**Supplement To Downeast Wind Project Visual Impact Assessment**

**Great Heath Visual Assessment**

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**INTRODUCTION**

This document is a supplemental submission to the Downeast Wind Project Visual Impact Assessment (VIA), prepared by TJD&A Landscape Architects & Planners, submitted in March 2021. It provides a visual assessment of the Project from the Great Heath, located in T18MD and the town of Columbia.

The Great Heath is not a statutorily defined scenic resource of state or national significance (SRSNS). Additionally, as set forth in Appendix J of the VIA, the Project analyzed whether the Great Heath might be considered an SRSNS pursuant to 35-A MRS Section 3451.9.A on the basis that it is an area with outstanding natural and cultural features comparable to National Natural Landmarks or Wilderness Areas. For the reasons set forth in Appendix J, we do not believe the Great Heath qualifies as an SRSNS. It is our understanding that the DEP has not made a final determination on this issue and has requested that it be further analyzed.

This analysis is being submitted as a supplement to the VIA because the Great Heath is virtually inaccessible during the winter. TJD&A conducted additional fieldwork to the Great Heath in spring 2021, once conditions allowed access to the Great Heath. This supplement presents the results of this additional fieldwork and visual analysis.

This supplement includes the following components:

1. A visual assessment of the Great Heath, following Ch. 382: WIND ENERGY ACT STANDARDS.
2. Context images of the Great Heath.
3. Two photosimulations representative of the proposed visual change in the Great Heath.
4. *Downeast Wind Energy Project Recreation User Study Report* by TRC.
5. Bureau of Land Management Manual H-8410-1 - Visual Resource Inventory.

**METHODOLOGY**

The assessment follows the same general methodology used for the VIA. The **viewshed analysis** provided in the VIA formed the basis for the fieldwork, i.e., identification of areas of greatest turbine visibility. **Fieldwork** was conducted in the Great Heath on May 3rd, 2021. Fieldwork investigation included paddling approximately 9 miles of the Pleasant River from an informal access point off Schoodic Road in the north to an informal water access point off Ell Meadow Road in the south. Views were photographed from the river throughout the trip. TJD&A staff ventured onto the open heath at two separate locations in order to capture views from areas in the heath identified as being likely to have high Project visibility. **Photosimulations** were developed using the same methodology described in the VIA. The **written assessment** follows the same format used for the VIA.

**GREATH HEATH DESCRIPTION**

At over 7,000 acres, the Great Heath is the largest peatland in the Downeast region and it is one of the largest multiple-unit peatlands in all of Maine. It extends on both sides of the Pleasant River as it meanders through the confluence of the Taylor and Ingersoll Branches in Columbia and T18 MD BPP. [[1]](#footnote-1)

The Great Heath is designated as an Ecological Reserve, lands that are specifically set aside to protect and monitor the State of Maine's natural ecosystems. These lands are managed by the Bureau of Parks and Public Lands, and the Maine Natural Areas Program oversees the long-term ecological monitoring plan. As of 2013, Maine has designated more than 90,000 acres of Ecological Reserves on 17 public land units. The original designation was enabled by an act of the Maine Legislature in 2000. As specified in the legislation, the purposes of the Reserves are ([Public Laws of Maine, Second Regular Session of the 119th, Chapter 592](http://www.mainelegislature.org/ros/LOM/LOM119th/2Pub551-600/2Pub551-600-41.htm#P1157_195393)):

* "to maintain one or more natural community types or native ecosystem types in a natural condition and range of variation and contribute to the protection of Maine's biological diversity,”
* "as a benchmark against which biological and environmental change may be measured, as a site for ongoing scientific research, long-term environmental monitoring and education," and
* "to protect sufficient habitat for those species whose habitat needs are unlikely to be met on lands managed for other purposes".[[2]](#footnote-2)

Access to the Great Heath is very limited. There are no access paths, roads, parking areas, signs, or other visitor accommodations within the Great Heath. The area is primarily accessed by the Pleasant River, which is not considered scenic in the *Maine Rivers Study*.[[3]](#footnote-3) Accessing the river requires finding one of a handful of remote boat launches on Cherryfield Foods’ property to the north of the Great Heath (all of which are on posted land) or using the one designated “public” boat launch on Ell Meadow Road in Columbia, for which there are no signs, directions, or markings for the Great Heath, the boat launch, or Ell Meadow Road. Other possible access is on foot and requires traversing either forested and shrub wetland and/or crossing a lagg at the bog/upland interface, which is akin to a moat. The only trails that provide access are unmarked, unmapped, and accessed only from land that is clearly posted with “No Trespassing” signs. There is no signage indicating the presence of the Great Heath, directing drivers to its only point of public access, or describing its significance to the public. Although it includes Maine Public Reserve Land, there are no parking areas or observation points that provide designated access into the Great Heath. Similarly, there are no identified hiking trails within the Great Heath.[[4]](#footnote-4) The map in Figure 1 on the following page indicates the potential access points into the Great Heath.



*FIGURE 1: Map of Great Heath and Access Routes*

**VISUAL ASSESSMENT OF THE GREAT HEATH**

This assessment follows Chapter 382: WIND ENERGY ACT STANDARDS in making a determination as to whether or not the presence of the Downeast Wind Project significantly compromises views from the Great Heath, such that the development would have an unreasonable adverse effect on its scenic character or existing uses related to scenic character. While we maintain that the Great Heath is not a SRSNS (see Appendix J of the VIA), for purposes of this evaluation we are treating the Great Heath as if it were a SRSNS.

**Chapter 382: WIND ENERGY ACT STANDARDS**

***382.3. Impacts to Scenic Character****. A wind energy development must not significantly compromise views from a Scenic Resource of State or National Significance (SRSNS) as defined in 35-A M.R.S. §3451(9) such that the development has an unreasonable adverse effect on the scenic character or existing uses related to scenic character of the SRSNS. When evaluating potential impacts to scenic character, the Department will take into consideration all relevant evidence, including but not limited to user intercept surveys and/or systematic field observations conducted and recorded using generally accepted professional standards, written public comments submitted by users of the SRSNS or other interested persons, oral statements made at Department public meetings held pursuant to 38 M.R.S. §345-A(5), and sworn testimony at public hearings held pursuant to Chapter 3 of the Department’s Rules.*

***382.3.B. Significance of a potentially affected SRSNS.***

As noted above, the Great Heath does not meet the standards of a SRSNS. The significance rating assigned to the Great Heath for the purposes of this evaluation is **None**. The following subsections support this finding:

***382.3.B(1)****.* ***Formal Assessment***

* The Great Heath is not listed on the National Register of Historic Places, is not a state or national park, does not contain a qualifying great pond or river segment, does not contain a designated scenic viewpoint, does not contain a scenic turnout, and is not listed as having state or national scenic significance in any of the referenced reports.
* The Great Heath is not a federally designated wilderness area and does not constitute an outstanding natural and cultural feature that is *comparable to a federally designated wilderness area*. Unlike a designated wilderness area, a significant portion of the Great Heath is privately owned, the predominant surrounding land use is commercial blueberry growing, and there are no restrictions on motorized uses such as boating on the Pleasant River or snowmobiling, both of which occur (see Appendix J of the VIA for supporting information).
* The Great Heath is not a national natural landmark, and it does not constitute an outstanding natural and cultural feature that is *comparable to a national natural landmark*. The Great Heath does not possess ecological attributes that are of exceptional natural value to the *nation as a whole rather than to one particular State or locality,*” which is required for designation as a NNL (see Appendix J of the VIA for supporting information).
* Neither the Great Heath nor the Pleasant River, which runs through the heath, appear on any formal assessment of scenic character. The primary value of the heath is ecological/scientific. The Great Heath is classified as a *Focus Area of Statewide Ecological Significance* for its ecological/scientific significance, not for scenic or recreational value. The Pleasant River – which runs through the Great Heath but is technically not part of the heath – is an ‘A’ river in the *Maine Rivers Study* for six resource values; however, it is not rated for ‘scenic’, therefore it is not a SRSNS.

***382.3.B(2)****.* ***Historic Significance***

* The Great Heath is not listed on the National Register of Historic Places.

***382.3.B(3). The character, landscape context, unique features, usage patterns, and other relevant characteristics of the SRSNS.***

* **Character.** The Great Heath is characterized by poorly drained, relatively flat terrain. The landscape is characterized primarily by open areas of 2.5- to 3-foot peat land vegetation and pockets of mixed deciduous and coniferous vegetation. The Great Heath Context Photographs attached to this document further demonstrate the character of the landscape.
* **Landscape Context.** The Great Heath is located in a rural area characterized by commercial blueberry barrens and second growth softwood-hardwood forests. The Pleasant River, along with several of its tributaries, meanders through the Great Heath. Throughout much of its length, views from the river are screened by riparian vegetation. See the context photographs provided in this document for additional information.
* **Unique Features.** The Great Heath is a significant ecological feature, noteworthy for its variety of peatland types. It encompasses an unpatterned stream drainage fen, an unpatterned open basin fen, and a level bog. It is the largest peatland in the Downeast region and one of the largest multiple-unit peatlands in all of Maine.While it does have distinctive ecological features, it lacks physical characteristics – such as pronounced topographic changes or notable landforms – that are typically associated with places of high scenic quality.
* **Usage Patterns**. Based upon the *Downeast Wind Energy Project Recreation User Study Report* prepared by TRC in 2016, use of the Great Heath is characterized as very low. This report is included as an attachment to this analysis. This report states the following: “Based on recreation survey data at the Schoodic Road Boat Launch, the area experiences a very low level of recreation activity. Total recreational use of the site from August 1 through November 30, 2016 is estimated to be 15 recreationists with an upper bound (at the 95 percent confidence level) estimate of 43 recreationists. This level of use equates to roughly one recreationists every nine days, with an upper bound of one recreationist approximately every three days. Only one recreation user was observed at this location during the study period and this individual declined to be interviewed as they had previously completed a questionnaire. In terms of the questionnaires, only two surveys were completed in total and only one at the Schoodic Road Boat Launch.”[[5]](#footnote-5) There are no access paths, roads, parking areas, signs, or other visitor accommodations within the Great Heath. The primary means of access is via the Pleasant River, which is not a SRSNS.

***382.3.B(4). Evidence of high scenic value or protection of the viewshed from the SRSNS.***

* The Bureau of Parks & Lands owns and manages the northern portion of the Great Heath as a Public Reserve Land. However, there is no mention of the Great Heath’s scenic value in any of the BPL’s literature, which stresses its ecological and natural significance. There is no evidence of scenic value of the viewshed from the Great Heath that may increase its significance as a scenic resource.
* The Great Heath has a lack in scenic quality based the rating system defined by the Bureau of Land Management’s (BLM) Manual H-8410-1 – Visual Resource Inventory (this form is included as an attachment to this document).  This is a process that BLM managers use to determine visual values as part of their work on federal lands.  While the Great Heath is not a federal property, the underlying approach is applicable to landscapes in general, evaluating key factors of landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications.  The ratings are based upon an understanding of similar features within this part of Maine. Using the BLM Manual, the Great Heath achieved a score of 11.  Within the BLM system, this is a scenic quality of C (with A being the highest and C the lowest), which is considered low or common. The scoring breakdown is detailed below:

Landform: 1/5

Vegetation: 3/5

Water: 3/5

Color: 1/5

Adjacent Scenery: 0/5

Scarcity: 3/5

Cultural Modifications: 0/2

***382.3.B(5). Evidence of the degradation of the scenic character of the SRSNS by factors such as incompatible development in the viewshed. Such evidence may decrease the significance of a SRSNS.***

* The Great Heath is surrounded by heavily managed commercial blueberry barrens and supporting infrastructure. When traversing the Pleasant River within the Great Heath, adjacent land use activities are screened by riparian vegetation. From the open heath, the surrounding mid-ground woodlands screen views of the existing land uses beyond the Great Heath.

***382.3.C. The existing character of the surrounding area.***

The existing character of the surrounding area is rated as a **medium**.

* See a description of the surrounding landscape character above in response to 382.3.B(3).
* See the context photographs provided in this document.
* The BLM Scenic Quality Inventory and Evaluation Chart looks at landform, vegetation, water, color, influence of adjacent scenery, scarcity, and cultural modifications to arrive at a determination of scenic quality base on numeric scores. Field study and desktop evaluation of the natural character of the landscape of the Great Heath arrived at a score of 10, which is a ‘C’ in an A, B, C rating scale. (C being lowest.)[[6]](#footnote-6)
* There is minimal existing development within the viewshed of the Great Heath. A single private camp that can only be accessed from the Pleasant River is the extent of visible development within the heath. Surrounding roads to access the blueberry barrens, most of them private and posted, are screened by existing vegetation.

***382.3.D. Expectations of the typical viewer****.*

The expectations of a typical viewer at the Great Heath are expected to be **low**.

* The Great Heath is not considered a SRSNS and is there is no evidence to suggest that it is valued for its setting in a naturally scenic landscape.
* If the Great Heath were to qualify as a SRSNS, it would be for scientific/ecological reasons and not primarily related to its scenic character.
* The activities occurring in the Great Heath include fishing, hunting, and scientific research. These types of activities do not include an emphasis on scenic value.
* Access to the Great Heath is extremely limited. The primary access to the heath is from the Pleasant River, which can be accessed at the end of Ell Meadow Road in the south of the Great Heath. Northern access into the Great Heath, by way of the Pleasant River, can be gained only by canoe/kayak via a tributary stream along Schoodic Road (See Figure 1). There is little to no space for parking and turning around at the Ell Meadow Road access point. Once on the Great Heath, traversing the landscape by foot is very difficult and strenuous due to the height of vegetation and lack of trails.

***382.3.E. Purpose and context of the proposed activity.***

These evaluation criteria are not specific to the Great Heath. The Downeast Wind Project was rated as a **medium** based on the criteria of this statute. See the VIA for additional information.

***382.3.F. Public use and enjoyment of a potentially affected SRSNS.***

The impact of the Project on public use and enjoyment in the Great Heath is expected to be **low/none**.

* There is no evidence of public activity or enjoyment of the Great Heath. This finding is supported by the absence of access paths, roads, parking areas, signs, or other visitor amenities within the Great Heath, plus the low evidence of visitor use observed during field visits. TJD&A field teams found the Heath to be entirely inaccessible in the winter due to lack of plowed roads in the vicinity of the Heath. In the spring, access was difficult to find. The Ell Meadow Road access point, the most accessible by car, is often inundated with water and mud due to poor drainage in the access way. TJDA field staff reported evidence of other vehicles having become stuck on multiple visits to the site.
* The extent, nature, and duration of existing public uses in the Great Heath will not be impacted. The area surrounding the Great Heath is largely privately held commercial blueberry barrens and woodlands.
* There is no evidence of tourism-related businesses or recreational clubs or organizations whose purposes or viability is related to the public use and enjoyment of the Great Heath.
* The *Downeast Wind Energy Project Recreation User Study Report* prepared by TRC in 2016 indicates that use of the Great Heath is very low and infrequent. For the four months between August and November, TRC estimates that there were 15 users at the northernmost boat access point. This is equivalent to one user every 8 days. Based upon TRC observation, the few users that were present were engaged in hunting or fishing, activities that are not scenery dependent.

***382.3.G. Scope and scale of the potential effect.***

The scope and scale of Project views from the Great Heath is expected to be **high**. This finding is based on viewshed mapping analysis, field observations, and photosimulations provided. While the scope and scale of Project visibility are identified as high for the purposes of this analysis, it should be noted that there are no designated viewpoints, access trails, or evidence of public use from the Great Heath that would suggest users would be in a location to see the turbines.

**Viewshed Analysis.** Evidence of the scope and scale of Project visibility across the Great Heath is provided in the viewshed mapping included in Appendix A of the VIA. The mapping referenced here includes Map 3: Topographic Viewshed for Blades, Map 4: Surface Data (landcover) Viewshed for Blades, and Map 5: Surface Data (landcover) Viewshed for Nacelles.

* The viewshed analysis based on the DTM and DSM, which determines visibility of both the blade tips and nacelles and accounts for the screening effect of vegetation, indicates that visibility will generally be limited to the open areas within the Great Heath. Riparian vegetation will screen views in many instances to boaters on the Pleasant River.
* According to the viewshed analysis map titled Topographic Viewshed for Blades (Appendix A, Map 3), approximately 6,830 acres of the Great Heath may have views of the turbine blade tips. This land area accounts for 100% of the publicly owned portion of the Great Heath. This analysis is not an accurate reflection of potential project visibility because it does not take into consideration the screening effect of vegetation within and around the Great Heath.
* According to the viewshed analysis map titled Surface Data (Landcover) Viewshed for Blades (Appendix A, Map 4), approximately 2,709 acres of the Great Heath may have views of the turbine blade tips. This land area accounts for 40% of the publicly owned portion of the Great Heath. This is a more realistic representation of potential project visibility because it does take into consideration the screening effect of vegetation within and around the Great Heath.
* According to the viewshed analysis map titled Surface Data (Landcover) Viewshed for Nacelles (Appendix A, Map 5), approximately 2,505 acres of the Great Heath may have views of the turbine nacelles. This land area accounts for 37% of the publicly owned portion of the Great Heath. This is a representation of where the turbine lighting may be visible.[[7]](#footnote-7) All areas that show visibility of the nacelle are included in the visibility of the blade tips.

**Views from the Heath**

* Project views from the heath on the east side of the Pleasant River are represented in Photosimulation 1, taken on the heath. This viewpoint shows six turbines visible at a distance of 0.6 mile to 1.6 miles. From this area in the heath, there will also be views of the Project to the north and south. The majority of Project turbines will be visible from this location in three directions (north, west, and south).
* Based upon the viewshed mapping and verified by field evaluation, there are points within the Great Heath east and west of the Pleasant River where turbines may be seen over a 360º horizontal field of view. However, there are no designated viewpoints, access trails, or evidence of public use within these high visibility areas. Traversing the open boggy landscape can be very difficult due to uneven terrain underfoot, sinkholes, and knee to waist-high vegetation. See attached context photographs.
* Viewshed mapping indicates that up to 30 turbines may be visible within three miles of the Great Heath. The greatest concentration of visibility will occur in the open heath on either side of the Pleasant River, where there are no designated viewpoints, access trails, or evidence of public use.

**Views from the Pleasant River**

* Project views from the Pleasant River are represented in Photosimulation 2. This viewpoint was selected from a location where riparian vegetation does not obstruct views into the heath. This viewpoint shows six turbines visible at a distance of 2.0 miles to 3.8 miles. In addition to this view to the east, there may also be visibility of turbines to the south from this viewpoint.
* Throughout most of its course within the Great Heath, the Pleasant River is characterized by significant riparian vegetation and a highly meandering alignment, requiring paddlers to focus their view on the river corridor as they navigate. Visibility from most locations along the river is limited by riparian vegetation.
* The Pleasant River flows 39 miles from Pleasant River Lake to Addison. The river runs through the Great Heath for 7.8 miles. According to the viewshed analysis, approximately 4.5 miles of the river will have visibility of the Project (11.5% of the total river). However, the surface data in the viewshed analysis does not take into account the detailed vegetative conditions on the shoreline that will frequently block views of the Project.
* According to the viewshed analysis, the majority of the viewshed area on the river will have potential visibility of less than five turbines. The greatest concentration of potential visibility is located at the southern end of the river within the Great Heath. Some locations in the southern section of the river may have potential visibility of up to 22 turbines. Based on TJDA field investigations, visibility is likely to occur at periodic gaps in the riparian vegetation at various points throughout the river. See the context photographs demonstrating typical views from the river.

***382.3.H. Cumulative Scenic Impact or Effect***

* No other wind energy projects exist or are proposed within eight miles of the Great Heath. The Bull Hill and Hancock wind projects, located west of the proposed Downeast Wind project, are both more than eight miles from the Great Heath. See Map 7: Cumulative Impact Viewshed in Appendix A of the Downeast Wind VIA.

***382.3.I. Unreasonable adverse effect on scenic character***

If the Great Heath were considered a SRSNS, it would be characterized as having low scenic value for the following reasons:

* As seen in the context photographs taken from the Pleasant River and on the Great Heath, the characteristic landscape of the Great Heath is flat with little to no topographic relief.
* The unique features that define the Great Heath are primarily of ecological and scientific (and not scenic) interest.
* The surrounding landscape is characteristic of this part of Washington County, with extensive privately held commercial blueberry barrens and forestland.
* There are no signs indicating the presence of the Great Heath Maine Public Reserve Land, nor are there any designated trails, parking areas, or observation points that would encourage or support visitor use.
* Use levels of the Great Heath are very low; users are primarily engaged in hunting and fishing, activities that are not scenery dependent.
* The Pleasant River, which runs through the Great Heath and may provide limited views of the turbines, is not rated as scenic by the Maine Rivers Study.

**CONCLUSION**

In accordance with Ch. 382, additional evaluation was provided to the Department to evaluate the visual effect of the Downeast Wind Project on the Great Heath, a natural feature with low scenic value. While the Downeast Wind Project will be visible from portions of the Great Heath, its presence should not cause an unreasonable adverse effect on its scenic character (which has been determined to be low) or existing uses related to scenic character (the very low uses documented on the Great Heath are primarily hunting and fishing, neither of which are dependent on scenic character). The table below summarizes these findings.

|  |  |  |
| --- | --- | --- |
| **Scenic Resource of State or National Significance**  | **Scenic Impact Evaluation Criteria** | **Overall Scenic Impact** |
| ***382.3.B.*  Resource** **Significance** | ***382.3.C.*  Character of** **Surrounding Area** | ***382.3.D.* Viewer** **Expectation** | ***382.3.E* Purpose** **and Context** | ***382.3.F* Extent, Nature,****Duration of Use** | ***382.3.F* Effect on Continued Use and Enjoyment** | ***382.3.G.*  Scope and Scale of Project Views** |
| **Great Heath** | None | Medium | Low | Medium | Low/none | Low/none | High | **Medium** |

Based upon the fieldwork and the assessment provided above, the scenic resource value of the Great Heath was determined to be **Low**, taking into consideration the significance of the resource, the existing character of the surrounding area, and expectations of the typical viewer.

Based upon the viewshed mapping, fieldwork, and photosimulations, the Project will have a pronounced effect on the Great Heath due to its proximity and number of turbines visible within the resource. Considered by itself, the scope and scale of the Project may be considered high. However, the overall scenic impact is considered to be **Medium**, based on the context surrounded by private blueberry barrens, the very limited amount of public use, the limitations on public access, the predominant uses that are not scenery dependent, the limitations provided by riparian vegetation on views into the resource, and the potential effect that the Project would have on future use of the resource.

Pursuant to Section 3.I.(3) Low Value SRSNS, the Project as proposed will have a medium scenic impact on a low value scenic resource, and thus should not constitute an unreasonable adverse impact.

1. <https://www.maine.gov/dacf/mnap/focusarea/great_heath_focus_area.pdf> [↑](#footnote-ref-1)
2. <https://www.maine.gov/dacf/mnap/reservesys/index.htm> [↑](#footnote-ref-2)
3. <https://mainerivers.org/wp-content/uploads/2009/05/Maine-Rivers-Study3.pdf> [↑](#footnote-ref-3)
4. For example, AllTrails is a popular website that describes hiking opportunities throughout the United States. It

also gives subscribers an opportunity to record and track their hikes. The AllTrails base map shows no hiking trails

within the State-owned land that comprises the Great Heath. Under the category of Community Content, no

recorded routes have been submitted by hikers as of the site access date on January 7, 2021. [↑](#footnote-ref-4)
5. Recreation Users Study Report, Downeast Wind Energy Project. Prepared for Apex Clean Energy Management, Inc. by TRC. Augusta, ME. March 2016. [↑](#footnote-ref-5)
6. US Department of the Interior, Bureau of Land Management. *Scenic Quality Field Inventory – Form 8400-1.* September 1985. [↑](#footnote-ref-6)
7. The Project has applied to the FAA to use radar activated lighting. If this is approved, the lighting would only be visible when activated by approaching aircraft. [↑](#footnote-ref-7)