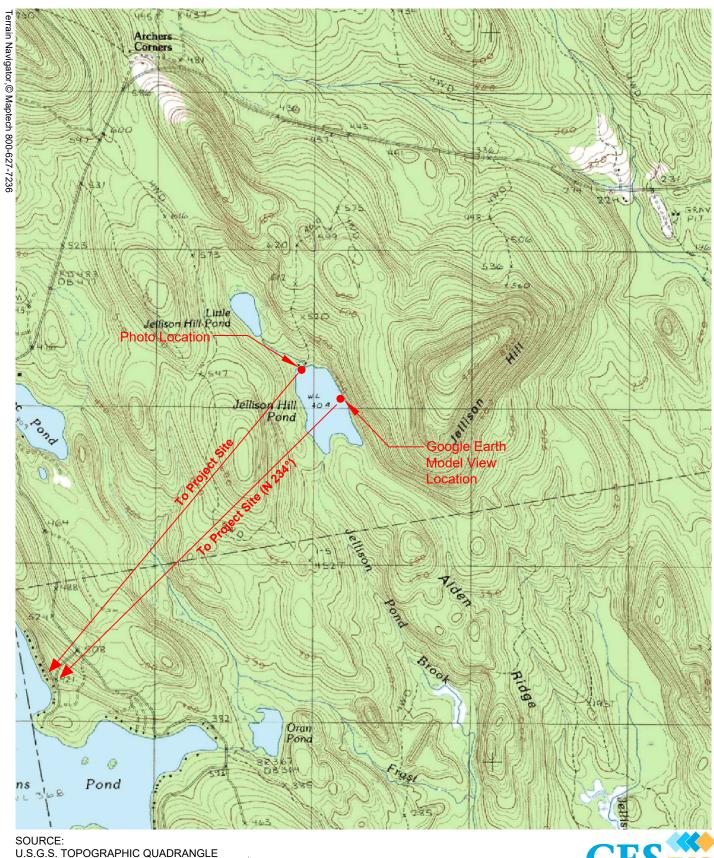
SILVER MAPLE WIND ENERGY PROJECT CLIFTON, MAINE MOUNTAINY POND VIEW ANAL. MAP



SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE GREEN LAKE @ 1:24,000

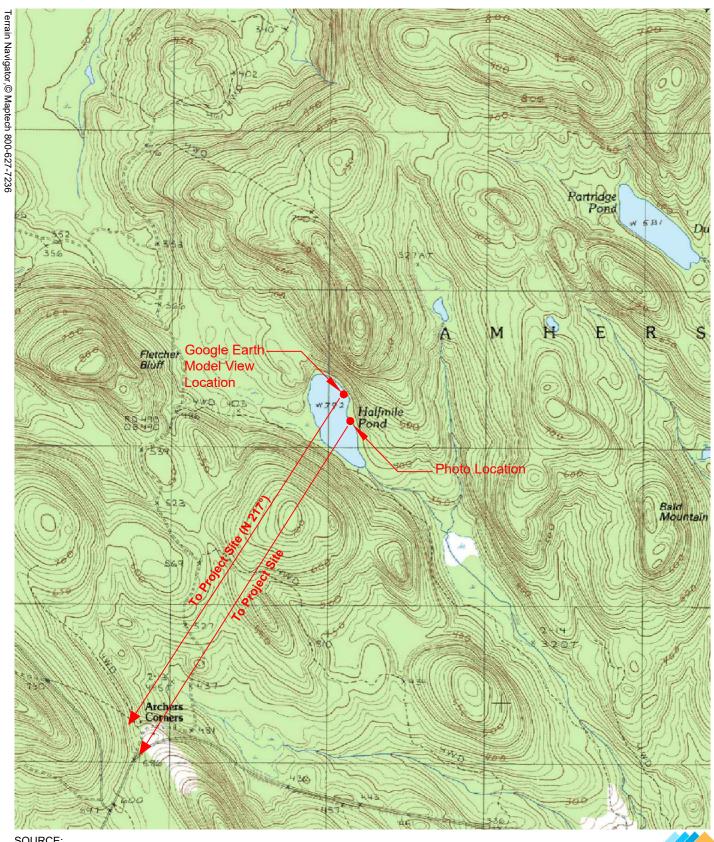


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U.S.G.S. TOPOGRAPHIC QUADRANGLE HOPKINS POND @ 1:24,000





SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE HOPKINS POND @ 1:24,000



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