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Section 8.5 - PUBLIC

Visibility Study

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8.5 Visibility Study 8.5-1

List of Attachments

Attachment 8-5.1: Visibility Study
[redacted]

List of Acronyms

BOEM	Bureau of Ocean Energy Management
COP	Construction and Operations Plan
WTG	wind turbine generator

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8.5 VISIBILITY STUDY

6.2.8.5 The Submission must include both Confidential and Public versions of a visibility study consistent with the Visual Impact Assessment as part of the COP.

The Visibility Study must present visual simulations of the proposed Offshore Wind Generation Facility. Visibility studies must include a map or maps that depict the nearest coastline, the boundary of the proposed site to be developed and any other reasonable reference points (e.g., coastal cities, historic sites, other wind energy areas). The visibility Study must identify the distance in statute miles between the nearest shoreline point and the nearest Offshore Wind Generation Facility turbines. If the nearest shoreline point is not in New York State, the Proposal should also identify the nearest New York shoreline point and include the nearest New York shoreline point in the viewshed impacts discussion. Simulations must be single frame, photographic images with superimposed simulations of the proposed wind turbine technology configured to represent a commercially-scaled and technically feasible scenario that is consistent with the proposed Project including operating capacity, wind turbine size, and generic spacing and configuration. Viewing instructions must be included on each simulation.

Visual simulations must represent, at a minimum, clear, partly cloudy, and overcast conditions during early morning, mid-afternoon, and late day, as well as one simulation at night with the turbines lit under clear conditions. Visual simulations must be provided from a minimum of two representative vantage points which represent the closest points to shore from any turbine within the Offshore Wind Generation Facility and, if applicable, any sensitive or historic viewpoints, consistent with the Visual Impact Assessment required through the COP. Proposals must address any mitigative viewshed impacts considered for the closest points to shore and if applicable any sensitive or historic viewpoints. The visibility study must also include analysis of the percentage of time during which different visibility conditions are expected to occur based on past meteorological data.

The simulations must be provided in a format suitable to be printed or electronically viewed by the public and/or the Scoring Committee.

6.2.8.5.1 Provide supporting GIS shape files that depict the nearest coastline, the boundary of the proposed site to be developed and any other reasonable reference points (e.g., coastal cities, historic sites, other wind energy areas).

The nearest shoreline point in New York is Montauk on Long Island, which is approximately 30.5 miles from the nearest wind turbine generator (WTG). The nearest shoreline point outside of New York is Block Island, Rhode Island, approximately 16.7 miles from the nearest WTG. Visual simulations show negligible impact from New York's viewpoints, which is further mitigated by the curvature of the earth, wave height, and atmospheric conditions.

Attachment 8-5.1 includes the visibility study prepared as part of the Construction and Operations Plan (COP), including visual simulations and a written assessment of the potential impacts to visual resources. The visibility study considered views from 40 representative observation points of visually and culturally sensitive resources in New York, Massachusetts, and Rhode Island, identified based on consultation with state agencies, tribal representatives, and studies prepared by the Bureau of Ocean Energy Management (BOEM). The simulations demonstrate the anticipated views of what the horizon will look like with Project WTGs at clear, partly cloudy, and overcast conditions during early morning, mid-afternoon, and late day, as well as one simulation at night with the WTGs lit under clear conditions. The simulations were evaluated by a rating panel of five visual professionals to determine the significance of visual impact at each point. The visibility study also includes analysis of the percentage of time during which different visibility conditions are expected to occur based on past meteorological data, and found that, based on the regional average visibility, the WTGs would not be visible during the typical and average summer

viewing conditions. Specifically, visibility will not extend beyond 10 miles during approximately 19% of daylight hours in a year and approximately 22% of nighttime hours in a given year.

The visibility study includes two visual simulations from New York, including from Cape Hero State Park Overlook, which was rated as negligible impact and Montauk Point State Park, which was rated as minimal impact. The visibility study also indicated that, at these distances from the WTGs, any atmospheric perspective would be effective at reducing the visibility almost completely. Attachment 8-5.1 includes discussion of both sites in Section 3.2.1.1 and 3.2.1.2. Attachment 8-5-1 includes the visual simulations from these two points, which is an excerpt from the complete set of visual simulations included in the visibility study (available at https://www.boem.gov/renewable-energy/state-activities/appendix-q1-c1-offshore-visual-impacts-assessment-visual).

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Attachment 8.5-1

Visibility Study

Sunrise Wind Farm Project

Appendix Q1
Offshore Visual Impacts Assessment

Prepared for:

Sunrise Wind | Powered by Ørsted & Eversource

August 23, 2021

Revision 1 – October 28, 2021

Revision 2 – August 19, 2022

Technical Report

Visual Impact Assessment

Sunrise Wind Farm

Prepared for:

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May 2021

Revised March 2022

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NOTE: This file includes Appendix A and B. Due to size, all other appendices are publicly available in the COP submission at: https://www.boem.gov/renewable-energy/state-activities/appendix-q1-offshore-visual-impacts-assessment

Appendix C is available at: https://www.boem.gov/renewable-energy/state-activities/appendix-q1-c1-offshore-visual-impacts-assessment-visual
Appendix C3 is available at: https://www.boem.gov/renewable-energy/state-activities/appendix-q1c2-offshore-visual-impacts-assessment-panorama-visual

GLOSSARY/LIST OF ACRONYMS AND ABBREVIATIONS

ADLS	Aircraft Detection Lighting Systems
AIS	Automatic Identification System
AMSL	Above Mean Sea Level
AOWL	Aviation Obstruction Warning Lights
BIWF	Block Island Wind Farm
BLM	Bureau of Land Management
BOEM	Bureau of Ocean Energy Management
COP	Construction and Operations Plan
Cross Section	A profile of the terrain that illustrates sources of visual screening along a line of sight between the proposed Project and a specific viewer/resource location.
DEM	Digital Elevation Model
DSM	Digital Surface Model
EDR	Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C.
FAA	Federal Aviation Administration
FDR	Facility Design Report
GIS	Geographic Information System
GPS	Global Positioning System.
HRVEA	Historic Resources Visual Effects Analysis
HVDC	High Voltage Direct Current
km	Kilometer (1 kilometer = 0.62 mile)
KOP	Key Observation Point
LAT	Lowest Astronomical Tide
Lidar	Light Detection and Ranging

LSZ	Landscape Similarity Zone. Area of similar landscape/aesthetic character based on patterns of landform, vegetation, water, land use, and user activity.
m	Meter (1 meter = 3.38 feet)
MassDCR	Massachusetts Department of Conservation and Recreation
MDS	Maximal Design Scenario
MHC	Massachusetts Historical Commission
mile	Statute mile (1 mile = 1.61 kilometers = 0.87 nautical miles)
MSL	Mean Sea Level
MW	Megawatt = One million watts
nm	Nautical Mile (1 nm = 1.15 statute mile)
NHPA	National Historic Preservation Act of 1966
NLCD	National Land Cover Dataset. Land cover types classified and mapped by U.S. Geological Survey
NHL	National Historic Landmark
NNL	National Natural Landmark
NPS	National Park Service
NRHP	National Register of Historic Places
NWR	National Wildlife Refuge
NCDC	National Climatic Data Center
NYSOPRHP	New York State Office of Parks, Recreation, and Historic Preservation
OCS	Outer Continental Shelf
OCS–DC	Offshore Converter Station – Direct Current
OnCS–DC	Onshore Converter Station – Direct Current
PAL	Public Archaeology Laboratory, Inc.

Project	the Sunrise Wind Farm Project
PDE	Project Design Envelope
RIDEM	Rhode Island Department of Environmental Management
RIHPHC	Rhode Island Historical Preservation & Heritage Commission
RPM	Revolutions Per Minute
RV	Recreational Vehicle
SASS	Scenic Area of Statewide Significance
SHPO	State Historic Preservation Offices
SLR	Single Lens Reflex
SRHP	State Registers of Historic Places
SRWEC	Sunrise Wind Export Cable – inclusive of Outer Continental Shelf and New York State portions
SRWF	Sunrise Wind Farm
TNC	The Nature Conservancy
Topside	Top of Structure
UAS	Unmanned Aircraft System
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USDOT	U.S. Department of Transportation
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

UXO	Unexploded Ordnance
VIA	Visual Impact Assessment
Viewshed	Area of potential Project visibility defined by maximum structure height and mapped topography, vegetation, and structures within the study area.
VRAP	Visual Resource Assessment Procedure
VSA	Visual Study Area
VTL	Visibility Threshold Level
WEA	Wind Energy Area
WMA	Wildlife Management Area
WTG	Wind Turbine Generator
ZVI	Zone of Visual Influence
3D	Three Dimensional

1.0 INTRODUCTION

Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) prepared this Technical Report on behalf of Sunrise Wind LLC (Sunrise Wind) to assess potential visual impacts associated with the Sunrise Wind Farm Project (the Project) to onshore resources. This report was prepared in support of the Sunrise Wind federal Construction and Operations Plan (COP).

As proposed, the Project will be located in federal waters on the Outer Continental Shelf (OCS), in Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0487 (Lease Area). The Project Site is approximately 30.5 mi (49 km) from Long Island, 16.7 mi (27 km) from Block Island, 25.5 mi (41 km) from mainland Rhode Island, 31.8 mi (51 km) from mainland Massachusetts, 18.8 mi (30 km) from Martha's Vineyard, and 34.4 mi (55 km) from Nantucket, as measured to the nearest SRWF wind turbine generator (WTG). The purpose of the Visual Impact Assessment (VIA) is to analyze the potential visibility of the proposed Project and determine the difference in landscape and seascape visual quality with and without the Project in place. Specifically, the study:

- Describes the appearance of the visible components of the proposed Project.
- Defines the character and visual quality of the landscapes within the Project's Visual Study Area (VSA).
- Defines the types and sensitivity of viewer groups within the VSA.
- Inventories existing visually sensitive public resources within the VSA.
- Evaluates potential Project visibility within the study VSA.
- Identifies key views for visual assessment.
- Illustrates what the Project will look like from representative key observation points (KOPs).
- Assesses the visual impacts associated with the proposed Project.

The VIA was prepared with oversight and input provided by landscape architects and other visual professionals experienced in the preparation of VIAs. It is also consistent with the policies, procedures, and guidelines contained in established VIA methodologies (see Literature Cited/References section), and in accordance with the Visual Impact Assessment Study Plan – Offshore (Appendix G).

1.1 Proposed Project

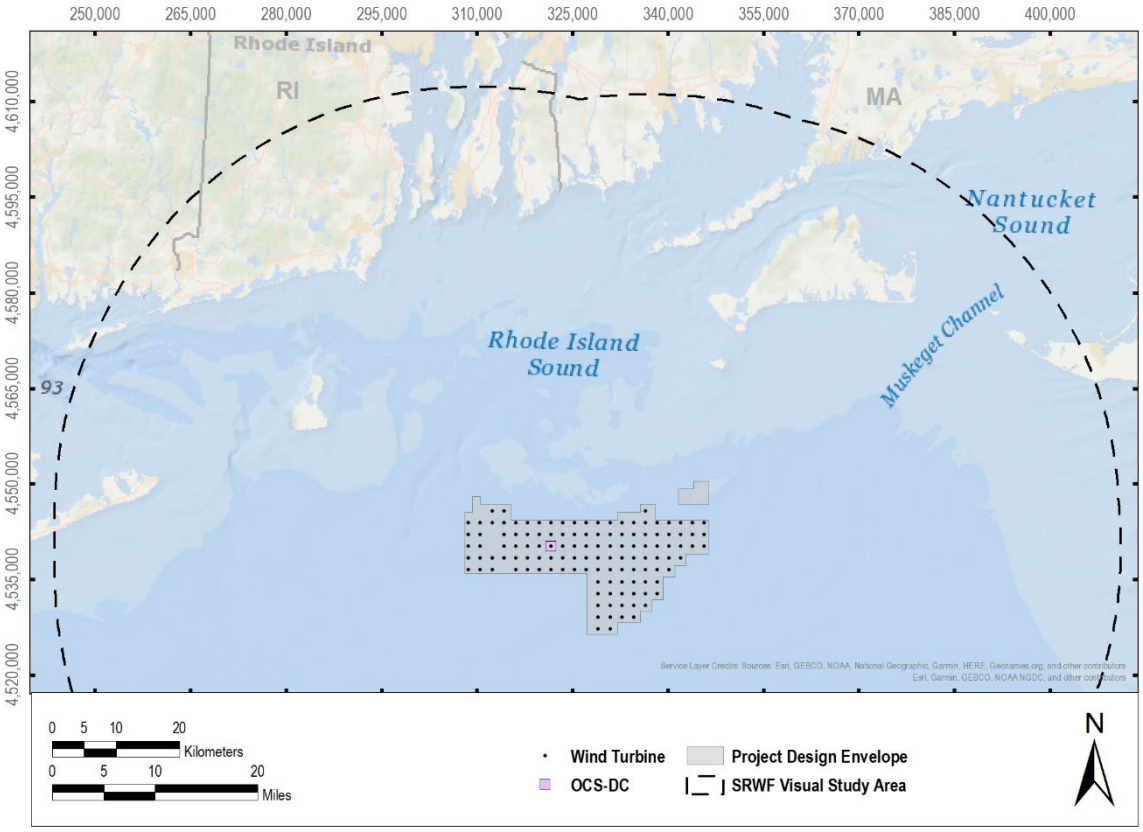
Sunrise Wind has applied a Project Design Envelope (PDE) approach to describe Project facilities and activities. A PDE is defined as *"a reasonable range of project designs"* associated with various components of the Project (e.g., foundation and WTG options) (BOEM 2018). The PDE approach considers a geographic area that is larger than what will ultimately be required for the development of the Project. This approach allows developers to account for locations within the PDE that are unsuitable for development due to constructability, cultural, or economic limitations. The proposed development area associated with the SRWF is illustrated in Inset 1.1-1. Since this subset of the PDE generally includes the contiguous areas closest to the mainland shoreline, it represents the greatest level of potential visual impact associated with the Project.

Generally, the Project will consist of up to 122 WTGs[1] and associated foundations, inter-array cables connecting the WTGs, and an Offshore Converter Station (OCS–DC). The Sunrise Wind Export Cable (SRWEC) is a submarine export cable located in both federal waters and New York State territorial waters.

[1] Since the time the analysis herein was conducted, Sunrise Wind has elected to reduce the number of wind turbine generators (WTGs) from 122 to up to 94 at 102 potential positions, and has chosen a WTG model with defined measurements. These design changes are anticipated to result in the same or lower impacts than those presented in this report.

It will connect the OCS–DC to a transition joint bay (TJB) at Smith Point County Park located on Fire Island, in the Town of Brookhaven, New York. From the TJB, an underground Onshore Transmission Cable will complete the connection to a new onshore converter station (OnCS–DC), located on Union Avenue in the Town of Brookhaven, New York. From the OnCS–DC at the Union Avenue Site, an Onshore Interconnection Cable will provide connection to the existing Holbrook Substation.

The visible offshore components of the operational Project, including the WTGs (and associated foundations) and the OCS–DC (collectively referred to as the Project) will be the focus of this VIA. A separate visual study has been prepared for the visible components of the Onshore Facilities (EDR, 2020a).



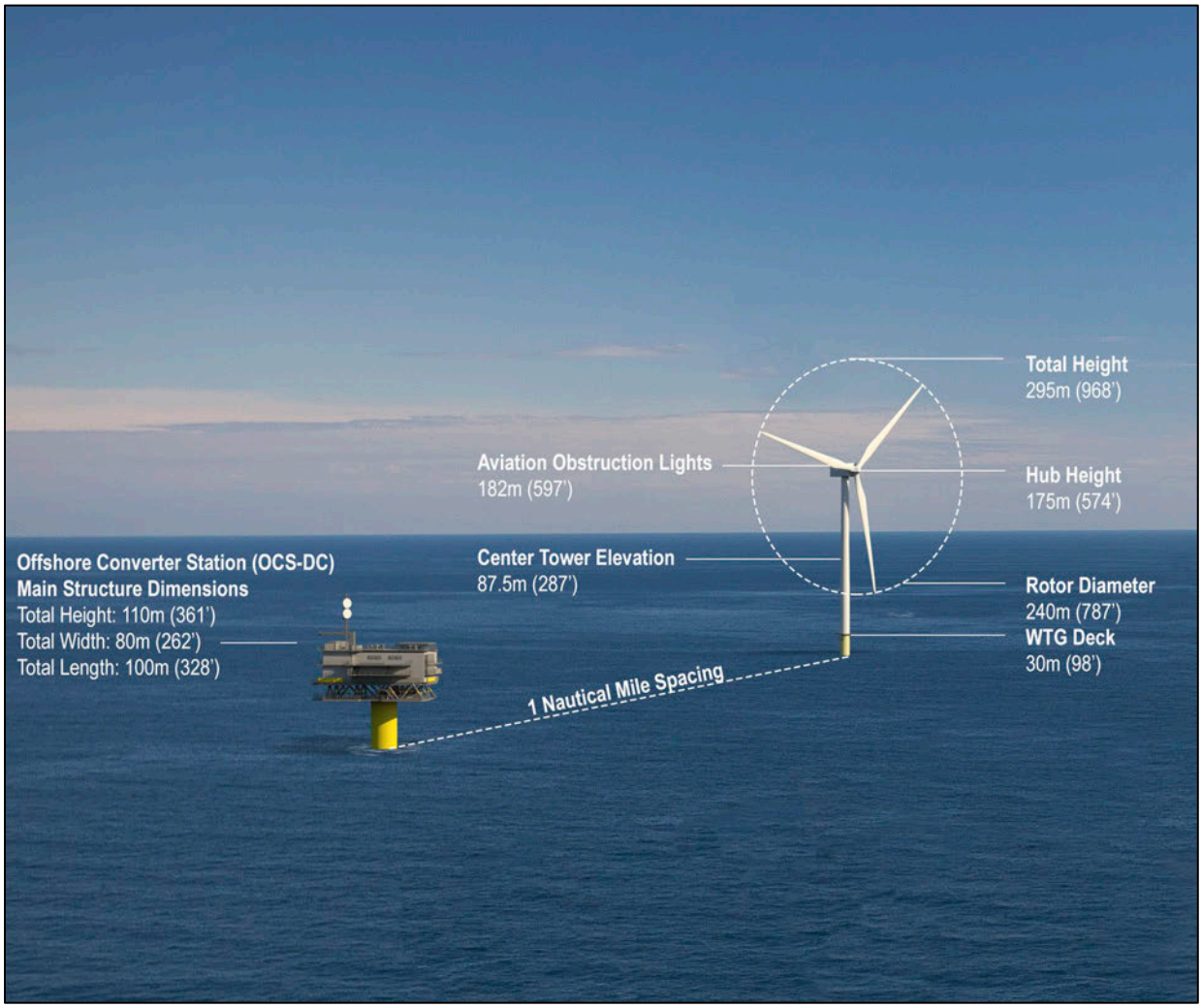
Inset 1.1-1 – Visual Study Area

Consistent with BOEM's *Draft Guidance Regarding the Use of a Project Design Envelope in a Construction and Operations Plan (2018)*, this VIA considers a Maximal Design Scenario (MDS) layout. The layout represents the largest geographic footprint occupied by visible structures and, therefore, the largest percentage of the visible horizon from shoreline locations that may be affected by the Project.

As mentioned previously this VIA considers a single OCS–DC and 122 WTG locations. At the time the VIA was initially produced several offshore substation options were under consideration. As such, the VIA visual simulations consider 120 WTG locations and 3 offshore platform locations. It is anticipated that two of the platforms included in the visual simulations would likely be WTGs. However, it is not anticipated that this

would change the overall results of the VIA and the VIA adequately captures the PDE presented in Section 3.0 of the COP.

This VIA considers the largest WTG dimensions that were under consideration by the project which provides a conservative assessment of theoretical WTG visibility from onshore locations. The maximum sized WTG under consideration is represented by a 15-megawatt (MW) turbine, with dimensions as indicated in Inset 1.1-2. For the development of the zone of visual influence area (viewshed analysis) all 123 foundation locations located within the SRWF area were analyzed at the maximum height of the WTGs in order to capture the greatest area of potential visibility. The foundations (WTGs and OCS–DC) are sited in a uniform east-west/north-south grid with 1.15 mi by 1.15 mi (1 by 1 nm; 1.85 by 1.85 km) spacing (Inset 1.1-2), within an area measuring approximately 132 square miles (341 sq. km.). Inset 1.1-1 illustrates the layout considered in this VIA. The dimensions of all components represented in this VIA are shown in Tables 1.1-1 through Table 1.1-2



Inset 1.1-2 – Computer Model of OCS–DC and WTG Maximum Dimensions

Table 1.1-1 WTG Dimensions Envelope Analyzed in the VIA

WTG Component/Parameter	Minimum (8 MW)	Maximum (15 MW)
Turbine Height [from Mean Sea Level (MSL)]	636 ft (194 m)	968 ft (295 m)
Hub Height (from MSL)	367 ft (112 m)	574 ft (175 m)
Air Gap (MSL) to the Bottom of the Blade Tip	98 ft (30 m)	180 ft (55 m)
Base Height (foundation height – top of Transition Piece)	79 ft (24 m)	98 ft (30 m)
Base (tower) Width (at the bottom)	20 ft (6 m)	30 ft (9 m)
Base (tower) Width (at the top)	13 ft (4 m)	23 ft (7 m)
Nacelle Dimensions (length x width x height)	39 ft x 23 ft x 20 ft (12 m x 7 m x 6 m)	82 ft x 36 ft x 39 ft (25 m x 11 m x 12 m)
Blade Length	262 ft (80 m)	377 ft (115 m)
Maximum Blade Width	16 ft (5 m)	30 ft (9 m)
Rotor Diameter	538 ft (164 m)	787 ft (240 m)

Table 1.1-2 Proposed OCS–DC Dimensions Envelope Analyzed in the VIA

OCS–DC Parameters	Maximum Design Scenario
Number of OCSs	1
Topside – main structure length and width	328 ft x 262 ft (100.0 m x 80.0 m)
Topside – main structure height	197 ft (60.0 m)
Air gap [from Lowest Astronomical Tide (LAT)]	78 ft (23.8 m)
Topside height above LAT (excluding lightning protection)	295 ft (90.0 m)
Total structure height from LAT (including lightning protection & ancillary structures)	361ft (110.0 m)

Each WTG will consist of four major components: the foundation, the tower, the nacelle, and the rotor (Inset 1.1-3). The height of the tower, or "hub height" (height from the water's surface to the center of the rotor) will be up to 574 feet (175 m) Above Mean Sea Level (AMSL). The nacelle sits atop the tower, and the rotor hub is mounted to the nacelle. Assuming a maximum rotor diameter of up to 787 feet (240 m), the total maximum WTG height (i.e., height AMSL at the highest blade tip position) will be up to 968 feet (295 m).

Descriptions of each of the proposed WTG components are provided below.

Foundation: For the purpose of this VIA, it was assumed that each of the WTGs will be anchored to the sea floor using a monopile foundation secured with a single steel pile driven into the sea floor. The monopile foundation is a tubular steel structure up to 50 feet (15 m) in diameter, upon which the tower transition will be mounted. The foundation will extend approximately up to 98 feet (30 m) AMSL, and the exposed portion of the foundation will be yellow in color. A boat landing may be affixed to the foundation with a stairway connecting the landing to a railed deck at the base of the tower.

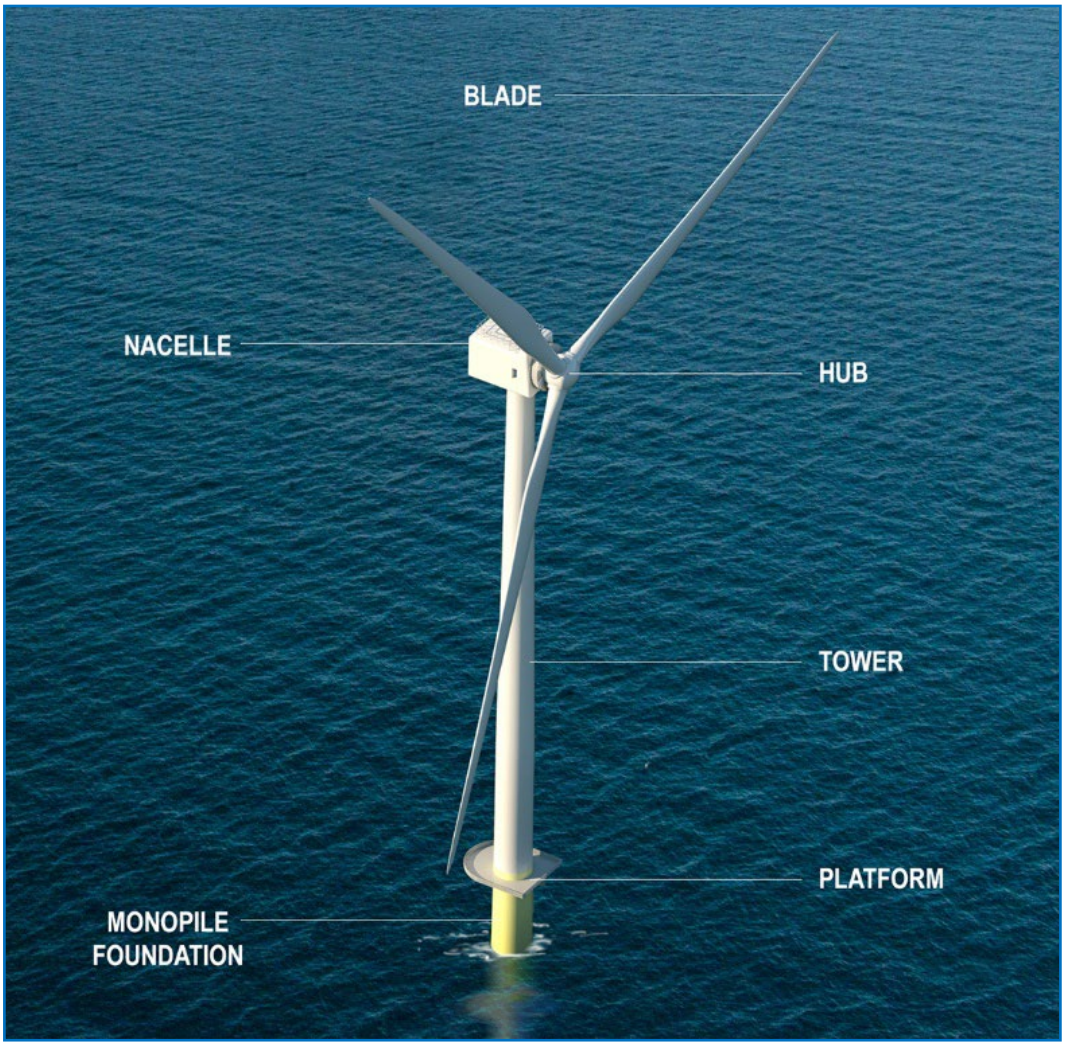
Tower: The towers used for the SRWF WTGs are tapered hollow steel structures manufactured in multiple sections. The assembled towers have a diameter of up to 30 feet (9 m) at the base and 23 feet (7 m) at the top. Up to two amber U.S. Coast Guard (USCG) warning lights will be mounted on the deck at the base of each tower. In accordance with the BOEM and Federal Aviation Administration (FAA) obstruction marking standards, the turbine will be painted light grey (RAL 7035) to pure white (RAL 9010). Additionally, the tower will be equipped with a minimum of three low intensity red flashing lights (L-810) at the approximate mid-section of the tower which will operate during nighttime hours only.

Nacelle: The main mechanical components of the WTG are housed in the nacelle. These components include the drivetrain, generator, and transformer. For the purpose of this study, the nacelle is assumed to have maximum dimensions of approximately 82 feet (25 m) long, 36 feet (11 m) wide, and 39 feet (12 m) in height. Two aviation obstruction warning lights are proposed to be located on top of the nacelle, in accordance with FAA guidelines. These will be medium intensity, flashing red lights (L-864) that are operated only at night, and will be synchronized with all other FAA warning lights in the Project, including the L-810 lights described above. It is assumed that the nacelle will be the same color as the tower and will not include any obvious lettering, logos, or other exterior markings. The lighting assumptions presented in the VIA follow the current BOEM guidance for the lighting and marking of WTGs in order to illustrate the potential nighttime visual impacts associated with the SRWF. However, lighting requirements may change based on final BOEM/FAA recommendations.

Rotor: A rotor assembly is mounted on the nacelle to operate upwind of the tower. The rotor consists of three composite blades, each approximately 377 feet (115 m) in length. The three-bladed rotor assembly will be light grey to white in color (consistent with the tower) and will have a maximum diameter of 787 feet (240 m). The rotor blades are rotated along their axis, or "pitched", to enable them to operate efficiently at

varying wind speeds. The rotor can spin at varying speeds, but typically rotates at a rate around 10 revolutions per minute (RPM).

The OCS–DC will be an enclosed structure measuring up to 328 feet long by 262 feet (100m x 80m) wide, with a maximum elevation of up to 361 feet (110 m) AMSL. For the purpose of this VIA, it is assumed that OCS–DC will be mounted on monopile foundations. However, the OCS–DC may utilize an up to 8-legged piled jacket foundation. Diagram illustrating the appearance and dimensions of the WTG and OCS–DC evaluated in this study are presented in Insets 1.1-2 and 1.1-3.



Inset 1.1-3 – Diagram of WTG Components

1.2 Existing Visual Character

1.2.1 Definition of the Study Area and Zone of Visual Influence

Sunrise Wind Farm

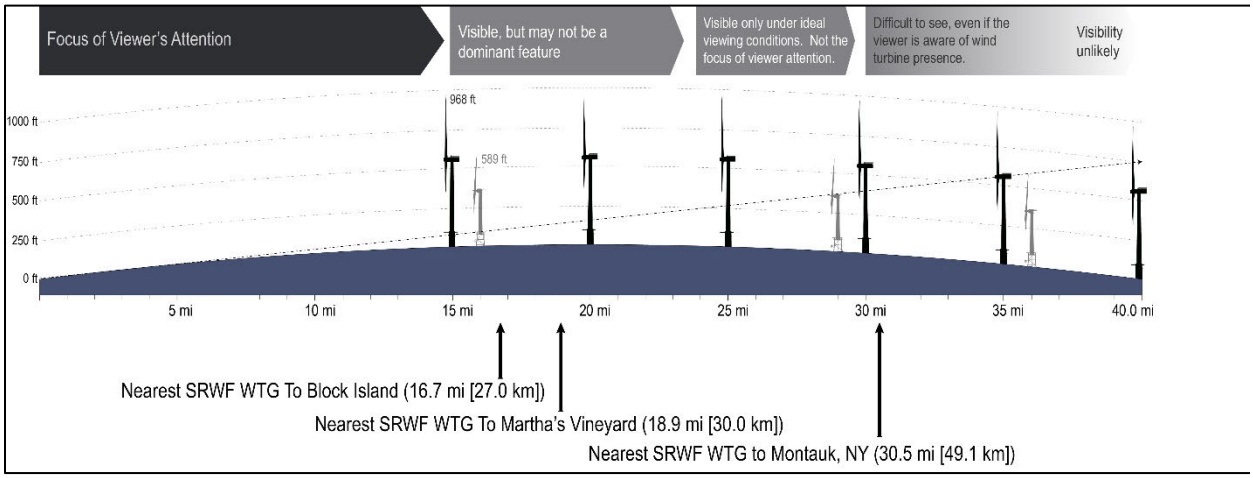
Currently, a standard VSA for offshore wind farms has not been expressly defined in regulatory guidance documents. However, *Information Guidelines for a Renewable Energy Construction and Operations Plan (COP)* (BOEM, 2020) indicates that visual impacts should be evaluated using photo simulations from locations within *"the onshore viewshed from which renewable energy structures, whether located offshore or onshore, would be visible."*

The first step in defining the maximum extent of WTG visibility in an offshore setting is to determine the likely physical threshold based on the screening effect of the curvature of the earth combined with the visibility limiting factors such as human visual acuity and atmospheric perspective. Observations of constructed offshore wind facilities are also useful in determining turbine visibility diminishment thresholds, but these studies have only been conducted on projects with significantly smaller wind turbines. For example, EDR completed observation of the operational Block Island Wind Farm (BIWF) which utilizes five WTGs with a maximum height of 589 feet (379 feet lower than the SRWF WTG). For reference, the typical heights of the BIWF turbines are included in Inset 1.2-1, below. These observations suggest that based on this smaller technology, the WTGs will generally become completely screened by curvature of the earth and/or atmospheric perspective at a distance between 35 and 40 miles, depending on the elevation of the viewer.

A study completed in Europe, *Offshore Wind Turbine Visibility and Visual Impact Threshold Distances* (Sullivan, et al., 2013) concluded that offshore wind facilities were judged to be a major focus of visual attention at distances up to 10 mi (16 km); were noticeable to casual observers at distances of almost 18 mi (29 km); and were visible with extended or concentrated viewing at distances beyond 25 mi (40 km).

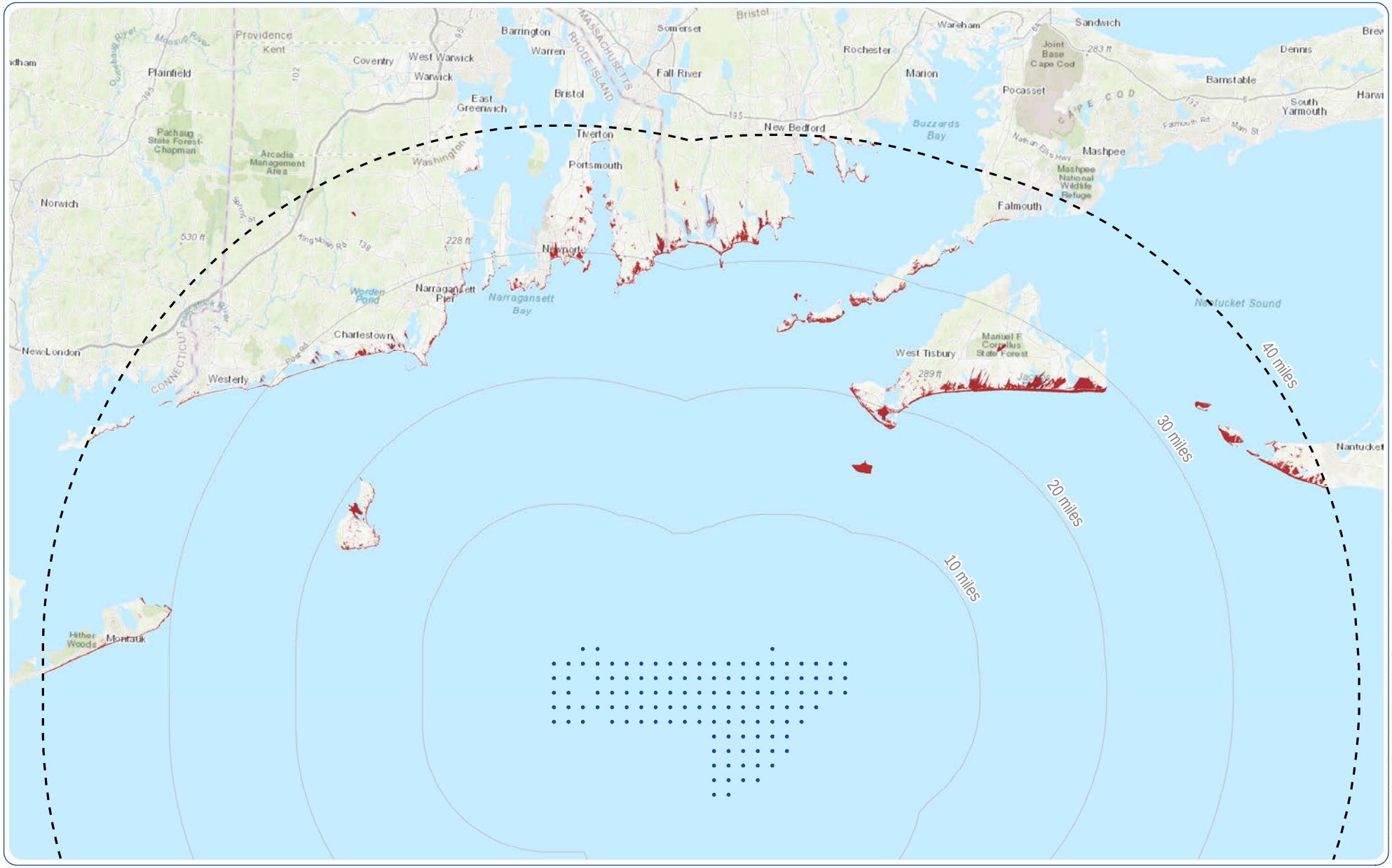
A more recent study undertaken by the New York State Energy Research and Development Authority (NYSERDA) suggests offshore wind energy projects of typical magnitude (100 8MW WTGs) would have minimal visual effects beyond a distance of 20 miles and negligible effect beyond 25 miles (EDR, 2017). Again, the study considers turbines that are significantly smaller than those included in this VIA and a calibration of this study is not appropriate given the fact it is based on observation and does not include any specific occupational statistics. However, both studies are still relevant in that atmospheric perspective and human visual acuity are significant limiting factors in turbine visibility from open coastal locations. These influences on turbine visibility are generally independent of the size of the technology.

Inset 1.2-1, below, considers the proposed maximum height of the WTG (968 ft [295 m]) and illustrates that from beach-level the curvature of the earth (considering typical refraction) will screen the turbine nacelle at approximately 35 miles. Assuming a maximum resolution of the human eye is conservatively 28 seconds of an arc or 0.008 angular degrees (Deering, 1998) at 40 miles, human vision can resolve an object that is approximately 30 feet in diameter. The WTGs considered in this VIA have a maximum blade width of 30 feet, suggesting that at a distance of 40 miles, they would be at the maximum threshold of potential visibility and would not result in impacts to onshore resources.



Inset 1.2-1 – Turbine Visibility at Various Distances

Based on the results described above, and to address WTG visibility from all potentially affected visually sensitive resources, the VSA was defined as the area within a 40-mile radius of each of the proposed WTGs. This VSA includes approximately 6,854 square miles (17,751 sq. km) of open ocean, 685 square miles (1774 sq. km) of land (including inland water bodies), and over 615 linear miles (990 linear km) of shoreline in Rhode Island, Massachusetts, Connecticut, and New York. The VSA includes all or portions of 17 towns in Rhode Island, 16 towns in Massachusetts, two towns in Connecticut, and two towns in New York. The location and extent of the VSA is illustrated in Figure 1.2-1 Sheet 1 and the associated towns and counties are listed in Table 1.2-1.



Sunrise Wind Farm Project

Outer Continental Shelf

Figure 1.2-1: Visual Study Area and Zone of Visual Influence

- Wind Turbine
- Zone of Visual Influence (ZVI)
- Visual Study Area

Sunrise Wind | Powered by Ørsted & Eversource

N W E S

0 5 10 20 Miles

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap on November 10, 2020 by Environmental Design and Research. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

Table 1.2-1 States, Counties, and Towns Within the SRWF Visual Study Area

State	County	Town(s)
New York	Suffolk	East Hampton, Southold
Connecticut	New London	North Stonington, Stonington
Massachusetts	Barnstable	Falmouth, Mashpee
	Bristol	Dartmouth, Fairhaven, Fall River, New Bedford, Westport
	Dukes	Aquinnah, Chilmark, Edgartown, Gosnold, Oak Bluffs, Tisbury, West Tisbury
	Nantucket	Nantucket
	Plymouth	Mattapoisett
Rhode Island	Kent	East Greenwich, West Greenwich
	Newport	Jamestown, Little Compton, Middletown, Newport, Portsmouth, Tiverton
	Washington	Charlestown, Exeter, Hopkinton, Narragansett, New Shoreham, North Kingstown, Richmond, South Kingstown, Westerly

Within the VSA, only a relatively small portion of the onshore locations would actually have open views that would include some portion of the proposed WTGs. To accurately define an inclusive and reasonable Zone of Visual Influence (ZVI) within the VSA, EDR identified the potential geographic areas of SRWF visibility by running a preliminary light detection and ranging (lidar) viewshed analysis within the VSA. Viewshed model considered vegetation, buildings/structures, and the curvature of the earth in order to delineate those areas that may have potential views of the highest portions of the WTGs (i.e., blade tips in the upright position). The viewshed analysis results indicated that, up to 34 square miles or 5 percent of the land area within the VSA, could have potential views of the WTGs from ground-level vantage points. For the purposes of the VIA, this area was defined as the ZVI and represented the areas in which further analysis was warranted to determine the degree of SRWF visibility and visual impact. The location and extent of the ZVI is illustrated in Figure 1.2-1. A comprehensive description of the viewshed analysis used to define the ZVI is provided in Section 3.1.

1.2.2 Physiographic/Visual Setting

The physiographic/visual setting of the terrestrial portions of the VSA can be broadly broken down into three categories: islands, mainland, and the open ocean. A description of each of these is presented below.

1.2.2.1 Islands

Islands cumulatively total approximately 204.63 square miles (530 sq. km) of land within the VSA, and 22.18 square miles (57.45 sq. km) occur within the ZVI. Examples of these islands include Long Island, Block Island, Conanicut Island, Prudence Island, Aquidneck Island, the Elizabeth Islands, Martha's Vineyard, Nantucket, and several smaller islands scattered along the coast of Connecticut, Massachusetts and Rhode Island. All of these islands are portions of terminal moraines from the Wisconsin Glacier, which retreated from the area approximately 22,000 years ago. As such, the islands are composed primarily of glacial till, which is a poorly sorted mix of silt, sand, cobbles, and boulders. Topography on the islands is typically undulating to gently rolling, with dunes and/or steep bluffs occurring along the island shorelines. Island elevations range from sea level to a maximum of approximately 307 feet AMSL, which occurs along Pasture Road in Chilmark on Martha's Vineyard. Cuttyhunk Island, Block Island, and Long Island also have prominent highpoints ranging from 130 feet to 200 feet AMSL. Vegetation on the islands is typically characterized by a mix of scrub/shrub forest, grassy dunes, salt marshes, freshwater wetlands, and open

fields (agricultural and successional). Developed areas include seasonal and year-round homes, villages, roads, and ports.

1.2.2.2 Mainland

The VSA includes approximately 480.2 sq. mi (1244 sq. km) of mainland: 33.2 sq. mi (86 sq. km) in Connecticut, 340.5 sq. mi (882 sq. km) in Rhode Island, and 106.5 sq. mi (276 sq. km) in Massachusetts (mainland New York does not occur within the VSA). The ZVI includes approximately 10.4 sq. mi (27 sq. km) of mainland: <0.1 sq. mi (<1 sq. km) in Connecticut, 5.5 sq. mi (14 sq. km) in Rhode Island, and 4.9 sq. mi (13 sq. km) in Massachusetts.

Within the mainland portion of the study area, elevations range from sea level along the coast to a high point of 528.2 feet (161 m) AMSL in the Town of Exeter, Washington County, Rhode Island. The mainland coast has variable topography. Barrier beaches and dunes are typically backed by salt ponds and tidal marshes along much of the mainland coast in Rhode Island and Massachusetts. However, in areas such as Watch Hill and Point Judith, Rhode Island, the shoreline topography is defined by steep bluffs and cliffs, along with fewer coastal ponds and marshes. Inland from the coast, mainland topography rises gradually but remains fairly level to gently rolling. Low hills and valleys are primarily forested with scattered freshwater lakes, ponds, and occasional agricultural land. Soils are generally thin and rocky, as is evidenced by abundant surface rock and stone walls. Residential development occurs throughout the area, with the highest density found in villages and towns along the coast. Outside of the village/town center areas, inland development is more scattered and low-density within a largely forested landscape.

1.2.2.3 Atlantic Ocean

The portions of the Atlantic Ocean that occur within the VSA include Rhode Island Sound, Block Island Sound, Narragansett Bay, Fischer's Island Sound, Buzzards Bay, Mount Hope Bay, Vineyard Sound, Nantucket Sound, and other bays and coves. Approximately 96.2 percent of the ocean area within the VSA, also occurs within the ZVI. This area is characterized by broad expanses of open water, with depths up to approximately 367 feet (112 m). Depending on weather conditions, the texture of the ocean surface can range from smooth to choppy, and its color can range from blue, to silver, to dark gray. The ocean in this area is a working water landscape that supports significant human activity, including recreational and commercial fishing, commercial shipping, ferry transportation, pleasure boating and associated maritime activities and features (buoys, channel markers, warning lights, etc.).

1.2.3 Distance Zones

Three distinct distance zones were defined for the VSA. Based on the Bureau of Land Management (BLM) Visual Resource Management Classification Process (BLM, 2009) these zones include the Foreground-Middle Ground (0-5 mi), Background (5-15 mi), and Seldom Seen Zones (>15 mi). However, it was determined that when considering water views of offshore WTGs, Seldom Seen may not be an accurate representation for views beyond 15 miles (since studies show offshore wind turbines to be visible out to 25 miles). Therefore, the name of this zone has been changed to "Extended Background". It is important to note that all Foreground-Middle Ground and Background views within the VSA would only be available to those travelling on the open ocean in commercial vessels, passenger boats, or pleasure craft. Consistent with BLM guidance, distance zones for this VIA are described as follows:

- Foreground-Middle Ground: 0 to 5 miles. Within the foreground (0.5 mile), a viewer is able to perceive details of an object with clarity. Surface textures, small features, and the full intensity and value of color can be seen on foreground objects. Beyond the foreground (0.5-5 miles) a viewer can perceive individual structures and trees but not in great detail. This is the zone where the parts of the landscape start to join together; individual hills become a range, individual trees merge into a forest, and buildings appear as simple geometric forms. Colors will be clearly distinguishable but

will have a bluish cast and a softer tone than those in the foreground. Contrast in color and texture among landscape/seascape elements will also be reduced. On the ocean, the majority of discernable features occur within the Foreground-Middle Ground Zone due to the effects of curvature of the earth and due to the fact that nearshore activities tend to be concentrated within this zone.

- Background: 5 to 15 miles. The background defines the broader regional landscape/seascape within which a view occurs. Within this distance zone, the landscape and features on the ocean are simplified; only broad landforms and objects on the ocean are discernible. Atmospheric conditions often render objects on the landscape/seascape an overall bluish color. Objects on the ocean, such as boats, buoys, and platforms may become completely screened by curvature of the earth at distances greater than 5 miles. In less frequent circumstances, larger features on the ocean horizon may exhibit the "mirage effect" in which images of the viewed objects appear displaced (floating above the water's surface) and can become very difficult to identify. At these distances, texture has generally disappeared, and color has flattened, but large patterns of vegetation are discernible. Silhouettes of one land mass set against another and/or the skyline are often the dominant visual characteristics in the background. Where landscape features are visible beyond the ocean surface (such as islands and peninsulas), they typically contribute to scenic quality by providing a softened backdrop for foreground-middle ground features, an attractive vista, or a distant focal point.

- Extended Background: Over 15 miles. At distances beyond 15 miles curvature of the earth becomes a significant factor in visibility, and those objects that are visible become less prominent in the overall landscape and seascape due to their relative size, occupation of the horizon, and deterioration of visibility due to atmospheric perspective[2]. For casual viewers, features at these distances may be difficult to discern and during conditions of high humidity, fog, and other weather events, visibility at these distances may be significantly diminished or completely eliminated.

Due to the distance at which the Project will be most frequently viewed, the curvature of the earth and atmospheric conditions will have a substantial influence on Project visibility. Studies on smaller operational offshore wind facilities that have been completed in Europe suggest that within the Extended Background zone, visibility zones can be further delineated to the point of complete diminishment. As demonstrated in Inset 1.2-1 Turbine Visibility at Various Distances, above.

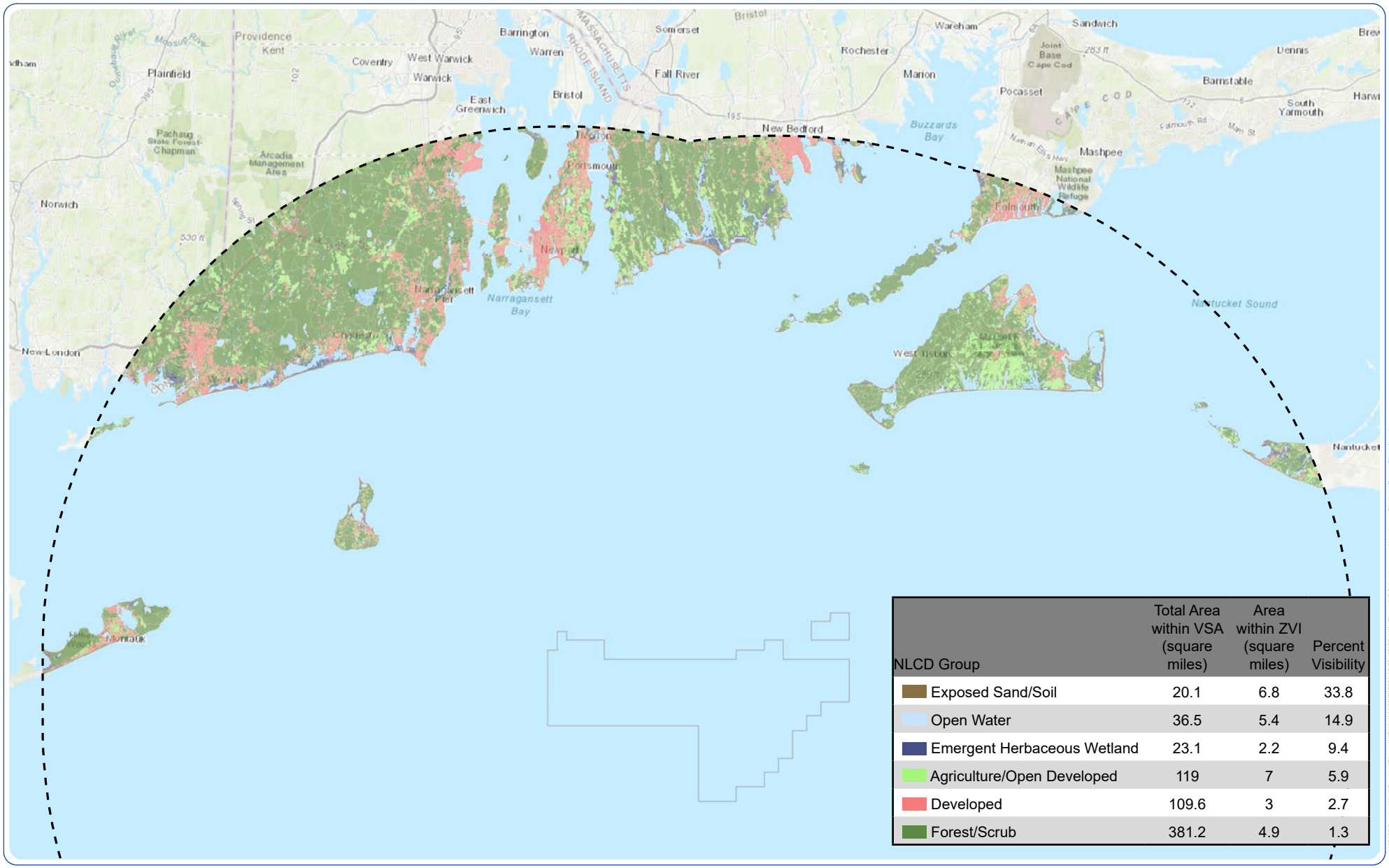
1.2.4 Landscape Similarity Zones

The definition of landscape and/or seascape character areas found in the ZVI provides a useful framework for the analysis of existing visual resources and viewer circumstances. These landscape/seascape character areas, referred to in this report as Landscape Similarity Zones (LSZs), are defined based on the similarity of visual features, such as landform, vegetation, water, and land use patterns.

EDR defined 17 distinct LSZs within the ZVI. The definition of generally homogeneous character zones within a VSA is consistent with the approach taken in various visual assessment guidance of methodologies (Smardon et al., 1988; U.S. Department of Agriculture [USDA] Forest Service, 1995; U.S. Department of Transportation [USDOT] Federal Highway Administration, 1981; U.S. Department of Interior [USDOI] Bureau of Land Management, 1980). The U.S. Geological Survey (USGS) National Land Cover Dataset (NLCD) used to help define the locations of these zones is illustrated in Figure 1.2-2 (Sheet 1), along with representative photos of each LSZ (Sheets 2-18). The general landscape character, land use, and types of views available from each of the LSZs that occur within the ZVI are described below. It is important to note

[2] Atmospheric perspective refers to the effect the atmosphere has on the appearance of an object as viewed from a distance.

that many of the LSZs described below also have an integral seascape component (i.e., views of the ocean) that is a major contributing factor to the visual composition and scenic quality of the LSZ. Use of these LSZs to assist in defining the baseline scenic quality for the VSA and ZVI is an appropriate methodology for projects located offshore but visible from the affected LSZs.



NLCD Group	Total Area within VSA (square miles)	Area within ZVI (square miles)	Percent Visibility
Exposed Sand/Soil	20.1	6.8	33.8
Open Water	36.5	5.4	14.9
Emergent Herbaceous Wetland	23.1	2.2	9.4
Agriculture/Open Developed	119	7	5.9
Developed	109.6	3	2.7
Forest/Scrub	381.2	4.9	1.3

Sunrise Wind Farm Project

Outer Continental Shelf

Figure 1.2-2: Landcover and Landscape Similarity Zones

Sheet 1 of 18 : Sunrise Wind Farm

Project Design Envelope

Visual Study Area

Sunrise Wind | Powered by Ørsted & Eversource

N W E S

0 5 10 20 Miles

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. **2.** This map was generated in ArcMap on October 29, 2021 by Environmental Design and Research. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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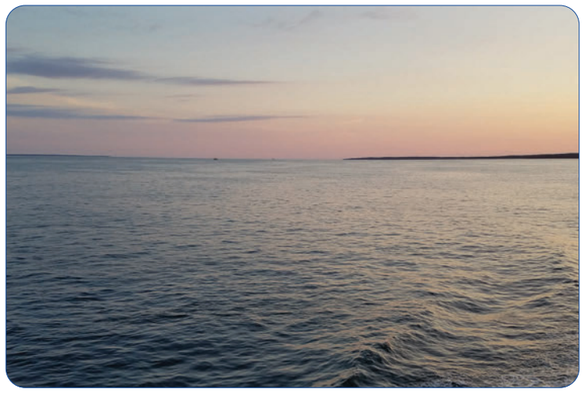


Sunrise Wind Farm Project
Outer Continental Shelf
Open Water/Ocean
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Shoreline Beach
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Coastal Bluff
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Developed Waterfront
Figure 1.2-2: Landscape Similarity Zones

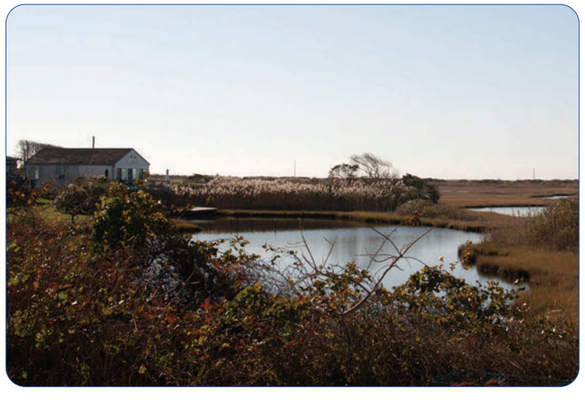
Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Coastal Dunes
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Shoreline Residential
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource



Sunrise Wind Farm Project
Outer Continental Shelf
Salt Pond/Tidal Marsh
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Coastal Scrub/Scrub Forest
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Maintained Recreation Area
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Forest
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Rural Residential
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Suburban Residential
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Village/Town Center
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Commercial
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Agricultural/Open Fields
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Inland Lakes and Ponds
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

Sunrise Wind Farm Project
Outer Continental Shelf
Highway Transportation
Figure 1.2-2: Landscape Similarity Zones

Sunrise Wind | Powered by Ørsted & Eversource

1.2.4.1 Open Water/Ocean Zone

The Open Water Ocean LSZ includes the SRWF Project Site and also accounts for the largest portion of the VSA and ZVI. This zone consists of the open water of the Atlantic Ocean, Block Island Sound, Vineyard Sound, Rhode Island Sound, Narragansett Bay, Long Island Sound, Fischer's Island Sound, Mount Hope Bay, Buzzards Bay, and a small portion of Nantucket Sound. The defining characteristic of this LSZ is the presence of open water as a dominant foreground element in all directions. The open expanse of water can be relatively calm and flat or may occasionally include rolling swells and white caps. Man-made features in the water are limited, but may include occasional jetties, buoys, and boats. Views across the open water often extend to the horizon; however, in some places may terminate at a distant shoreline characterized by a mix of natural vegetation and man-made features, including houses, water towers, commercial structures, and marinas. Human activity on the water can be extensive, especially near major ports and navigation channels during the recreation season, and includes ferry transport (Block Island, Long Island, Newport, Martha's Vineyard, and Nantucket ferries), pleasure boating (including tour boats), commercial and recreational fishing, and various water sports.

Representative examples of the Open Water/Ocean LSZ can be seen in Figure 1.2-2 Sheet 2.

1.2.4.2 Shoreline Beach

This LSZ is characterized by an open beach that slopes gradually to the edge of the ocean. The beaches within the ZVI include sandy beaches, such as Narragansett Beach, Horseneck Beach, Sachuest Beach, and those within the Watch Hill Scenic Area along the southern and central portions of the mainland shoreline in Rhode Island and Massachusetts. Sandy beaches also occur on the southern and western portions of Martha's Vineyard and Nantucket, as well as eastern Block Island and Long Island.

Cobble and rocky beaches exist on Long Island's south shore, Aquidneck and Conanicut Islands, the western and northern portions of Martha's Vineyard, and southern portions of Block Island. The defining characteristic of this LSZ is an unobstructed, water-level view up and down the shoreline and across open water as one looks out to sea. An open, unobstructed view of the Open Water/Ocean LSZ and its interaction with the shoreline is a defining characteristic of the Shoreline Beach LSZ. Public beaches, such as Fred Benson Beach, Narragansett Beach, Scarborough State Beach, South Beach State Park, and Horseneck Beach also include occasional public buildings (i.e., bathhouses). Viewer activity in this area is primarily recreational, including swimming, sun-bathing, walking, beachcombing, fishing, and surfing. Views toward the shore from this zone are typically characterized by grassy dunes, coastal scrub, and/or bluffs or cliffs, as well as man-made features and buildings/structures, all of which limit the visibility of inland features.

Representative examples of the Shoreline Beach LSZ can be seen in Figure 1.2-2 Sheet 3.

1.2.4.3 Coastal Bluff

The defining characteristic of this LSZ is an open view of the ocean and shoreline from an elevated bluff or cliff. This zone occurs in several locations within the ZVI but is particularly well represented along the south shore of Block Island including the Clayhead Trail in New Shoreham, at Gay Head in Aquinnah on Martha's Vineyard, along portions of the Cliff Walk in Newport, and at Montauk Point on Long Island. Coastal scrub vegetation on top of the bluffs is typically separated from the shoreline by a more-or-less vertical wall of rapidly eroding glacial till or exposed rock. Viewers in this LSZ are typically 20 to 100 feet AMSL and come to these areas primarily for the elevated long-distance views of the Open Water/Ocean LSZ and coastline they provide. Because of their elevation and lack of tall vegetation, these views typically include significant lengths of shoreline and/or a broad expanse of open ocean, as well as typical inland features, including coastal scrub vegetation, lighthouses, homes, and other man-made elements. However, because of the density of surrounding vegetation and/or the predominance of privately-owned land, such views are generally only available from discrete public access points and trails and overlooks.

Representative examples of the Coastal Bluff LSZ can be seen in Figure 1.2-2 Sheet 4.

1.2.4.4 Developed Waterfront

This zone also occurs along the shoreline, but unlike the previous LSZs, is defined primarily by the dominance of man-made features, including docks, boats, and shoreline buildings/structures. Fishing ports, harbors, marinas, and shoreline commercial and industrial areas are included in this LSZ, which occurs primarily from Point Judith eastward on the mainland, in the downtown/harbor area of New Shoreham and portions of Great Salt Pond on Block Island, and in Newport on Aquidneck Island. Some examples in the ZVI include Point Judith, Woods Hole, and New Shoreham Harbor. Although the Open Water/Ocean LSZ is an essential character defining element of the view, it is primarily a backdrop to the maritime activity occurring in this zone. Buildings/structures, vehicles, and boats in these areas are a mix of sizes, styles, and conditions. Masts, antennas, and other man-made vertical elements typically break the skyline and create some degree of visual clutter. Viewer activity in these areas is generally water-oriented but highly variable and includes commercial fishing, seafood processing, boat repair, pleasure boating, retail shopping, and restaurants.

Representative examples of the Developed Waterfront LSZ can be seen in Figure 1.2-2 Sheet 5.

1.2.4.5 Coastal Dunes

This LSZ typically occurs between the ocean beaches and more inland coastal scrub, salt ponds, and marshes throughout the ZVI. Dunes are found at mainland beaches, such as Horseneck Beach State Reservation in Massachusetts and Scarborough State Beaches in Rhode Island, and at island beaches on Aquidneck Island, Block Island, Martha's Vineyard, Nantucket and Long Island. The Coastal Dunes LSZ is characterized by undulating dune topography and vegetation dominated by dune grass, low shrubs, and occasional stunted trees (including pines). Coastal dunes are typically strictly regulated ecological communities, and access is limited to narrow enclosed footpaths and boardwalks that cut through or over the dunes, providing public access to the beaches. Views of the Open Water/Ocean LSZ from the dunes are variable, but typically restricted to these paths and typically screened by the tight, rolling landform until emerging at the top of the beach. Viewer activity in this area is almost exclusively recreational and typically focused on sight-seeing and beach access.

Representative examples of the Coastal Dunes LSZ can be seen in Figure 1.2-2 Sheet 6.

1.2.4.6 Shoreline Residential

Within the ZVI this LSZ is characterized by year-round and seasonal homes situated along the ocean shoreline. The defining characteristic of this zone is a broad, often elevated, view of the ocean from a residential setting. Generally, shoreline homes are specifically situated to take advantage of these water views of the adjacent Open Water/Ocean LSZ. The homes are a mix of historic and modern architecture. Along the mainland Rhode Island and Massachusetts shorelines, the types of homes are highly variable, ranging from densely situated, modest, cottage style homes in Westerly, Rhode Island and Westport, Massachusetts, to larger waterfront estates in Narragansett, Rhode Island, Martha's Vineyard, and Nantucket, to the stately, historic mansions situated on large lots in Newport on Aquidneck Island. Landforms in this LSZ are level to gently undulating, and surrounding vegetation includes a mix of coastal scrub, dunes, and maintained landscapes. With the exception of the older estates, large trees are generally lacking. Viewers in this zone are generally engaged in typical residential activities, although some recreational activity/sight-seeing occurs in areas with public access (i.e., the Cliff Walk in Newport).

Representative examples of the Shoreline Residential LSZ can be seen in Figure 1.2-2 Sheet 7.

1.2.4.7 Salt Pond/Tidal Marsh

This LSZ is characterized by coastal ponds and marshes that are connected to the ocean by one or more relatively narrow channels. It occurs commonly throughout the mainland portions of the VSA and is represented in the ZVI by Winnapaug Pond, Quonochantaug Pond, and Ninigret Pond in southern Rhode Island; and Richmond Pond, Cockeast Pond, and Allens Pond in Massachusetts. Great Salt Pond on Block Island is also a notable example of the Salt Pond/Tidal Marsh LSZ. These areas are typically characterized by open water surrounded by a fringe of herbaceous marsh vegetation. They are subject to the influence of tides and, therefore, can include exposed sand or mud banks and flats along their edges at low tide. Views to the Open Water/Ocean LSZ may be available across the salt ponds and tidal marsh waters but are generally interrupted by adjacent dunes, barrier spits (typically 10 to 15 feet tall), and/or scrub vegetation that separates the ponds and the adjacent land from the ocean. Residences often occur along the edges of these ponds, as indicated by docks and boats along their shorelines. Recreational activity in the form of boating, fishing, and clamming is common in these areas.

Representative examples of the Salt Pond/Tidal Marsh LSZ can be seen in Figure 1.2-2 Sheet 8.

1.2.4.8 Coastal Scrub/Shrub

This LSZ occurs throughout the ZVI and typically buffers other shoreline LSZs, such as Developed Waterfront, Coastal Dunes, or Coastal Bluff. Large contiguous areas of Coastal Shrub/Scrub Forest occur at Rodman's Hollow Nature Preserve and the Clay Head Trail and Nature Preserve on Block Island, and coastal areas of the mainland, such as Charlestown, South Kingstown, and Westport, where shoreline development is less dense. The Coastal Shrub/Scrub Forest LSZ is characterized by a thick tangle of woody and herbaceous vegetation, typically less than 20 feet in height. This vegetation occurs on upland dunes as well as along the edges of marshes and shrubby wetlands. Landform in this zone is gently rolling with small hills and hollows. The vegetation is largely impenetrable, except where crossed by roads or trails. In these areas and other small clearings, outward views toward the Open Water/Ocean LSZ may be available but are largely enclosed by surrounding vegetation and are limited to the orientation and width of the cleared corridor. Viewer activity is primarily local travel and recreational trail use.

Representative examples of the Coastal Shrub/Scrub Forest LSZ can be seen in Figure 1.2-2 Sheet 9.

1.2.4.9 Maintained Recreation Area

This is a diverse LSZ characterized largely by the presence of maintained lawns and managed landscapes that are used primarily for recreational purposes. It includes areas of open lawn at public parks, lighthouses, USCG stations, and golf courses. Prominent man-made structures (i.e., lighthouses) and signage are often focal points/destinations in this LSZ. Views of the ocean are highly variable, depending on the proximity of these sites to the shoreline. However, the open, maintained landscape generally allows for expansive, unobstructed views of the surrounding landscape/seascape. At recreation areas along the shoreline, these can include broad views of the Open Water/Ocean LSZ and shoreline. Typical examples of this LSZ are Brenton Point State Park, Beavertail State Park, and the Point Judith USCG Station on mainland Rhode Island, Nobska Lighthouse on the Massachusetts mainland, Montauk Point Lighthouse on Long Island, and Southeast Lighthouse and North Light on Block Island.

Representative examples of the Maintained Recreation Area LSZ can be seen in Figure 1.2-2 Sheet 10.

1.2.4.10 Forest

The Forest LSZ is characterized by relatively large tracts of forestland, typically including both deciduous and coniferous species (i.e., oaks, hickories, white pine) in the overstory, with mixed shrubs, vines, and saplings in the understory. In areas closer to the coast, the trees are often crooked and stunted, while inland forests generally have trees that are taller and straighter. Scattered residences, local roads, small fields,

and wetlands also occur within this zone but were not called out as separate LSZs due to their low density, relatively small size, and the visual dominance of the surrounding forest. Landform within this zone is typically level to gently rolling, although distinct ridges and valleys are present in places. Boulders, stone walls, and bedrock outcrops on the ground plain are also a distinguishing characteristic of forests within the VSA. Notable areas of forest land directly adjacent to the ZVI include Montauk Point State Park, Camp Hero State Park, and Hither Hills State Park on Long Island, Trustom Pond National Wildlife Refuge (NWR) on mainland Rhode Island, Peaked Hill Reservation on Martha's Vineyard, and the Nantucket State Forest. Long distance views and views to the Open Water/Ocean LSZ within the zone are generally either fully or partially screened by vegetation and, when present, are tightly enclosed by the surrounding trees.

Representative examples of the Forest LSZ can be seen in Figure 1.2-2 Sheet 11.

1.2.4.11 Rural Residential

This LSZ occurs primarily along the frontage of rural roads within the inland portion of the VSA. Some examples of the Rural Residential Zone in the ZVI include Little Compton on mainland Rhode Island, Westport on mainland Massachusetts, and occasional inland areas on Block Island and Martha's Vineyard. Frontage development along the roads typically includes single family homes that vary widely in age and architectural style (from modern modular homes to older vernacular farmhouses). Rural residences tend to be located along narrow, tree-lined roads, both paved and unpaved. Throughout this LSZ, homes are often surrounded by forest, but this zone also includes small orchards, open fields/lawns, and small farms interspersed with hedgerows and small woodlots. Landform in this area is characterized by gently rolling topography. Long distance views in this LSZ are largely restricted to small open fields. Views of the Open Water/Ocean LSZ are typically unavailable at these primarily inland locations. However, when in proximity to the shoreline, it is possible views may be available between densely situated homes. In these uncommon instances, the ocean becomes an integral component of the landscape and may contribute to overall scenic quality/character. Typical viewer activity within this zone includes residential activity, outdoor recreation, and local travel.

Representative examples of the Rural Residential LSZ can be seen in Figure 1.2-2 Sheet 12.

1.2.4.12 Suburban Residential

The Suburban Residential LSZ occurs primarily in the mainland portion of the VSA and is characterized by medium to high-density residential neighborhoods that typically occur on the outskirts of villages and town centers, and along secondary roads and cul-de-sacs spurring off the main roads. Buildings are relatively new, one- and two-story, wood-framed homes with gable roofs and clapboard or shingle siding. In areas along the coast, this LSZ is characterized by clusters of generally modest homes off unpaved roads that follow the lay of the land. Many of these clusters occur on higher ground, in scrub forest settings, and/or along the edges of salt ponds and coastal marshes. In more inland settings, suburban residential developments have the appearance of more typical subdivisions, with regularly spaced homes surrounded by well-maintained lawns and landscaped yards. These neighborhoods often occur in wooded areas with pockets of remnant forest vegetation within the subdivisions and a scattering of individual trees along the roads. The streets are well-organized in layout and appearance and are often curvilinear in form. Examples of the Suburban Residential Zone within the ZVI include the community of Bonnet Shores in Narragansett, Green Hill in Charlestown on the Rhode Island mainland, and south of New Bedford and Sconticut Neck in the Town of Fairhaven on the Massachusetts mainland. Typical user activities in this LSZ include home and yard use/maintenance, as well as local travel. Outward views available in this LSZ, including those toward the Open Water/Ocean LSZ, are generally limited by the surrounding forest vegetation, adjacent buildings/structures, and/or undulating topography that surround the subdivisions.

Representative examples of the Suburban Residential LSZ can be seen in Figure 1.2-2 Sheet 13.

1.2.4.13 Village/Town Center

This LSZ includes the more well-defined village/town center areas within the VSA. This zone is characterized by moderate to high-density residential and commercial development and includes larger town center areas such as Newport on Aquidneck Island, the City of New Bedford and Falmouth Harbor on the Massachusetts mainland, the Village of Chilmark on Martha's Vineyard, and the Hamlet of Montauk on Long Island. Vegetation, in the form of street trees and yard trees, contributes to visual character in the villages, but buildings (typically two to three stories tall) and other man-made features dominate the landscape within the majority of this zone. These features can be highly variable in their size, architectural style, and arrangement. However, many of the villages have a distinctive New England feel, which may include tightly situated clusters of historic Georgian, Cape Cod, and Victorian style houses and buildings located in proximity to water features, including rivers, ponds, and harbors. Buildings within the village cores include churches, town halls, libraries, and commercial blocks surrounded by residences which typically extend beyond the village core. Buildings within the village core tend to be arranged in an organized pattern that generally focuses views along the streets and blocks with long distance, outward views. Any long-distance outward views that are available will generally exist in outskirt areas of the villages and town centers and will be, at least partially, screened by existing buildings/structures, mature street trees, and/or surrounding native vegetation. In this region, many villages and town centers are situated specifically to take advantage of seaports and/or waterfront character. Therefore, in these areas (e.g., Edgartown, Oak Bluffs, and Vineyard Haven, Martha's Vineyard) open water views of the bays, sounds, and ocean are a character defining element and the ocean contributes to the overall scenic quality of the landscape.

Representative examples of the Village/Town Center LSZ can be seen in Figure 1.2-2 Sheet 14.

1.2.4.14 Commercial

This LSZ typically occurs on the mainland in Rhode Island and Massachusetts, and on some of the larger islands, such as Aquidneck and Conanicut (but not on Long Island, Martha's Vineyard, Nantucket, and Block Island). It generally consists of strip commercial development along a highway and includes retail businesses, restaurants, convenience stores, automobile dealers, shopping centers, and malls. Topography is typically level and vegetation is restricted to remnant blocks of trees and landscaping around buildings. Views are focused along the axis of the highway and the foreground is dominated by buildings, automobiles, paved roads, and parking lots. The surrounding landscape varies from village/town center, to suburban residential, to small woodlots. Within the ZVI, this LSZ occurs primarily in East Newport and Middletown on Aquidneck Island in Rhode Island where inland roads are perfectly aligned with the ocean and the SRWF. The Commercial zones throughout the larger VSA typically occur well inland from the shoreline and are therefore outside the ZVI. The majority of the area defining the Commercial LSZ is well inland from the coast and ocean views are typically screened by a combination of build structures and surrounding vegetation. However, the presence of the ocean nearby is typically apparent in the character of these areas, particularly for those users that live, work, or frequently vacation near these locations.

Representative examples of the Commercial LSZ can be seen in Figure 1.2-2 Sheet 15.

1.2.4.15 Agricultural/Open Field

This LSZ is a relatively minor component of the VSA. It is characterized by generally small, level to gently sloping pastures and crop fields, along with hedgerows, orchards, barns, and rural residences. However, this zone also includes several turf farms characterized by relatively large flat fields of mowed grass. Livestock and working farm equipment add to the visual diversity of the open fields. Within the ZVI, this zone occurs in Little Compton, Rhode Island and as a minor component of the landscape in the southwestern portion of Block Island. Larger agricultural fields also occur in Westport, Fairhaven, and Dartmouth, Massachusetts, and smaller fields are present in Chilmark on Martha's Vineyard and Bartlett's Farm on Nantucket. Although open farmland provides for long distance views in this zone, adjacent forest,

coastal scrub, and buildings/structures typically frame/enclose these views and provide significant screening. Because this LSZ occurs primarily inland of the coast, views to the ocean from this LSZ are relatively rare, except in the Little Compton area where agricultural fields typically occur on the highpoints of peninsulas. In such areas, the Open Water/Ocean LSZ is a distinctive extended background feature that contributes to the overall character and scenic quality of the landscape.

Representative examples of the Agricultural/Open Field LSZ can be seen in Figure 1.2-2 Sheet 16.

1.2.4.16 Inland Lakes and Ponds

This LSZ occasionally occurs within ZVI near the coastline, in areas isolated from tidal fluctuation. Examples of freshwater lakes and ponds include Gardiner Pond and Nelson Pond on Aquidneck Island, Squibnocket Pond on Martha's Vineyard, and Hummock Pond and Miacomet Pond on Nantucket. Inland ponds on the Massachusetts and Rhode Island mainland are typically too far inland to be included in the ZVI, or are isolated from coastal views by intervening ridgelines, such as Worden Pond in southern Rhode Island. The dominant visual feature of this zone is an open expanse of flat water that is enclosed by a vegetated shoreline. The shorelines are typically dominated by deciduous and coniferous trees but are occasionally interrupted by man-made features, such as homes, boat launches, and docks. Human activity on the lakes and along the shoreline includes boating, fishing, and swimming. Shoreline trees and low forested hills define the visible background in most views from inland lakes and ponds. In many areas, inland lakes and ponds may be situated along the coast and even atop high Coastal Bluffs and views of the ocean are an integral part of the character of the landscape. Examples include Springhouse Pond on Block Island and Tisbury Great Pond on Martha's Vineyard. Further inland (mainland Massachusetts and Rhode Island), ponds and lakes are typically secluded and include a significant vegetation component, which limits outward views.

Representative examples of the Inland Lakes and Ponds LSZ can be seen in Figure 1.2-2 Sheet 17.

1.2.4.17 Highway Transportation

The Highway Transportation LSZ includes primary, high-volume vehicular travel corridors that traverse the VSA and are dominated by automobiles, pavement, guardrails, and signs. Within the ZVI, this zone is represented by State Route 138, a limited-access highway connecting the Rhode Island mainland to Conanicut and Aquidneck Islands and Route 1 on the Rhode Island mainland. Views from within this LSZ are generally focused on the roadway and associated traffic. Travel is at moderate to high speed, and outward peripheral views are fleeting. As such available views toward the ocean may contribute to the character of this LSZ, but elements within the Open Water/Ocean LSZ are difficult for viewers to distinguish. Within the VSA, the area surrounding the Highway Transportation LSZ, is typically dominated by adjacent buildings/structures and trees with limited elevated long-distance views available. However, in several locations, elevated bridges such as the Pell Bridge, Verrazano Bridge, and Mount Hope Bridge offer elevated, long-distance views over Narragansett Bay, Mount Hope Bay, and the ocean.

Representative examples of the Highway Transportation LSZ can be seen in Figure 1.2-2 Sheet 18.

1.2.5 Viewer/User Groups

Four broad categories of viewer/user groups were identified within the Project VSA and ZVI. These include the following:

1.2.5.1 Local Residents

Local residents include those who live, work, and travel for their daily business within the VSA. They generally view the landscape from their yards, homes, local roads, and places of employment. Residents are concentrated in and around the various village and shoreline residential areas but can be found

throughout the VSA. Except when involved in local travel, residents are likely to be stationary and have frequent or prolonged views of the landscape. Local residents may view the landscape from ground level or elevated viewpoints (typically upper floors/stories of homes). Residents of the various islands within the VSA also experience the landscape from the water since visits to the mainland for goods and services often require travel by ferry. Residents' sensitivity to visual quality is variable and may be tempered by the aesthetic character/setting of their neighborhood or workplace. Those living in more densely settled areas with views focused on their neighborhood street or downtown centers may be less sensitive to landscape changes than those with a view of undeveloped land or the ocean. Residents living on the coast with views toward the water may have an increased level of sensitivity to changes in the seascape. It is generally assumed, however, that all residents are familiar with the surrounding landscape and may be sensitive to changes in their views.

1.2.5.2 Through Travelers

Travelers passing through the area view the landscape from motor vehicles on their way to other destinations. Through travelers are typically moving, have a relatively narrow field of view oriented along the axis of the roadway, and are destination oriented. Drivers on major roads in the area (i.e., Rhode Island State Route 138 and U.S. Route 1) will generally be focused on the road and traffic conditions but will have the opportunity to observe roadside scenery. Passengers in moving vehicles will have greater opportunities for prolonged off-road views than drivers, and therefore may be more aware of the quality of surrounding scenery. However, through travelers who are not residents of the area or vacationers are unlikely to be particularly sensitive to visual change. Occasionally, through travelers may also take advantage of the ferry network to go between the islands and the mainland. These individuals are likely to have a higher sensitivity to visual change, since the viewer can be fully engaged with the scenery and surroundings.

1.2.5.3 Tourists/Vacationers

This viewer group consists of out-of-town vacationers and seasonal/weekend residents who come to the area for the purpose of experiencing its scenic and recreational resources. These viewers include sightseers, families on vacation, and weekend/seasonal homeowners. They may view the landscape on their way to a destination (i.e., on a roadway or ferry) or from the destination itself. Some, such as weekend and seasonal homeowners, may spend extended time in the area. Tourists and vacationers in the area are generally involved in outdoor recreational activities at parks, trails, and beaches, and in natural settings such as forests, dunes and the ocean. Typical activities include bicycling, swimming, recreational boating, fishing, and more passive recreational activities (such as, picnicking, beachcombing, kite flying, or walking. Recreational users are generally considered to have relatively high sensitivity to aesthetic quality and landscape character. They will often have continuous views of landscape features over relatively long periods of time, and scenic quality generally enhances the quality of any outdoor recreational activity even though users may not be specifically involved in sight-seeing. Therefore, this viewer/user group may be particularly sensitive to visual change. Vacation homeowners, tourists, and recreational users will be concentrated in and around the ocean shoreline, but also use interior portions of the islands and public lands on the mainland throughout the VSA.

1.2.5.4 Fishing Community

The fishing community is represented by commercial fishermen who work in and experience the coastal and open ocean environment on a regular basis. The commercial fishing community typically engages in focused activity associated with various methods of catching fish and shellfish, including setting gear such as longlines, trawl nets, and pots or traps. Inshore fishing is restricted to the bays, coves, beaches, and waters along the coast. Offshore fishing occurs many miles offshore along the outer continental shelf, including the Project Lease Area. Despite the focused activity associated with harvesting seafood, the fishing community is particularly sensitive to changes to the visual seascape since there is often nothing in

their immediate environment except for open ocean and horizon. The fishing community can have prolonged visual exposure to the seascape and coastal environment, in which fleets spend hours to days setting gear and harvesting fish. This is also one of the only user groups that would have foreground-middle ground views of the Project, whereas the other viewer/user groups are largely restricted to background and extended background views.

1.2.6 Visually Sensitive Resources

The identification of visually sensitive resources is an important step in determining locations which may be particularly sensitive to visual change. These resources have generally been identified by national, state, or local governments, organizations, and/or Native American tribes as important sites which are afforded some level of recognition or protection. Avoiding or minimizing impacts to these resources is an important consideration in the planning stages of a project. For the VIA, a comprehensive inventory of visually sensitive resources was prepared for the entire VSA. A Geographic Information System (GIS) analysis was then conducted to determine how many of these resources occur within the ZVI and would require further evaluation. Appendix A lists all of the visually sensitive resources that occur within the ZVI (determined by the lidar viewshed analysis). A summary of the types of visually sensitive resources found within the VSA is presented in Table 1.2-3, below.

Table 1.2-3 Types of Visually Sensitive Resources found within the ZVI

Type of Resource	Occurrences of Resource Within ZVI				
	NY	**CT**	**RI**	**MA**	**Total**
National Historic Landmarks	1	0	8	2	11
Properties Listed on the National Register of Historic Places	3	3	42	18	66
Properties Determined Eligible for National or State Registers of Historic Places	3	0	53	5	61
National Natural Landmarks	0	0	0	2	2
State Designated Scenic Areas	7	0	43	33	83
Scenic Area of Local Significance	0	0	0	0	0
State Designated Scenic Overlooks	0	0	0	0	0
National Wildlife Refuges (one NWR area occurs in NY, CT, RI, and MA)	1	1	6	3	8[3]
State Wildlife Management Areas	0	0	7	8	15
National Parks	0	0	0	1	1
State Parks	7	0	4	6	17
State Nature and Historic Preserve Areas	0	0	1	0	1
National Forests	0	0	0	0	0
State Forests	0	0	0	1	1
National Recreation Areas and/or Seashores	0	0	0	0	0
State Beaches	1	0	6	2	9
National or State Designated Wild, Scenic, or Recreational Rivers	0	0	0	0	0
Highways Designated or Eligible as Scenic	1	0	9	0	10
National Historic Trails	0	0	1	0	1
National Recreation Trails	0	0	1	0	1
State Fishing and Boating Access Sites	0	0	29	4	33
Lighthouses (not NRHP-Listed or State Historic-Listed)	0	0	1	25	26
Public Beaches	8	1	44	79	132
Ferry Routes (Occur across multiple states)	2	1	6	10	14[4]
Seaports (Commercial Maritime Facilities)	0	0	0	3	3
Other State Land with Public Access	2	0	6	1	9
Total	36	6	248	198	488

[3] Great Thicket NWR occurs in Massachusetts, Rhode Island, Connecticut, and New York.
[4] Four ferry routes cross stateliness so include a count in multiple states.

The locations of these visually sensitive resources are illustrated in Figure 1.2-3 at the conclusion of this section. Brief descriptions of the visually sensitive resources that occur with the ZVI are presented below:

1.2.6.1 Historic Sites and National Historic Landmarks

Authorized by the National Historic Preservation Act of 1966 (NHPA), the National Register of Historic Places (NRHP) is maintained by the National Park Service (NPS) as part of a national program to coordinate efforts to identify, evaluate, and protect historic and archeological resources. According to the NPS website, the NRHP is the official list of designated historic places worthy of preservation, and National Historic Landmarks (NHL) are historic places that hold historic significance and are designated by the Secretary of the Interior. The State Registers of Historic Places (SRHP) for Massachusetts, New York, and Rhode Island are maintained by their respective State Historic Preservation Offices (SHPOs) and include resources that these states have determined are worthy of preservation, but which have either not been determined eligible for inclusion or have not been evaluated for listing in the NRHP. A Historic Resources Visual Effects Analysis (HRVEA) prepared for the Project (EDR, 2021b) contains additional details on S/NRHP and NHL properties and districts. Additionally, the HRVEA discusses sites and districts in Rhode Island and Massachusetts that have been inventoried by the Rhode Island Historical Preservation & Heritage Commission (RIHPHC) and the Massachusetts Historical Commission (MHC) but are not listed on the SRHPs; these resources are not addressed in this VIA.

Within the ZVI, EDR identified 66 districts and individual properties listed on the NRHP, 61 properties determine eligible for listing on the NRHP, and 11 properties or districts listed as NHLs. These include historic districts, homes, lighthouses, churches, and government buildings (see also EDR, 2020b).

1.2.6.2 National Natural Landmarks

The National Natural Landmarks (NNL) Program identifies sites that contain outstanding biological and geological resources and encourages the conservation of these areas (NPS, 2017c). Gay Head Cliffs and Muskeget Island are the only designated NNLs within the ZVI. Gay Head Cliffs is located on Martha's Vineyard, approximately 21.3 miles from the SRWF at its nearest point, and Muskeget Island is located off the western shores of Nantucket Island, approximately 34.4 miles from the SRWF at its nearest point.

1.2.6.3 State Designated Scenic Areas

The ZVI includes a total of 83 state-designated scenic areas; 43 in Rhode Island (14 of which occur on Block Island) 33 in Massachusetts, and seven in New York. The Rhode Island scenic areas consist of a range of landscapes, from shoreline beaches and bluffs to village areas, coastal scrub, and agricultural fields. All of these areas have been designated as noteworthy or distinctive scenic landscapes or views by the Rhode Island Department of Environmental Management (RIDEM). In Massachusetts, scenic areas were designated by the Massachusetts Department of Conservation & Recreation (MassDCR) and The Nature Conservancy (TNC) during their 1982 Landscape Inventory Project (Commonwealth of Massachusetts, 2017b). Scenic areas within the ZVI in Massachusetts are all in coastal areas, including the Elizabeth Islands and Martha's Vineyard and Nantucket. Seven New York State-designated Scenic Areas of Statewide Significance (SASS) occur within the ZVI in the Town of East Hampton, at Montauk Point, Hither Hills, and Napeague. These areas consist of a mix of steep coastal bluffs, forested hills, tidal ponds and salt marshes, and pasture lands. All of the designated scenic areas within the ZVI are over 16.8 miles from the nearest WTG. No Scenic Areas of Local Significance or State Scenic Overlooks occur within the ZVI.

1.2.6.4 National Wildlife Refuges

The National Wildlife Refuge (NWR) System, managed by the U.S. Fish and Wildlife Service (USFWS), is a system of public lands and waters set aside to conserve the nation's fish, wildlife, and plants (USFWS, 2017a). Eight NWRs occur within the ZVI. Three of these resources are located on the Rhode Island

mainland, and consist of the Ninigret NWR, the Trustom Pond NWR, and the John H. Chafee NWR. The Sachuest Point NWR is located on Aquidneck Island, Rhode Island, and the Block Island NWR is located on the northern portion of Block Island. The Great Thicket NWR, is shared by Rhode Island, Connecticut, New York, and Massachusetts. In addition to Great Thicket NWR, two other NWRs are located in Massachusetts; Nantucket NWR and Nomans Land Island NWR. Nomans Land Island, a former military training site, is closed to the public due to potential safety risks from unexploded ordnance (UXO), as well as a desire to protect the undisturbed natural island habitat (USFWS, 2017c). Nomans Land Island is the closest NWR to the SRWF, approximately 15.1 miles from the nearest proposed WTG.

1.2.6.5 State Wildlife Management Areas

There are 15 State Wildlife Management Areas (WMAs) within the ZVI: seven in Rhode Island, and eight in Massachusetts. These state-owned lands are managed to provide wildlife habitat and accommodate wildlife-related recreation (hunting, bird watching, etc.). The closest WMA to the SRWF WTGs is the Gosnold WMA, located on Cuttyhunk Island, approximately 25.3 miles from the nearest proposed WTG.

1.2.6.6 National Parks

The 1916 National Park Service Organic Act (the Organic Act) established the National Park Service (NPS) and authorized the agency to promote and regulate national parks, monuments, and reservations. The New Bedford Whaling National Historical Park in New Bedford, Massachusetts, is the only NPS property that occurs within the ZVI. Located just off the Acushnet River inlet this resource is approximately 40.5 miles from the nearest proposed WTG.

1.2.6.7 State Parks

Of the 17 State Parks and Reservations that occur within the ZVI, six are located in Massachusetts, seven are located in New York, four are located in Rhode Island, and none are located in Connecticut. Examples of state parks within New York, Rhode Island, and Massachusetts are described below:

Fishermen's Memorial State Park: This Rhode Island State Park is located near Point Judith in the Town of Narragansett, approximately 26.8 miles from the nearest proposed WTG. The park is just over 90 acres in size, and facilities include recreational vehicle (RV) and tent campsites, picnic areas, a playground, and basketball and tennis courts (RIDEM, 2017b).

Brenton Point State Park: Approximately 28.8 miles north of the nearest proposed WTG, this Rhode Island State Park is located midway along Ocean Drive in the Town of Newport on Aquidneck Island, where Narragansett Bay meets the Atlantic Ocean. The park is on the grounds of what was one of Newport's largest estates and includes scenic views along the Atlantic coast. It provides opportunities for picnicking, hiking, fishing, and scenic views of the Atlantic Ocean (RIDEM, 2017b).

Beavertail State Park: Located at the tip of the Town of Jamestown on Conanicut Island, Rhode Island, this park is approximately 29.4 miles from the nearest proposed WTG. The park includes overlooks and trails along the rocky coastline. In addition to sight-seeing, the park also offers saltwater fishing, hiking trails, and a naturalist program (RIDEM, 2017b).

Montauk Point State Park: This New York State Park is located on the eastern tip of the south shore of Long Island, in the Town of East Hampton, approximately 29.5 miles from the nearest proposed WTG. The park offers panoramic views of Block Island Sound where it meets the Atlantic Ocean. Block Island, and the BIWF, are visible at a distance of approximately 16.8 miles. Activities offered at the park include fishing, hiking, hunting, surfing, and cross-country skiing (New York State Office of Parks, Recreation, and Historic Preservation [NYSOPRHP], 2017).

South Beach State Park: This Massachusetts State Park is located on the south shore of Martha's Vineyard in the Town of Edgartown, Massachusetts, approximately 27.1 miles from the nearest proposed WTG. The park includes approximately one mile of white sand beach, with wide, rolling dunes separating the main road from the beach. The area is largely undeveloped, and the beach provides opportunities for recreational activities such as sun-bathing, hiking, fishing, and swimming.

1.2.6.8 State Nature Preserves

One State Nature Preserve, the John H. Chafee Rome Point Preserve State Nature Preserve, occurs within the ZVI. The nature preserve is located in Washington County, Rhode Island, approximately 35.6 miles from the nearest proposed WTG. The Chafee Nature Preserve is a conservation easement between the RIDEM and the Town of North Kingstown. The property is open to the public and provides agricultural, educational, and scenic values, as well as natural and historical resources (RIDEM, 2017a).

1.2.6.9 National and State Forests

There are no National Forests occurring within the ZVI.

The Manuel F. Correllus State Forest, located on the inland portion of Martha's Vineyard, Massachusetts, is the only state forest occurring within the ZVI. This large resource ranges from approximately 26.0 to 29.5 miles from the nearest WTG.

1.2.6.10 State Beaches

State Beaches are typically heavily used bathing beaches that may include large parking areas, bathhouses, pavilions, and concession buildings. Nine state beaches occur within the ZVI, six along the Rhode Island coast, two within South Beach State Park along the southern shore of Martha's Vineyard, Massachusetts, and one in Hither Hills State Park, New York. Distances from these beaches to the nearest WTGs ranges from approximately 25.8 miles to 37.6 miles. Rhode Island State Beaches, all of which have views toward the Project, include Point Judith Fisherman's Memorial State Park, Roger Wheeler, Scarborough, Salty Brine, East Matunuck, and Misquamicut State Beaches. (RIDEM, 2017b).

1.2.6.11 National or State Designated Wild, Scenic, or Recreational Rivers

There are no National or State Designated Wild, Scenic, or Recreational Rivers occurring within the ZVI.

1.2.6.12 Highways Designated or Eligible as Scenic

Ten Scenic Byways occur within the ZVI. Montauk State Parkway is located in New York, and the remaining nine are located in Rhode Island. The Paradise Avenue scenic byway (and associated roads) is located in the Town of Middletown, which follows the waterfront along Sachuest Bay and the Sakonnet River and includes portions of Hanging Rock Road, Indian Avenue, Berkeley Avenue, Mitchell Lane, Wapping Road, Wyatt Road, and Peckham Avenue. Rhode Island Route 1 Scenic Byway (Post Road) running through the Towns of Charleston, South Kingstown, and Westerly parallels the coastline and offers intermittent views of salt marsh ponds and the Atlantic Ocean (RIDOT, 2017a).

1.2.6.13 National Trails

National Trails are officially established under the authorities of the National Trail System Act (1968). National Historic Trails must meet criteria listed under the National Trails System Act and are established by an Act of Congress. National Recreation Trails are existing regional and local trails recognized by either the Secretary of Agriculture or the Secretary of the Interior upon application.

One National Historic Trail, the Washington-Rochambeau Revolutionary Route, occurs within the Rhode Island portion of the ZVI. This trail travels around the Narragansett Bay moving inland across the Providence River and terminating at the southwestern tip of the Scituate Reservoir. Towns connected by

this trail include Barrington, Bristol, Cranston, East Providence, Middletown, Newport, Portsmouth, Providence, Scituate, and Warren. Distances from portions of this trail within the VSA to the nearest WTG range from approximately 32.2 miles to 41.4 miles.

One National Recreation Trail, the Cliff Walk, occurs within the ZVI along the eastern shore of Newport, Rhode Island. This trail is also located within the NRHP-listed Ochre Point Cliffs Historic District. It runs for a total of 3.5 miles, starting at the western end of Easton's Beach (also known as First Beach), proceeding along Narragansett Bay, and ending at the east end of Bailey's Beach (also known as Reject's Beach). The trail offers views of the Atlantic Ocean and passes historic mansions, wildflowers, wildlife, and dramatic rocky shorelines (Cliff Walk, 2015). At its closest point, the Cliff Walk is approximately 28.6 miles from the nearest proposed WTG.

1.2.6.14 State Fishing and Boating Access Sites

Within the ZVI, there are 33 state-owned and/or -managed fishing and boating access sites. Of these, 29 are in Rhode Island (including five on Block Island) and four are in Massachusetts: one each in the Towns of West Tisbury, Edgartown, Westport and New Bedford. The majority of these sites, in both Rhode Island and Massachusetts, provide access to the bays and sounds of the Atlantic Ocean, and all are at least 16.9 miles from the SRWF.

1.2.6.15 Lighthouses

There are 26 lighthouses within the ZVI that are not designated NRHP historic sites, including one in Rhode Island and 25 in Massachusetts. The Menemsha Creek Entrance Jetty Lighthouse on Martha's Vineyard, Massachusetts is the lighthouse located closest to the SRWF, at approximately 22.5 miles from the nearest proposed WTG.

1.2.6.16 Public Beaches

There are 132 public beaches within the ZVI (in addition to the previously mentioned State Beaches). A total of 44 public beaches are located in Rhode Island, 79 in Massachusetts, eight on Long Island in New York, and one in Connecticut. The nearest of these beaches (Mohegan Bluffs on Block Island, Rhode Island) is approximately 16.9 miles from the nearest proposed SRWF WTG.

1.2.6.17 Ferry Routes

Within the ZVI, there are 14 different ferry routes. These routes accommodate multiple ferries departing from and going to Montauk, Block Island, Aquidneck Island, Conanicut Island, mainland Rhode Island and Massachusetts, Cuttyhunk Island, Nantucket Island, and Martha's Vineyard. The ferry that comes closest to the proposed SRWF is the Newport – Block Island Ferry, whose route comes within approximately 17.8 miles of the nearest proposed WTG.

1.2.6.18 Seaports

There are three seaports occurring within the ZVI, all are located within Massachusetts and are characterized by a variety of working waterfront activity. These Seaports include the Gosnold Ferry Terminal which is closest to the Project at 26.0 miles to the nearest WTG, Woods Hole Ferry Terminal, and the Falmouth Harbor.

1.2.6.19 Other State Land with Public Access

Some public lands within the ZVI may not neatly fit within the categories outlined above and do not have commonality in naming, but still allow for public access. Nine of these resources have been identified in the ZVI. The six resources occurring in Rhode Island are categorized according to their administration and are located throughout the state. The resource closest to the SRWF is land connected to Mohegan Bluffs. It is

16.9 miles from the nearest WTG and is administered by Parks and Recreation within the RIDEM. One resource is within Massachusetts and is identified as Westport River Public Access Facility. Two resources in New York have been identified as Hither Woods State Park, and State of New York Lands. These sites are contiguous to Hither Hills State Park and Montauk Point State Park, respectively.

Although not formally inventoried, it should be noted that the ZVI also includes other public resources that could be considered regionally or locally significant or sensitive due to the type or intensity of land use they receive. These include local parks and recreational facilities, campgrounds, golf courses, local nature preserves, tourist attractions, fish and game clubs, schools, churches, cemeteries, areas of concentrated human settlement, and heavily traveled roads. Ocean bays and sounds within the ZVI could also be considered sensitive visual resources. These areas provide recreational opportunities, such as boating, fishing, kayaking, cruising, swimming, and wildlife viewing, and historic villages along these bays offer waterfront dining, shopping, and other tourist attractions and accommodations.

1.2.7 Environmental Justice Areas

Implemented in 1994, Executive *Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires directing attention to a project's environmental and human health effects on minority and low-income populations. While this order addresses actions undertaken by federal agencies, states have also identified parameters to define Environmental Justice areas (EJAs) at the state level to mitigate the potential for disproportionately high and adverse human health or environmental impacts on minority, low-income, and/or indigenous communities and populations from state actions. There are 29 EJAs that occur within some portion of the ZVI. These are identified in Appendix A and Figure 1.2-3.

1.2.8 Local Plan Review

Local comprehensive plans, recreation and open space plans, local waterfront revitalization plans (LWRP [New York State only]), and conservation plans may also identify important visual/aesthetic resources defined by communities. To address potential visual resources identified in these local and state planning documents, EDR first identified municipalities that occur within the ZVI and then quantified the extent of potential visibility within each. For those municipalities that have greater than 5 percent of their land area within the ZVI, each of the applicable plans were consulted to determine the existence of resources important to those communities. Appendix A1 includes an inventory of each municipality that includes greater than 5% ZVI presence as well as an overview of the types of resources identified in these plans.

As shown in Table 1.2-4, below, 11 municipalities were identified as having greater than 5 percent of their land area within the ZVI.

Table 1.2-4 Municipalities With Greater Than Five Percent ZVI Content

Municipality	Percent Within ZVI
Gosnold, Dukes County, MA	20.3%
Aquinnah, Dukes County, MA	18.0%
Edgartown, Dukes County. MA	8.5%
Nantucket, Nantucket County, MA	6.7%
West Tisbury, Dukes County, MA	5.3%
New Shoreham, Washington County, RI	10.0%
Newport, Newport County RI	9.8%
Little Compton, Newport County, RI	9.3%

Middletown, Newport County, RI	9.1%
Narragansett, Washington County, RI	5.7%

Each of the individual towns have some level of comprehensive plan or open space recreation plan. Each of these documents provides general, high-level discussion about the "protection of scenic and historic resources". For example, the Little Compton Comprehensive Plan (AB Planning and Mapping, 2018) identifies the need to protect scenic resources and encourages architectural renovations, conservation land easements/acquisitions, and investigation into the nomination of scenic byways within the town (none existed during development of the plan). The goals outlined in the plan do not specifically address shoreline/ocean vistas but do discuss the need for more sustainable beach access.

The Draft Open Space and Recreation Plan for the Town of Gosnold (Martha's Vineyard Commission, 2018) notes that the Massachusetts Landscape Inventory Project classifies Cuttyhunk Island (Town of Gosnold) as a "Distinctive Scenic Landscape" which signifies the highest visual quality (Martha's Vineyard Commission, 2018). The paramount open space and recreation goals at the time of plan development, was to preserve scenic quality through the conservation of land on the Island. However, panoramic views extending "28 miles" from Lookout Hill were noted as significant contributors to the scenic quality of the Island.

Several of the town comprehensive plans specifically identify the potential risks to historic and scenic resources. These generally relate to contemporary development or renovation/demolition of existing historic properties within the town, but the risk of flooding resulting from climate change and sea-level rise were also identified as a significant risk to scenic and historic coastal resources.

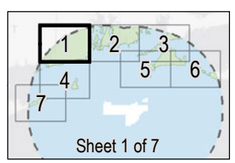
Applicable Coastal Zone Management Act (CZMA) consistency is addressed in Appendix C – Coastal Zone Management Consistency Certifications within the COP.

Sunrise Wind Farm Project

Outer Continental Shelf

Figure 1.2-3: Visually Sensitive Resources within the Zone of Visual Influence

- Selected Key Observation Point
- Ferry Route
- State Scenic Byway
- NRHP-Listed Resource
- NRHP-Eligible Resource
- State Scenic Area
- National Wildlife Refuge
- State Wildlife Management Area
- State Park
- State Nature and Historic Preserve Area
- State Beach
- State Fishing and Boating Access
- State Beach
- Other State-Owned Environmental Land with Public Access
- Environmental Justice Area
- SRWF Zone of Visual Influence (ZVI)
- SRWF Visual Study Area



Notes: 1. Further information on each Visually Sensitive Resource within the ZVI is provided in Appendix A. **2.** Basemap: ESRI ArcGIS Online "World Topographic Map" map service. **3.** This map was generated in ArcMap on October 26, 2021. **4.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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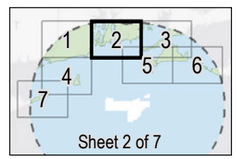
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 1.2-3: Visually Sensitive Resources within the Zone of Visual Influence

- Selected Key Observation Point
- Lighthouse (not NRHP-Listed)
- Seaport
- Ferry Route
- State Scenic Byway
- National Historic Trail
- National Recreation Trail
- National Historic Landmark
- NRHP-Listed Resource
- NRHP-Eligible Resource
- State Scenic Area
- National Wildlife Refuge
- State Wildlife Management Area
- National Park
- State Park
- State Nature and Historic Preserve Area
- State Fishing and Boating Access
- State Beach
- Other State-Owned Environmental Land with Public Access
- Environmental Justice Area
- SRWF Zone of Visual Influence (ZVI)
- SRWF Visual Study Area



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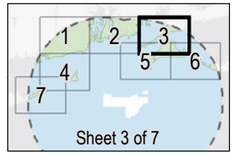
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 1.2-3: Visually Sensitive Resources within the Zone of Visual Influence

- Selected Key Observation Point
- Lighthouse (not NRHP-Listed)
- Seaport
- Ferry Route
- National Historic Landmark
- NRHP-Listed Resource
- NRHP-Eligible Resource
- State Scenic Area
- National Wildlife Refuge
- State Wildlife Management Area
- National Park
- State Park
- State Forest
- State Fishing and Boating Access
- State Beach
- Environmental Justice Area
- SRWF Zone of Visual Influence (ZVI)
- SRWF Visual Study Area



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Outer Continental Shelf

Figure 1.2-3: Visually Sensitive Resources within the Zone of Visual Influence

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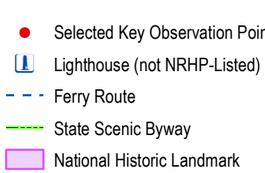
- State Fishing and Boating Access
- State Beach
- Other State-Owned Environmental Land with Public Access
- Environmental Justice Area
- SRWF Zone of Visual Influence (ZVI)
- SRWF Visual Study Area



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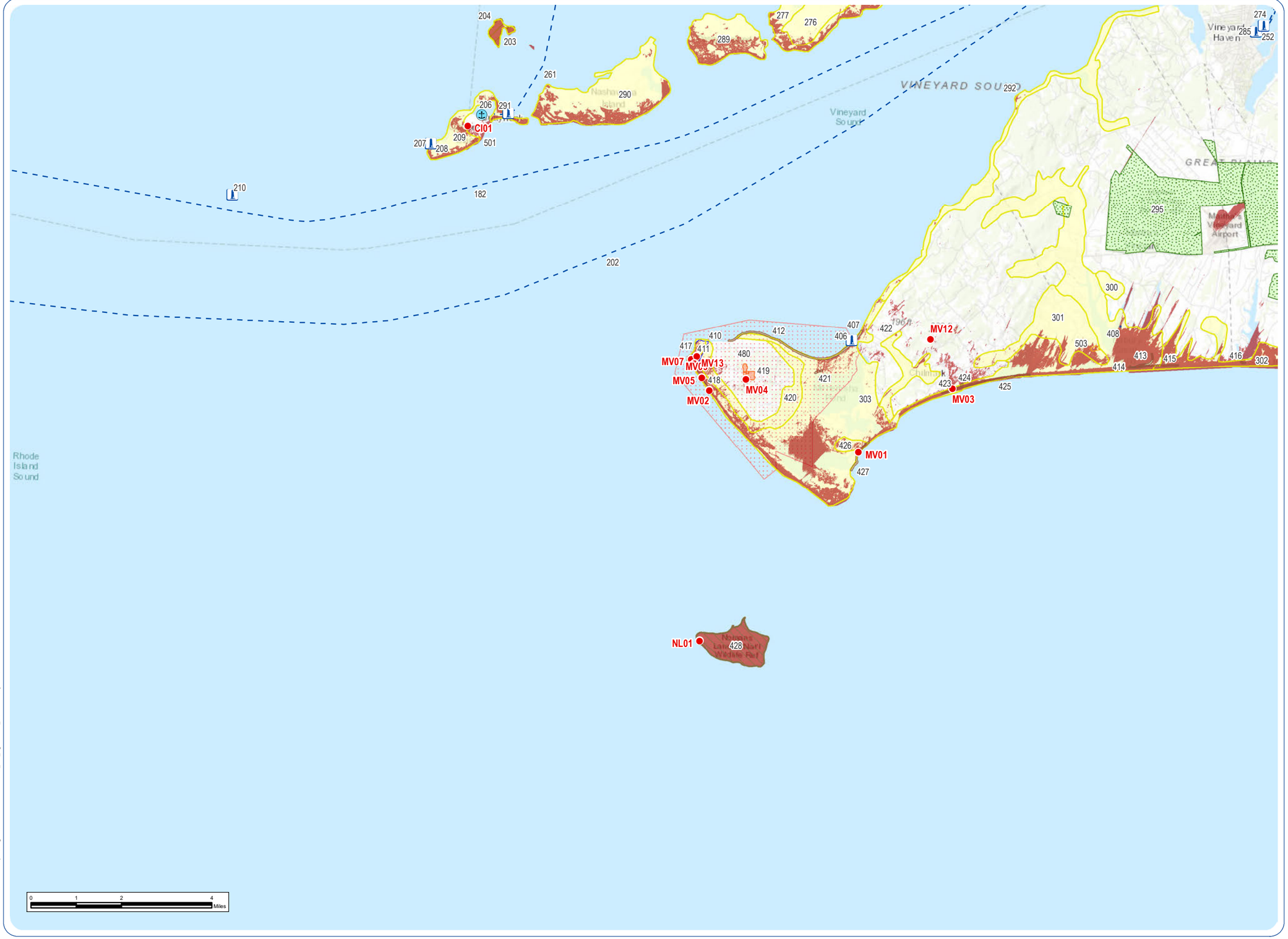
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 1.2-3: Visually Sensitive Resources within the Zone of Visual Influence



- Selected Key Observation Point
- Lighthouse (not NRHP-Listed)
- Seaport
- Ferry Route
- NRHP-Listed Resource
- NRHP-Eligible Resource
- National Natural Landmark
- State Scenic Area
- National Wildlife Refuge
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- State Forest
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- State Beach
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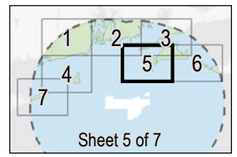

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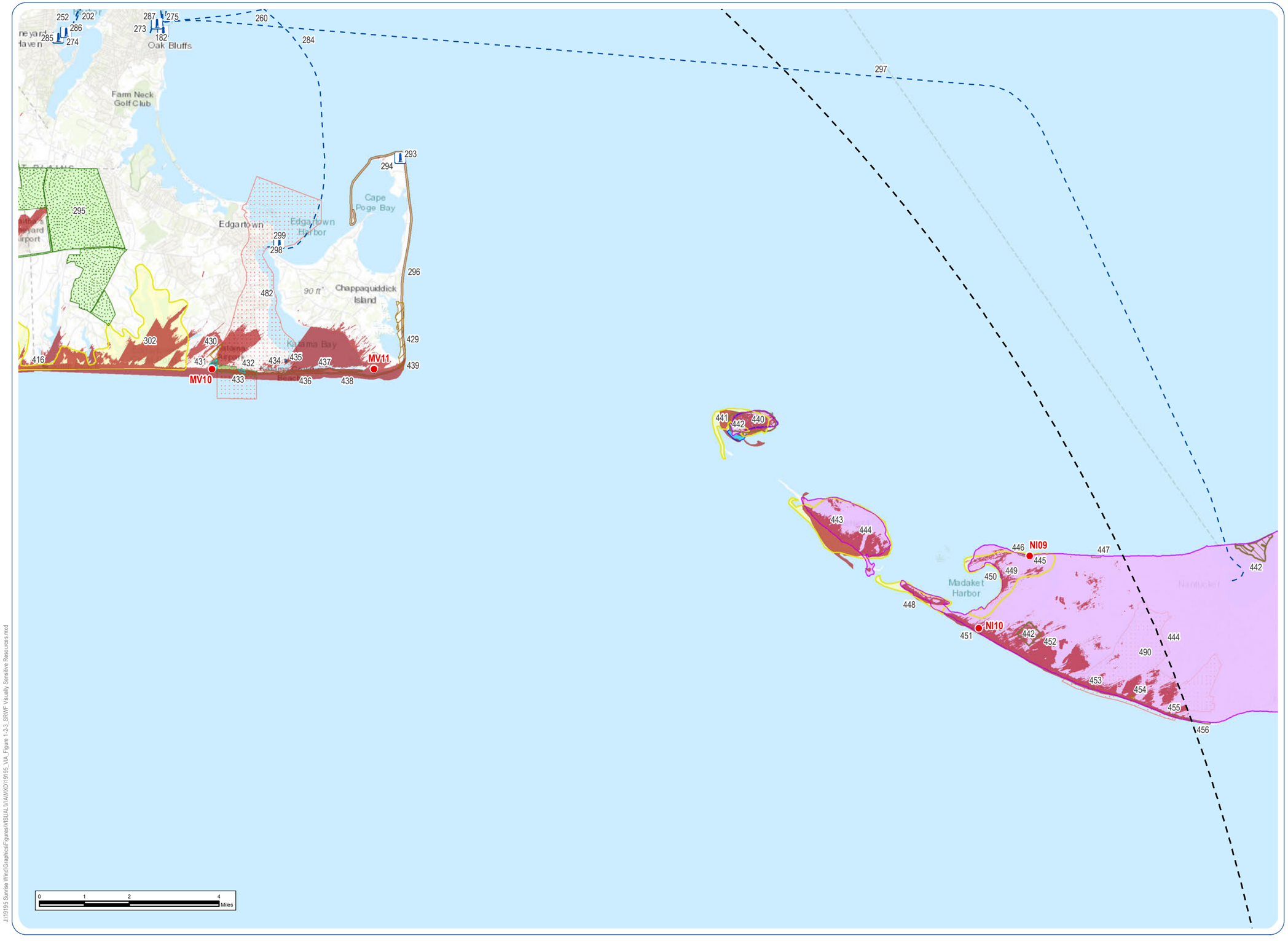
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 1.2-3: Visually Sensitive Resources within the Zone of Visual Influence



- Selected Key Observation Point
- Lighthouse (not NRHP-Listed)
- Ferry Route
- National Historic Landmark
- NRHP-Listed Resource
- National Natural Landmark
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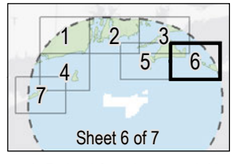

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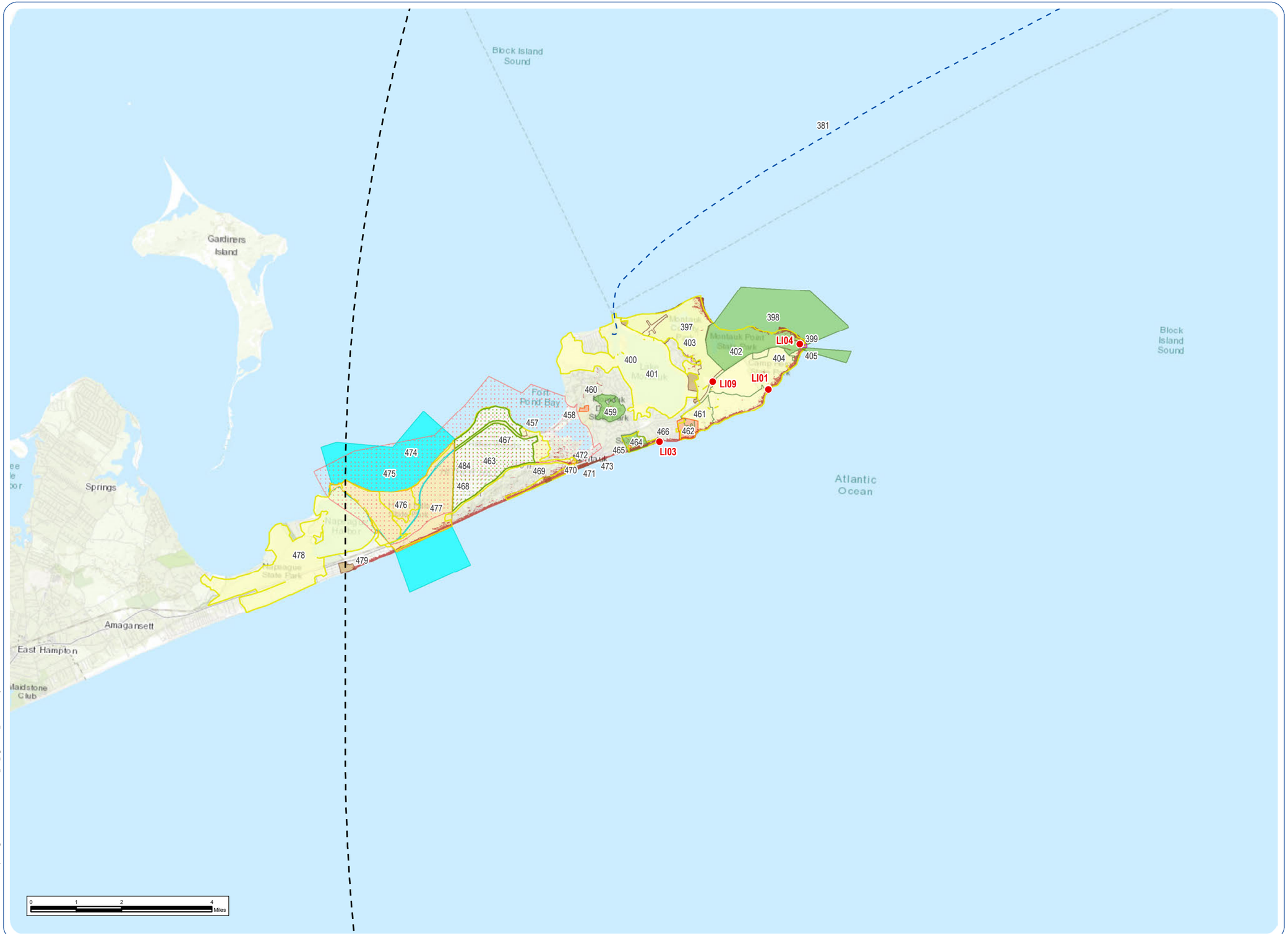
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 1.2-3: Visually Sensitive Resources within the Zone of Visual Influence



- Selected Key Observation Point
- Ferry Route
- National Historic Landmark
- NRHP-Listed Resource
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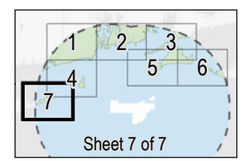

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2.0 VISUAL IMPACT ASSESSMENT METHODOLOGY

At the time this study was prepared BOEM had not yet released its guidelines for visual impact assessment for projects under its jurisdiction (BOEM, 2021). The VIA procedures used for this study draw from methodologies developed by various state and federal agencies, including the BLM (1980), USFS (1974), USDOT Federal Highway Administration (1981), the U.S. Army Corps of Engineers (USACE) (Smardon et al., 1988) and the New York State Department of Environmental Conservation (not dated). Methodologies employed to inventory visual resources, analyze the Project's potential viewshed (i.e., the ZVI), and prepare visual simulations are also generally consistent with European and Canadian guidance developed specifically for onshore and offshore wind farms (University of New Castle, 2002; Enviros Consulting, 2005; Horner & Maclennan and Envision, 2006, Ministry of Forests, Lands, and Natural Resource Operations, 2016).

A Visual Impact Assessment Study Plan - Offshore outlining methodologies to be used in this VIA was developed, and discussions with involved agencies were held from November 2019 to April 2020. The Study Plan was provided to BOEM, MHC, Rhode Island Historical Preservation and Heritage Commission, New York State Office of Parks Recreation and Historic Preservation (OPRHP), and Native American tribes for review in February of 2020. The Study Plan was submitted for formal OPRHP review in May of 2020. The final Visual Impact Assessment Study Plan – Offshore incorporating comments received from the involved agencies can be found in Appendix G.

The specific techniques used to assess potential Project visibility and visual impacts are described in the following section.

2.1 Potential Project Visibility

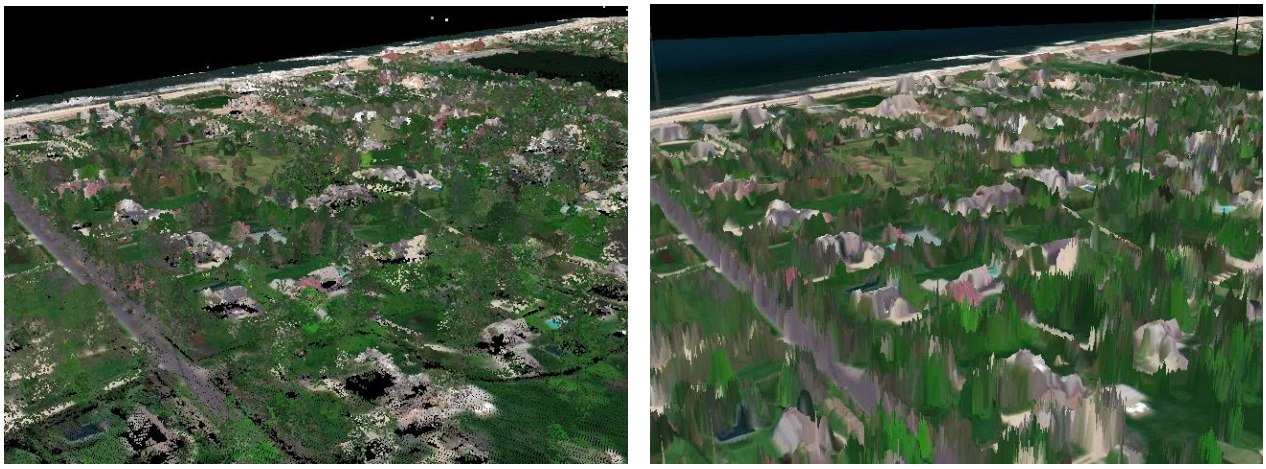
An analysis of potential Project visibility was undertaken to identify those locations within the VSA where it may be possible to view the proposed WTGs and OCS–DC from ground-level vantage points. This analysis included identifying potentially visible areas on viewshed maps, preparing technical cross sections, and verifying line of sight conditions in the field. The methodology employed for each of these assessment techniques is described below.

2.1.1 Viewshed Analysis

As mentioned previously, a viewshed analysis was conducted to determine the possible extent of the Project's visibility (the ZVI) within the and VSA utilizing USGS lidar data collected between 2010 and 2014 for Long Island, Rhode Island, Massachusetts, and Connecticut. Using the lidar data, a highly detailed digital surface model (DSM) of the VSA was created at a horizontal resolution of three meters (Inset 2.1-1). The DSM includes the elevations of buildings, trees, and other objects large enough to be resolved by lidar technology. Additionally, a bare- digital elevation model (DEM) was created, representing bare earth conditions. The DEM was created at the same resolution as the DSM to allow direct comparison of ground elevation with the elevation of surface features (including the ground, buildings, and vegetation) in the DSM. To account for some small lidar data gaps, USGS 10-meter resolution DEM and NLCD data were used to complete the DSM lidar model. The DSM was then used as a base layer for the viewshed analysis, which was conducted using ESRI ArcGIS® software with the Spatial Analyst extension and earth curvature corrections.

The analysis of potential SRWF visibility within the VSA was based on 123 points representing the WTG locations currently under consideration (using latitude and longitude coordinates provided by Sunrise Wind), an assumed maximum blade tip height of 968 feet (295 m), and an assumed viewer height of 6 feet (1.83 m). Additional viewshed was analyses were completed to assess 1) the visibility of the aviation

obstruction lights at a height of 597 feet (182 m) (see Inset 1.1-2), 2) the visibility of the mid-tower aviation obstruction lights at an elevation of 287 feet (87.5 m), and 3) the visibility of USGS navigation warning lights on the WTG deck at an elevation of 98 feet (30 m). It should be noted that all 123 foundation locations are considered to be WTGs in this analysis which provides flexibility in the determination of OCS–DC position. Consequently, the resulting ZVI conservatively considers the maximum degree of SRWF visibility within the VSA.



Inset 2.1-1 – Lidar Point Cloud (Left) and processed lidar grid (right).

Once the viewshed analysis was completed, a conditional statement was used to set Project visibility to zero in locations where the DSM elevation exceeded the bare earth (DEM) elevation by 6 feet or more. This was done because: 1) without this adjustment in locations where trees or structures are present in the DSM the viewshed would reflect visibility from the treetops or building roofs, which is not the intent of this analysis; and 2) ground-level vantage points within buildings or areas of vegetation exceeding 6 feet in height will generally be screened from views of the Project. The resulting viewshed analysis provides an exceptionally accurate prediction of Project visibility from onshore resources. However, changes in vegetation height, clearing, grading, and the addition or removal of structures since the lidar data were collected may result in minor visibly discrepancies.

2.1.2 Field Verification

Potential visibility of the proposed Project was evaluated in the field between June 2017 and July 2020. The purpose of this exercise was to verify the existence of direct lines of sight to the water in the direction of the proposed Project from representative KOPs and other sites with potential Project visibility, as indicated by viewshed analysis. Field review was also used to obtain photographs from selected KOPs for subsequent use in the development of visual simulations. Fieldwork was completed under a range of sky conditions (overcast to clear), but during the KOP photography visibility was recorded as being 10 miles or greater in all instances.

At each of the KOPs, EDR's field crew selected an appropriate photo location based on the availability of an open view toward the Project site, appropriate composition, lighting, and, if possible, the inclusion of distinctive foreground features that allow recognition of the viewpoint by the public. In some cases, photos were taken from multiple viewpoints at a single KOP to cover a range of compositions and perspectives. At each viewpoint, a series of overlapping photos of the entire visible seascape was obtained in five-degree

increments. A tripod-mounted, full frame digital single lens reflex (SLR) camera with a resolution of 30.4 megapixels and a 50-millimeter lens was used for all photos. This focal length is the standard used in VIAs because it most closely approximates normal human perception of spatial relationships and scale in the landscape. Additionally, high-resolution video was taken at each of the simulated KOPs for use in video animations demonstrating the WTGs and environment in motion.

For views lacking background alignment features (i.e., identifiable landscape features with known locations), the field crew also utilized global positioning system (GPS) equipment with sub-meter accuracy to document the location of each KOP and foreground reference features (e.g., buildings, fences, flag poles, placed flags) visible in the photos. Precise locations of these features allow accurate camera alignment during the development of visual simulations. It also assures that the resulting simulations have a high degree of accuracy in terms of WTG location and perceived size relative to other landscape features.

In some cases where foreground reference features were lacking, EDR consulted the Automatic Identification System (AIS) when offshore anchored ships were present in the view. This system automatically documents a vessel's position in a central database that is accessible to the public. If a vessel was determined to be anchored and visible to the photographer, the precise coordinates of the vessel were logged and recorded every five minutes during the photography session (to account for potential anchor drag). If there were no vessels anchored or visible, EDR utilized an unmanned aircraft system (UAS) to provide a visual reference feature in the photographs. The UAS was flown to a specific position, photographed from shore, and its position and altitude were automatically logged on a time-matched flight recorder. The UAS also documented views toward the camera and provided time-tagged and geo-tagged photographs as redundant positional documentation.

For one KOP, photographs were not obtained during field review. Nomans Land Island NWR contains dangerous UXO that caused the federal government to ban public access to the island. While this site was requested to be included as a KOP by the Wampanoag Tribe of Gay Head (Aquinnah), the coordination of such a trip would have caused substantial complications and delays. In place of an actual photograph from this location, EDR created a virtual three-dimensional (3D) model of the island for use in developing the simulation from that site.

Appendix B includes a list and photolog depicting each KOP visited during field review.

2.2 Project Visual Impact

Beyond evaluating potential Project visibility, the VIA also examined the potential visual impacts associated with the proposed Project on seascapes, landscapes, and viewers within the ZVI. This assessment involved creating computer models of the proposed WTGs and OCS–DC, selecting representative KOPs within the ZVI, and preparing computer-assisted visual simulations of the proposed Project. These simulations were then used to characterize the type and extent of visual impact resulting from Project operation. The assessment used the following four steps to evaluate the Project's visual impact:

1. Evaluate the scenic quality of the identified LSZs within the ZVI using representative baseline photographs from within each of the LSZs (Section 2.2.1).
2. Evaluate the scenic quality of the existing views from representative KOPs (Section 3.2.1).
3. Evaluate the scenic quality of the proposed view from representative KOPs and assess the change in scenic quality (Section 3.2.2).
4. Evaluate the Visual Threshold Level (VTL) at each KOP to predict the Project's visual contrast with the ocean, seascape, and landscape features (Section 3.2.3).

2.2.1 Landscape Similarity Zone Scenic Quality Evaluation

The visual impact of the SRWF was evaluated using a modified version of USACE Visual Resources Assessment Procedure (VRAP) (Smardon et al., 1988). Using a scoring system and forms based on those provided in the VRAP Manual (Smardon et al., 1988), this evaluation assigned each LSZ a specific scenic quality designation based on quantitative scoring of various landscape elements/features. This step in the process is typically known as the Management Classification System (MCS). However, because management classification is reserved for actions occurring within the various LSZs, this system was determined to be inappropriate for offshore projects, which occur only within the ocean LSZ. Therefore, the MCS portion of the VRAP was used to simply define the scenic quality of the various LSZs in order to provide a baseline for the evaluation of potential seascape/landscape impacts.

The aesthetic quality of each of the LSZs defined within the ZVI was evaluated by a panel of five visual professionals (see resumes in Appendix F). Each panel member was given access to digital files including the following information:

- Representative photos of each of the defined LSZs (see Figure 1.2-2).
- Narrative descriptions of each of the defined LSZs (see Section 1.2.4).
- Maps illustrating the SRWF ZVI, the Project Location, and LSZ areas (see Figure 1.2-2).
- Rating forms (modified Form 4 from the USACE VRAP Manual - see Appendix D).
- Guidance for completing the evaluation, including definition of terms (see Appendix D).
- Google Earth Placemarks identifying representative LSZ locations within the VSA.

In addition, all panel members participated in a meeting (by conference call) to review the information provided to them, receive additional information on the location, extent, and aesthetic character of the LSZs (from Project team members who had been on-site), and instructions on completing the evaluation forms they had been provided.

Within each LSZ, the visual quality of six landscape components (landform, water resources, vegetation, land use, user activity, and special considerations) was evaluated by each rating panel member and given a numerical score on a scale of 1-9 (see Appendix D and E for rating forms used in the VIA). The resulting scores were then converted back to a 1-3 scale to remain consistent with the scoring values established in the VRAP Manual. The complete set of rating panel forms used for the sensitivity rating is provided in Appendix D.

The numerical scores from each evaluator were totaled and averaged to generate a composite rating for each LSZ. The composite rating placed each LSZ into one of the three sensitivity classifications as described in Table 2.2-1, below.

Table 2.2-1 Scenic Quality Designations

Type of Resource	Occurrences of Resource Within ZVI
Preserved	These areas are considered to be unique and to have the most distinct visual quality in the region. They often include significant views of the ocean, and the ocean is a significant contributor to the scenic quality of the view. Human development is minimal or subtle and does not detract from the scenic quality. These views and locations are highly valued and may be protected by federal and state policies and laws (Score of 17 or more).
Retained	These areas are regionally recognized as having distinct visual quality and likely include significant to secondary views of the ocean and seascape which also contribute significantly to scenic quality. Human development may be apparent, and some degree of modified landscape/seascape is expected (Score of 14 to 16).
Partially Retained	These areas are locally valued for above average visual quality. These areas may include views of the ocean and seascape, but human development and landscape modification is apparent and expected (Score of 11 to 13).
Modified	These areas are not noted for their distinct qualities and are often considered to be of average visual quality. Views of the ocean and seascape are partially screened or hampered by development and modification to the landscape (Score of 8 to 10).
Impaired	These areas are noted for their minimal visual quality and are often considered heavily modified by human development. Views of the ocean and seascape are secondary or non-existent (Score of less than 8).

2.2.2 Landscape Similarity Zone Scenic Quality Evaluation Results

The scenic quality evaluation of each LSZ within the ZVI, as determined by the rating panel, is presented in Table 3.2-1, below. The completed rating forms are included in Appendix D.

Table 3.2-1 LSZ Scenic Quality Evaluation Results

Landscape Similarity Zone	Rating Panel Members						Classification
	Kellie Connelly	Richard Smardon	Jocelyn Gavitt	Nicole Reddington	Steve Breitzka	Average[1]	
Coastal Bluffs	16.0	16.3	16.7	17.0	15.3	**16**	Retained
Inland Lakes and Ponds	13.7	15.0	15.7	16.3	15.7	**15**	Retained
Coastal Dunes	14.7	15.7	14.7	15.3	13.7	**15**	Retained
Maintained Recreation Area	11.0	14.3	17.3	14.3	16.3	**15**	Retained
Salt Pond Tidal Marsh	14.0	15.0	15.3	14.7	12.5	**14**	Retained
Open Water	11.3	15.3	16.3	14.3	14.7	**14**	Retained
Shoreline Beach	11.3	13.3	16.7	14.3	12.3	**14**	Retained
Coastal Scrub/Shrub	12.7	15.0	12.3	14.7	15.0	**14**	Retained
Village or Town Center	13.3	11.7	14.0	15.0	13.8	**14**	Retained
Agricultural/Open Field	13.3	11.8	13.5	14.2	11.0	**13**	Partially Retained
Shoreline Residential	12.7	11.3	14.3	12.7	13.7	**13**	Partially Retained
Developed Waterfront	10.3	12.3	14.7	13.0	12.8	**13**	Partially Retained
Rural Residential	13.3	11.5	14.3	11.0	11.5	**12**	Partially Retained
Forest	9.7	11.7	11.0	11.7	9.0	**11**	Partially Retained
Suburban Residential	8.7	12.2	9.8	10.8	9.0	**10**	Partially Retained
Highway Transportation	10.0	10.0	9.7	5.0	6.0	**8**	Modified

Landscape Similarity Zone	Rating Panel Members						Classification
	Kellie Connelly	Richard Smardon	Jocelyn Gavitt	Nicole Reddington	Steve Breitzka	Average[1]	
Commercial	7.7	8.7	7.2	6.7	6.3	**7**	Impaired

[1]Average rating scores were rounded to the nearest whole number for consistency with the VRAP thresholds.

As summarized in Table 3.2-1 the average score of five rating panel members classified nine of the 17 LSZs as having Retained scenic quality. These LSZs received average scores ranging from 14 to 16. Retained landscapes and seascapes are regionally recognized as having distinct visual quality. Human development may be apparent in these areas and some degree of modified landscape/seascape is expected. These areas are assumed to have relatively high susceptibility to visual change due to the intactness of the existing landscape/seascape and lack of discordant elements. LSZs in this class include the Coastal Bluffs, Inland Lakes and Ponds, Coastal Dunes, Maintained Recreation Area, Salt Pond Tidal Marsh, Open Water, Shoreline Beach, and Coastal Shrub/Shrub. In all of these, the ocean or seascape are significant contributors to the overall scenic quality of the LSZ. Village/Town Center is also included in the Retained landscapes and includes potential views of the ocean, but the evaluation criteria indicated high scores were primarily associated with cultural resources, land use, and user activity.

Six LSZs, including Agricultural/Open Fields, Shoreline Residential, Developed Waterfront, Rural Residential, Forest, and Suburban Residential LSZs received average scores between 10 and 13, which is consistent with a Partially Retained landscapes. These areas are locally valued for above average visual quality. They may include views of the ocean and seascape, but human development and landscape modification is apparent and expected. These landscapes/seascapes may also be significant contributors to scenic quality when viewed from within other LSZs.

The Highway Transportation and Commercial LSZs received a score of 8, indicating a modified landscape. These areas typically have minimal visual quality and can tolerate substantial visual change. The Highway Transportation LSZ is not noted for distinct qualities and is considered to be of average visual quality. Views of the ocean and seascape are typically observed from moving vehicles and partially screened or influenced by development and heavy modification to the landscape.

The Commercial LSZs received a score of 7, indicating an impaired landscape. These areas typically have minimal visual quality and can tolerate substantial visual change. These areas are often heavily modified by human development and views of the ocean and seascape are secondary or non-existent.

The visual impact procedure, discussed in Section 2.2.5 uses the same evaluation form to assess the scenic quality of views at individual KOPs. The evaluation results for the LSZs will be used to verify the existing scenic quality evaluations of the KOPs that occur within the respective LSZs.

2.2.3 Selection of Key Observation Points

In developing the Wind Energy Areas (WEAs) on the OCS, BOEM commissioned the *Visualization Study for the Massachusetts And Rhode Island Wind Energy Areas* (BOEM, 2014) to evaluate the potential visual impacts associated with offshore wind development. This study identified visually sensitive KOPs with views toward the Massachusetts and Rhode Island offshore lease areas. Based on the results of the BOEM study, EDR identified specific viewpoints prior to, and during, the field verification process as representative KOPs with potential for the development of visual simulations. In addition, Sunrise Wind, EDR, and the Public Archaeology Laboratory, Inc. (PAL) had multiple discussions with various agencies and stakeholders to identify KOPs of visual and cultural importance during consultation associated with Orsted and Eversource's other projects located in the Massachusetts/Rhode Island Wind Energy Areas (Revolution

Wind and South Fork Wind)[5]. Agencies and Stakeholders involved in these discussions included the Wampanoag Tribe of Gay Head (Aquinnah), the Shinnecock Indian Nation, the Mohegan Tribe of Indians in Connecticut, the Mashantucket Pequot Tribal Nation, the Mashpee Wampanoag Tribe, the MHC, the NYSOPRHP, and the Massachusetts Department of Environmental Protection (MassDEP). The representative KOPs identified through this process, noted as selected KOPs or candidate KOPs, are listed in Appendix B. Additionally, the location of KOPs relative to the Project ZVI and landcover types are illustrated in Appendix B2.

Based on the research and consultation described above, the photos captured during field verification, and a review of data regarding viewer activity and sensitive public resources, EDR selected a total of 40 unique KOP locations within the SRWF ZVI for the development of the visual simulations. The KOPs were selected based upon the following criteria (KOP specific selection criteria are provided in Appendix B):

- They were identified as KOPs by federal, state, local, or tribal officials/agencies as important visual resources, either in prior studies or through direct consultation.
- They provide clear, unobstructed views toward the SRWF site (as determined through field verification).
- They illustrate the most open views available from historic sites, designated scenic areas, and other visually sensitive resources within the ZVI.
- They are representative of a larger group of candidate KOPs of the same type or in the same geographic area.
- They illustrate typical views from LSZs where views of the Project are most likely to be available.
- They illustrate typical views of the proposed SRWF that will be available to specific viewer/user groups within the ZVI.
- They illustrate typical views from a variety of geographic locations and under different lighting conditions to illustrate the range of visual change that could occur with SRWF in place.

Since Project visibility is largely limited to areas that include open water in the view, only nine LSZs (Open Water/Ocean, Shoreline Beach, Coastal Bluff, Coastal Dunes, Salt Pond/Tidal Marsh, Shoreline Residential, Coastal Scrub/Shrub, Forest, and Maintained Recreational Areas) and two distance zones (Background and Extended Background) were represented by the simulations. However, these simulations show the full range of Project visibility and visual effect that will be available from publicly accessible vantage points within the ZVI for the proposed Project. As discussed above, the selection of KOPs considered geographic distribution to insure adequate coverage of the ZVI. However, there are several areas in which visibility extends inland, beyond the shoreline. Several KOPs selected for the production of visual simulations provide representation of these areas, but in many instances these inland areas of potential Project visibility occur on private or otherwise inaccessible property. Generally, these areas include farm estates, airports, private residences, salt marshes, and inland ponds. The intent of the VIA is to provide representative distances, viewing angles, and viewing circumstances that could be applied broadly across locations with similar viewing circumstances.

Locations of the selected KOPs are shown in Figure 2.2-1. Information regarding each of these selected KOPs is summarized in Tables 2.2-2. KOPs considered for the development of visual simulation but determined through the viewshed analysis or simulation process to have minimal or no visibility of the SRWF are summarized in Table 2.2-3. Appendix B includes all KOPs identified and ultimately selected for the production of visual simulations. Additionally, Appendix B includes a table detailing the identification and selection criteria for each KOP.

[5] The Revolution Wind Farm, South Fork Wind Farm, and Sunrise Wind Farm visual study areas include similar geographic regions and therefore this VIA draws from previous consultations associated with the South Fork Wind Farm and Revolution Wind Farm.

Table 2.2-2 KOPs Selected for Visual Simulations

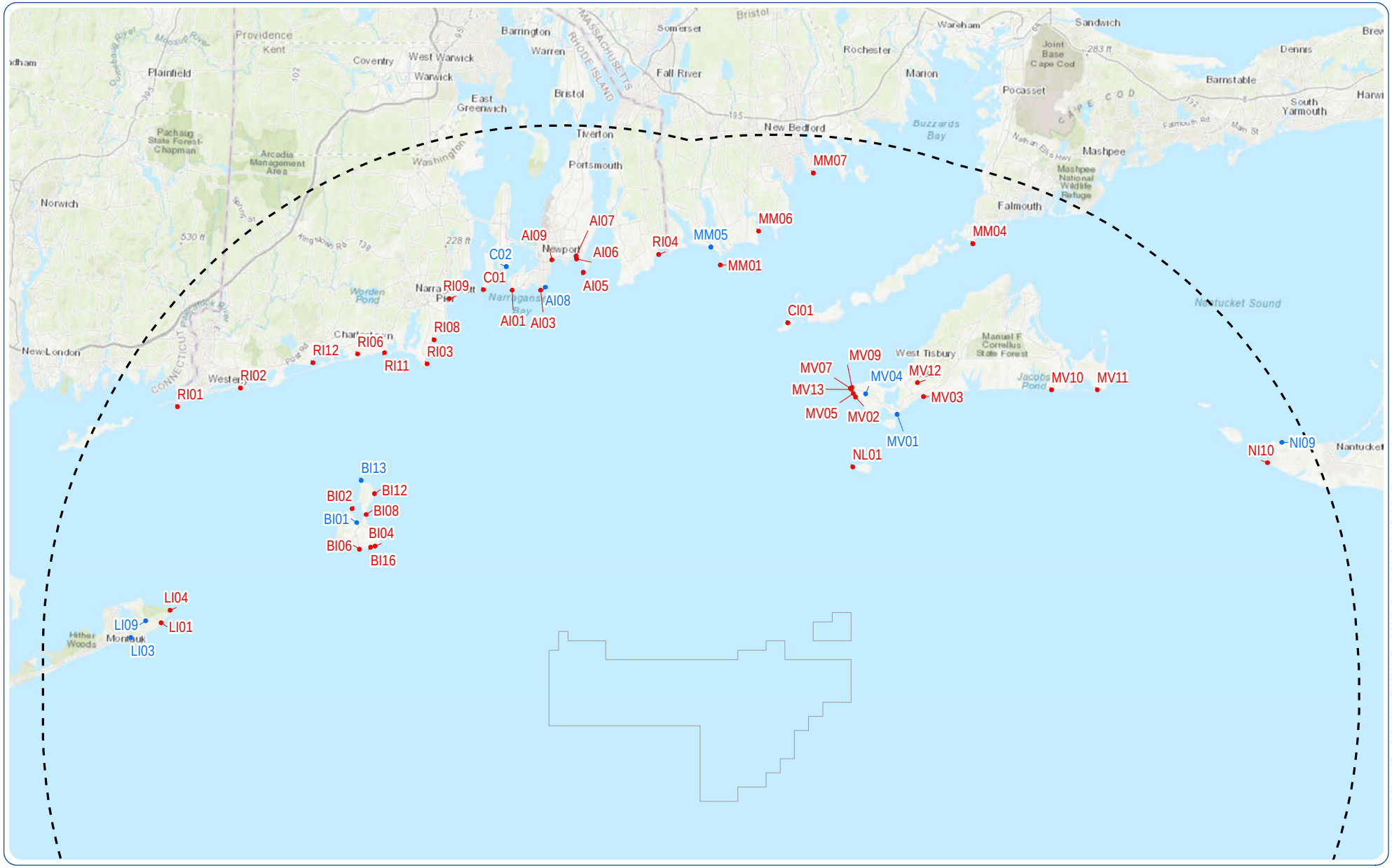
KOP	KOP Name	Location	Latitude, Longitude (WGS 84)	Conditions Present	LSZ	Distance to SRWF (Miles/km)
New York						
LI01	Camp Hero State Park Overlook	Town of East Hampton, Suffolk County, New York	41.0572° N, 71.8717° W	Summer Afternoon	Coastal Bluff	31.2/50.2
LI04	Montauk Point State Park	Town of East Hampton, Suffolk County, New York	41.0721° N, 71.8590° W	Summer Late Afternoon & Nighttime	Maintained Recreation Area	30.6/49.2
Massachusetts						
CI01	Cuttyhunk Island	Town of Gosnold, Dukes County, Massachusetts	41.4205° N, 70.9341° W	Winter Midday	Coastal Scrub/Shrub	25.8/41.5
MM01	Gooseberry Island	Town of Westport, Bristol County, Massachusetts	41.4851° N, 71.0388° W	Summer Early Afternoon	Coastal Scrub/Shrub	30.7/49.4
MM04	Nobska Lighthouse	Town of Falmouth, Barnstable County, Massachusetts	41.5158° N, 70.6551° W	Summer Morning	Maintained Recreation Area	34.7/55.8
MM06	Demarest Lloyd State Park	Town of Dartmouth, Bristol County, Massachusetts	41.5261° N, 70.9807° W	Summer Midday	Shoreline Beach, Coastal Scrub/Shrub	33.1/53.3
MM07	Fort Taber District	Town of New Bedford, Bristol County, Massachusetts	41.5950° N, 70.9023° W	Summer Early Afternoon	Maintained Recreation Area	37.8/60.8
MV02	Philbin Beach	Town of Aquinnah, Dukes County, Massachusetts	41.3374° N, 70.8289° W	Summer Early Afternoon	Shoreline Beach	21.0/33.8
MV03	Lucy Vincent Beach	Town of Chilmark, Dukes County, Massachusetts	41.3395° N, 70.7257° W	Summer Midday & Winter Late Afternoon (Sunset)	Coastal Bluffs	22.0/35.4
MV05	Moshup Beach	Town of Aquinnah, Dukes County, Massachusetts	41.3413° N, 70.8323° W	Winter Late Morning	Coastal Dunes	21.2/34.1
MV07	Aquinnah Overlook	Town of Aquinnah, Dukes County, Massachusetts	41.3473° N, 70.8370° W	Summer Morning, Winter Late Afternoon (Sunset), & Winter Nighttime	Coastal Bluff	21.5/34.6
MV09	Gay Head Lighthouse	Town of Aquinnah, Dukes County, Massachusetts	41.3483° N, 70.8345° W	Summer Morning & Winter Late Afternoon (Sunset)	Maintained Recreation Area	21.6/34.8

KOP	KOP Name	Location	Latitude, Longitude (WGS 84)	Conditions Present	LSZ	Distance to SRWF (Miles/km)
MV10	South Beach State Park	Town of Edgartown, Dukes County, Massachusetts	41.3498° N, 70.5310° W	Summer Morning	Shoreline Beach	27.1/43.6
MV11	Wasque Point	Town of Edgartown, Dukes County, Massachusetts	41.3508° N, 70.4618° W	Fall Midday	Shoreline Beach	29.4/47.3
MV12	Peaked Hill	Town of Chilmark, Dukes County, Massachusetts	41.3552° N, 70.7353° W	Summer Early Afternoon & Winter Late Afternoon (Sunset)	Forest	22.9/36.9
MV13	Edwin D Vanderhoop	Town of Aquinnah, Dukes County, Massachusetts	41.3460° N, 70.8355° W	Summer Midday	Coastal Bluff	21.5/34.6
NI10	Madaket Beach	Town of Nantucket, Nantucket County, Massachusetts	41.2702° N, 70.2013° W	Summer Midday (Overcast &Clear)	Shoreline Beach	37.0/59.5
NL01	Nomans Land Island	Town of Chilmark, Dukes County, Massachusetts	41.2571° N, 70.8308° W	Winter Late Afternoon (Sunset)	Coastal Bluff	15.6/25.1
Rhode Island						
AI01	Brenton Point State Park	Town of Newport, Newport County, Rhode Island	41.4504° N, 71.3548° W	Summer Afternoon & Summer Nighttime	Maintained Recreation Area	28.9/46.5
AI03	Newport Cliff Walk	Town of Newport, Newport County, Rhode Island	41.4512° N, 71.3116° W	Summer Morning	Shoreline Residential, Maintained Recreation Area	28.6/46.0
AI05	Sachuest Point National Wildlife Refuge	Town of Middletown, Newport County, Rhode Island	41.4727° N, 71.2472° W	Fall Morning	Coastal Scrub/Shrub	29.8/48.0
AI06	Sachuest Beach (Second)	Town of Middletown, Newport County, Rhode Island	41.4880° N, 71.2580° W	Summer Late Afternoon	Shoreline Beach	30.9/49.7
AI07	Hanging Rock	Town of Middletown, Newport County, Rhode Island	41.4913° N, 71.2590° W	Fall Morning	Coastal Scrub/Shrub	31.1/50.1
AI09	Easton's Beach	Town of Newport, Newport County, Rhode Island	41.4883° N, 71.2914° W	Summer Morning	Shoreline Beach	30.9/49.7
BI02	Great Salt Pond	Town of New Shoreham, Washington County, Rhode Island	41.1949° N, 71.5886° W	Summer Early Afternoon	Commercial Waterfront	20.1/32.3

KOP	KOP Name	Location	Latitude, Longitude (WGS 84)	Conditions Present	LSZ	Distance to SRWF (Miles/km)
BI04	Southeast Lighthouse	Town of New Shoreham, Washington County, Rhode Island	41.1528° N, 71.5519° W	Summer Midday, Summer Nighttime & Winter Morning	Maintained Recreation Area, Coastal Bluff	16.9/27.2
BI06	New Shoreham Beach	Town of New Shoreham, Washington County, Rhode Island	41.1485° N, 71.5753° W	Summer Midday	Shoreline Beach	17.8/28.6
BI08	Fred Benson Beach	Town of New Shoreham, Washington County, Rhode Island	41.18850° N, 71.56679° W	Summer Early Afternoon	Shoreline Beach	19.0/30.6
BI12	Clayhead Trail	Town of New Shoreham, Washington County, Rhode Island	41.2127° N, 71.5551° W	Summer Midday	Coastal Bluff	19.5/31.4
BI16	Mohegan Bluffs	Town of New Shoreham, Washington County, Rhode Island	41.15121° N, 71.55863° W	Summer Midday	Shoreline Beach, Coastal Bluff	17.2/27.7
C01	Beavertail Lighthouse	Town of Jamestown, Newport County, Rhode Island	41.4498° N, 71.3985° W	Summer Late Afternoon	Maintained Recreation Area	29.5/47.5
RI01	Watch Hill Lighthouse	Town of Westerly, Washington County, Rhode Island	41.3052° N, 71.8578° W	Summer Late Afternoon	Maintained Recreation Area, Shoreline Residential	36.0/57.9
RI02	Weekapaug Breachway	Town of Westerly, Washington County, Rhode Island	41.3289° N, 71.7631° W	Summer Late Afternoon	Shoreline Beach	33.0/53.1
RI03	Point Judith Lighthouse	Town of Narragansett, Washington County, Rhode Island	41.3631° N, 71.4810° W	Summer Midday	Maintained Recreation Area	25.7/41.4
RI04	South Shore Beach	Town of Little Compton, Newport County, Rhode Island	41.49548° N, 71.3312° W	Summer Late Morning	Shoreline Beach, Shoreline Residential	31.6/50.9
RI06	Trustom Pond NWR	Town of South Kingstown, Washington County, Rhode Island	41.3722° N, 71.5869° W	Winter Morning	Salt Pond/Tidal Marsh	29.0/46.7
RI08	Scarborough Beach	Town of Narragansett, Washington County, Rhode Island	41.3909° N, 71.4713° W	Summer Midday	Shoreline Beach	27.1/43.6
RI09	Narragansett Beach	Town of Narragansett, Washington County, Rhode Island	41.4386° N, 71.4498° W	Summer Morning	Shoreline Beach	29.7/47.8
RI11	Matunuck Beach	Town of South Kingstown, Washington County, Rhode Island	41.37446° N, 71.54615° W	Summer Late Afternoon	Developed Waterfront, Shoreline Beach	28.0/45.1
RI12	Ninigret National Wildlife Refuge	Town of Charlestown, Washington County, Rhode Island	41.3604° N, 71.6544° W	Summer Morning	Shoreline Beach	30.5/49.1

Table 2.2-3 Considered KOPs with Minimal or No Visibility of the SRWF

KOP	KOP Name	Location	Latitude, Longitude (WGS 84)	LSZ	Distance to SRWF (Miles/km)
MV01	Squibnocket Farm	Town of Chilmark, Dukes County, Massachusetts	41.31858° N, 70.76507° W	Coastal Scrub/Shrub	20.5/33.0
BI01	Island Cemetery	Town of New Shoreham, Washington County, Rhode Island	41.17895° N, 71.58074° W	Maintained Recreation Area	19.2/30.9
BI13	North Light	Town of New Shoreham, Washington County, Rhode Island	41.2275° N, 71.5758° W	Coastal Scrub/Shrub	21.0/33.8
NI09	Eel Point	Town of Nantucket, Nantucket County, Massachusetts	41.2938° N, 70.1799° W	Shoreline Beach	38.7/62.3
MV04	Gay Head Community Baptist Church	Town of Aquinnah, Dukes County, Massachusetts	41.3411° N, 70.8135° W	Forest	21.4/34.4
C02	Fort Wetherill State Park	Town of Jamestown, Newport County, Rhode Island	41.4778° N, 71.3595° W	Coastal Bluff	30.8/49.6



Sunrise Wind Farm Project

Outer Continental Shelf

Figure 2.2-1: Key Observation Points

- Candidate Key Observation Point (KOP)
- KOP Selected for Simulation
- Project Design Envelope
- Visual Study Area

Sunrise Wind | Powered by Ørsted & Eversource

N W E S

0 5 10 20 Miles

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap on November 10, 2020 by Environmental Design and Research. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

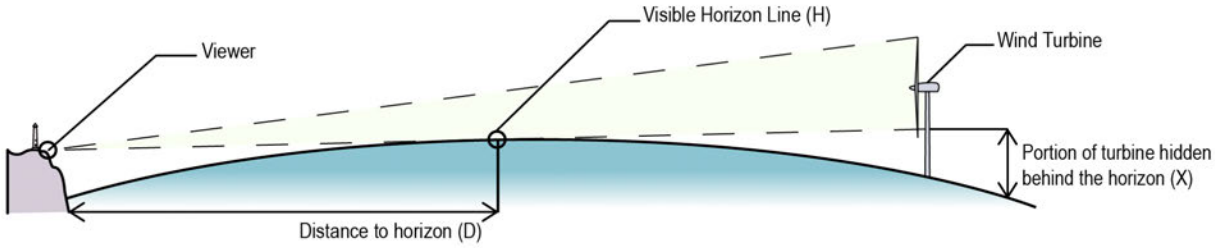
2.2.4 Visual Simulations

To show anticipated visual changes associated with the proposed Project, high-resolution, georeferenced, three dimensional (3D) models were used to create realistic photographic simulations of the Project for each of the selected KOPs. The photographic simulations were developed by constructing a 3D computer model of the proposed WTGs, Project layout, and OCS–DC based on design specifications and coordinates provided by Sunrise Wind. As mentioned previously, because the exact WTG model had not yet been determined at the time the VIA was being conducted, a hypothetical model using the largest dimensions under consideration was prepared. A diagram of the computer models of the WTG and OCS–DC used in this VIA is shown in Inset 1.1-2.

Simulations were created by aligning each photographic viewpoint through a virtual 3D camera, using digitized location data for elements visible in the photograph. This step involves utilizing aerial photographs and GPS data collected in the field to create an AutoCAD® drawing. The 3D AutoCAD data were then imported into 3DS Max®, and additional components (cameras, modeled scene, etc.) were added. These data were superimposed over photographs as seen through the virtual camera from each of the viewpoints, and minor camera changes (height, roll, bearing) were made as necessary to align all known reference points within the view. This process ensures that Project elements are shown in proportion, perspective, and proper relation to the existing landscape elements in the view. Consequently, the alignment, elevation, dimensions, and scale of the modeled Project components are accurate and true in their relationship to other landscape elements in each photo.

The next step involves positioning the Project layout in each of the aligned views at the appropriate distance in front of, at, or below the horizon (depending on the distance from the viewer). This was done by first determining the distance to the horizon (ocean/sky interface) visible in the photograph. This is accomplished by entering the viewer position and elevation into the Haversine Formula, which uses the radius of the earth (corrected for refraction)[6] to calculate the mathematical distance to the horizon (D), or the point at which the sky meets the water (see Inset 2.2-1, below). This distance is then used to draw a horizontal line (virtual horizon) in the 3D model representing the mathematical horizon line, which is visible through the virtual camera. The virtual horizon is then precisely aligned to the visible horizon (H) in the photograph by making minor adjustments to the virtual camera target on the vertical axis. With the virtual horizon aligned to the photographed horizon, the positions of the individual WTGs were all placed relative to this horizon line. The Haversine Formula was then used to determine each turbine's position, relative to the horizon (X). For example, if the WTG appears in front of the horizon, the returned value is zero and the WTG will be placed at the horizon. If the WTG appears behind the visible horizon, the returned value will be a negative number (-X). This value was then applied to the turbine's vertical position in the model so that it appears on or below the visible horizon.

[6] Refraction values assume "typical" viewing conditions and do not account for atmospheric anomalies such as the mirage effect which is typically rare and of short duration but may temporarily increase turbine visibility.



Inset 2.2-1 – Curvature of the Earth and Refraction Diagram

At this point, a "wire frame" model of the SRWF and known reference points are shown on each of the photographs. The proposed exterior color/finish of the SRWF was then added to the model, and the appropriate sun angle was simulated based on the specific date, time, and location at which each photo was taken. This information allows the computer to accurately illustrate highlights, shading, and shadows for each individual component of the SRWF shown in the view. All simulations show the WTGs with rotors oriented toward the southwest, which is generally the prevailing wind direction in the area. Simulation methodology is outlined in Figure 2.2-2. With the exception of the panorama simulations, all of the simulations show a field of view of 38.7 degrees, which is equivalent to the field of view of a standard 50 mm camera lens. As mentioned previously, this is the standard focal length used in VIAs, because it most closely approximates normal human perception of spatial relationships and scale in the landscape.

To prepare nighttime simulations, EDR obtained data on the proposed aviation obstruction warning lights from the FAA Advisory Circular 70/7460-1L (FAA, 2016) and the *Draft Proposed Guidelines for Providing Information on Lighting and Marking of Structures Supporting Renewable Energy Development* (BOEM, 2019) which set guidelines for the lighting of WTGs. In addition, EDR documented views of the operational BIWF to determine the appearance of the warning lights at night at distances beyond 20 miles. Computer modeling and camera alignment for the nighttime photos were conducted in the same manner described for the daytime simulations. However, modifications of the nighttime photos (e.g., compositing foreground and background images obtained using different shutter speeds) was required in some cases to create a realistic representation of a nighttime view. These modifications included the reduction of "hotspots" which can be caused by the cameras inability to accurately expose a light source in a very dark scene. Under very dark conditions, the center of a light source may appear light red to white, depending on the camera distance relative to the light source. However, actual observations of the lights suggest that they appear uniform across the entire source of light. To account for this, a lower exposure photograph was taken to represent the lights at each viewpoint. These lights were then transposed to the evenly exposed night scene.

It was assumed that all lights will flash in a synchronized manner, as currently set forth by FAA guidelines. Nighttime photographic simulations therefore show all WTGs with their lights on. Due to the effects of the curvature of the earth and refraction, USCG navigation lights on the WTGs were only considered in views that had a direct line of sight to the deck at the WTG base, which is approximately where the USCG lights would be located. Video animations of the proposed nighttime conditions were also prepared and are described in Section 2.2.3.1.

In order to demonstrate high contrast lighting conditions, nighttime, sunrise, and sunset conditions photographic renderings were prepared for a subset of KOPs in which the setting or rising sun would fall behind the Project and backlight the proposed WTGs at some time during the year. Photographic

renderings are specifically titled as such because they involve manipulation of the base photograph and do not represent an actual photographed condition. However, these renderings are generated using a methodology that can very accurately predict how the scene would likely appear during the intended conditions. To prepare these photographic renderings, EDR used the original daytime photograph as a base to maintain the documented location and existing conditions at a given viewpoint. Camera alignments were prepared in the same manner described for the daytime simulations. However, to simulate sunrise and sunset conditions, the daylight system was adjusted in 3DS Max to represent sunrise/sunset conditions on a specific day during the year when the rising or setting sun aligns with the proposed WTGs as closely as possible. Once the daylight system was adjusted to reflect accurate lighting of the foreground landscape, the proposed WTGs were rendered to reflect the sunrise or sunset lighting conditions. Similarly, the exact sun position and atmospheric conditions were generated, and an infinite plane representing the ocean was modeled and materialized to simulate sunrise or sunset lighting conditions and reflections. To alter the original sky condition to sunrise/sunset conditions, the 3D-generated sunset atmosphere was used as a reference to replace the existing daytime sky. Using this reference, an existing photo of a sunrise/sunset sky was positioned and overlaid onto the 3D-generated sunset atmosphere in order to maintain the exact location of the sun. The 3D-generated ocean representing sunrise/sunset conditions was overlaid on the daytime ocean in the existing photo. In a few instances, the existing daytime ocean was replaced by a photo of an ocean in sunrise/sunset conditions. Because a majority of the worst-case sunrise/sunset conditions occur during the winter months and/or late in the day, existing people were removed from daytime photos to represent normal activity levels under the sunrise/sunset conditions illustrated. The complete set of photographic simulations and renderings developed for this VIA is provided in Appendix C.

2.2.4.1 Video Simulations

In response to BOEM recommendations provided during early Project consultation, EDR also produced five time-lapse videos that depict a time frame spanning 18 hours of daytime and nighttime conditions, and include a variety of lighting conditions, cloud cover, and weather scenarios. As mentioned in Section 2.1.3, during the field review EDR recorded 60 seconds of video to capture the motion and sound present at each KOP. EDR then used this footage to produce animated simulations for five KOPs using the same viewpoint alignment process described above for the daytime simulations. However, rather than rendering a single frame representing a single point in time, multiple frames were rendered while the 3D turbine blades were in motion. Each individual rendering of the WTGs was placed in sequence to give the impression of blade rotation. Additionally, the 3D model contained a daylight system which was also animated to show the variable lighting (back lit, front lit, and side lit) that the WTGs would receive throughout 18 hours of the day. Additionally, the aviation obstruction lights were animated to flash at a rate of 30 flashes per minute for the nighttime portion of the sequence. The 3D renderings of the SRWF were then superimposed over the baseline video and the scene was digitally adjusted to demonstrate the lighting conditions from sunrise to nighttime. This was accomplished by adjusting the color, hue, and saturation of the video to achieve the desired lighting condition for the corresponding time of day. To simulate the path of the sun in each scene, a digital lighting system that replicated the sun was placed into the scene and animated to follow the azimuth and altitude of the sun throughout the day. The resulting video illustrates the WTG blades spinning from sunrise throughout the day, until nighttime when the aviation obstruction lights are activated. Links to the video simulations are provided below in Table 2.2-5.

Table 2.2-5 KOPs Selected for Time Lapse Simulations

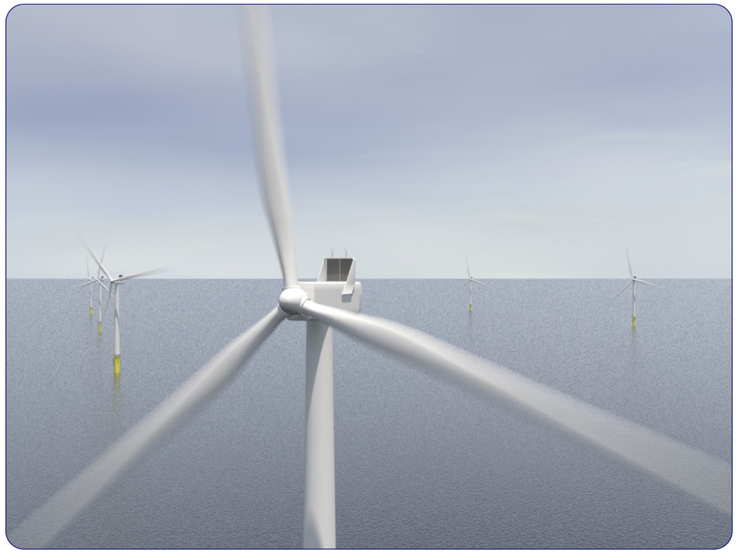
KOP	KOP Name	Location	Link
MV05	Moshup Beach	Town of Aquinnah, Dukes County, Massachusetts	Moshup Beach

KOP	KOP Name	Location	Link
MV07	Aquinnah Overlook	Town of Aquinnah, Dukes County, Massachusetts	Aquinnah Overlook
BI16	Mohegan Bluffs	Town of New Shoreham, Washington County, Rhode Island	Mohegan Bluffs
RI11	Matunuck Beach	Town of South Kingstown, Washington County, Rhode Island	Matunuck Beach
AI05	Sachuest Point National Wildlife Refuge	Town of Middletown, Newport County, Rhode Island	Sachuest Point

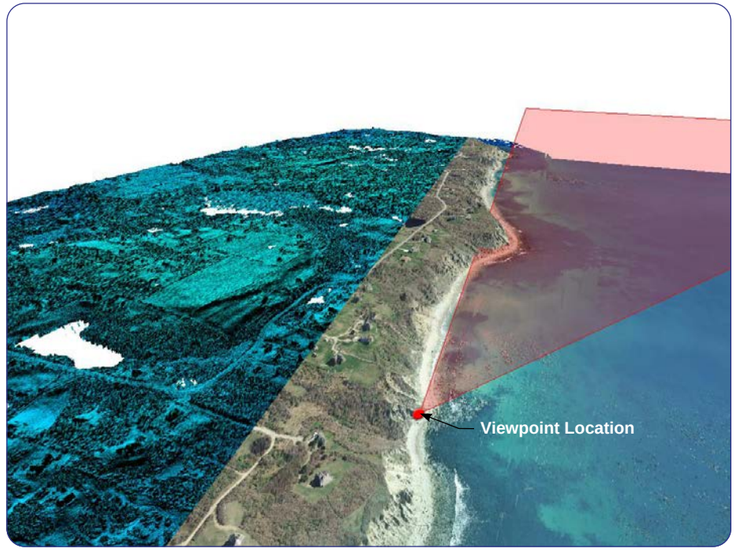
2.2.4.2 Horizon Occupation

To determine the proportion of the horizon occupied by the SRWF, EDR completed a horizon occupation analysis. This analysis first determined how much ocean horizon was visible from each KOP. To determine this the KOP photographs were reviewed to identify where ocean horizon meets the sky without interruption by land (islands and peninsulas) or other offshore development. This exercise was completed by visually identifying land masses in the KOP photographs and then using AutoCAD to develop a cone depicting the open, undeveloped ocean horizon from each KOP. When developing the horizontal occupation, a radius of 20 miles (32 km) was used as a threshold for landforms that could potentially interrupt the ocean horizon. In other words, any land masses beyond this distance were ignored in the definition of ocean horizon due to the screening effects of curvature of the earth. The resulting horizontal occupations were then combined and the angles defining open ocean horizon were quantified in degrees. The vertical occupation was determined by using two lines of sight at each KOP. One from the KOP to the maximum height of the turbine and the other from the KOP to the horizon. Finding the angle between these two lines of sight resulted in enumeration of the vertical expanse occupied by the WTGs illustrated in the visual simulation. A vertical occupation value was determined for the closest and furthest turbine from the KOP. Visible turbine height is measured against the maximum vertical field of view illustrated by the KOP simulation and also against the maximum human vertical field of view which is assumed to be 55 degrees. The horizon occupation analysis is presented in Appendix C3.

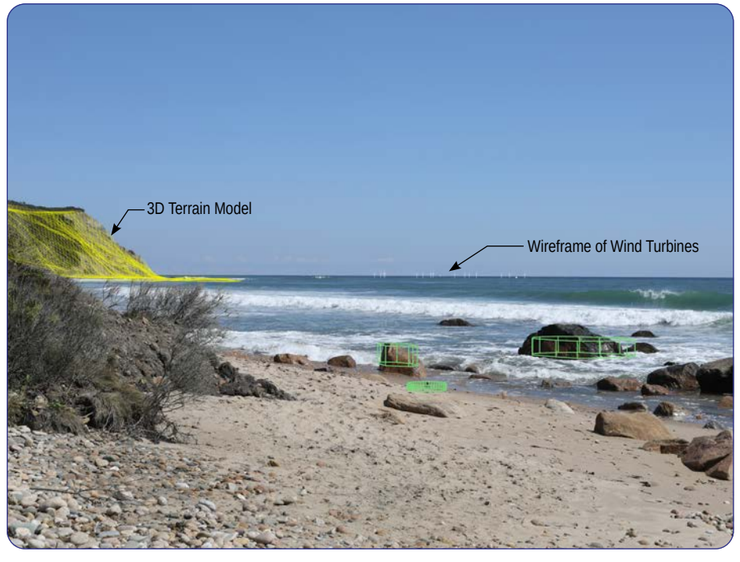
1. Photos are selected to illustrate typical views of the proposed project that will be available to representative viewer/user groups from the major landscape similarity zones and sensitive sites within the visual study area.



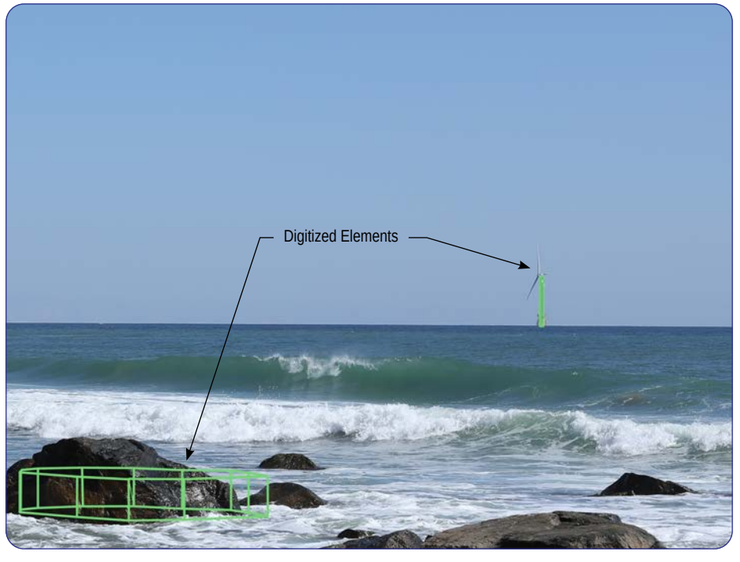
2. A three-dimensional computer model of the project is built based on proposed turbine specifications and coordinates.



3. Aerial photographs, LIDAR data, and GPS data collected in the vicinity of the viewpoints are used to align the photo with the 3D model illustrated in Image 2.



4. These data are superimposed over photographs from each of the viewpoints, and minor camera changes are made to align all known reference points within the view.



5. Digitized landscape features (buildings, structures, etc) from photographs and aerials of the location help increase the accuracy of the camera target position.

6. The proposed exterior color/finish of the turbines and other project components were then added to the model and the appropriate sun angle is simulated based on the specific date, time and location (latitude and longitude) from which each photo was taken.

2.2.5 Visual Impact Evaluation

The VIA uses representative KOPs within each of the landward LSZs in the ZVI to determine the Project's potential visual impact. This evaluation is based on a comparison of existing photographs and visual simulations from each KOP to quantify the effect of the Project using forms and a scoring system based on those included in the VRAP Manual (Smardon et al., 1988).

The same panel of five visual professionals that completed the scenic quality analysis for the LSZs also conducted the VIA procedure. Panel members were provided with digital files of the existing conditions photos and simulations of the proposed Project for each of the selected KOPs, along with supporting information, including a viewpoint location map, contextual photographs illustrating the full field of view, and summary information regarding each KOP location (including viewing instructions). The distance and direction of the SRWF from each of the selected KOPs, and the LSZ, viewer groups, viewer activities, and sensitive resources represented by each viewpoint were provided to the panel (Appendix C), along with the rating forms to be used for the visual impact assessment (a simplified version of Form 6 from the USACE VRAP, Appendix E).

The rating panel members viewed the existing conditions photos and visual simulations on screen[7] from a distance of approximately 20 to 22 inches. Each of the images presented to the panel for rating contained a graphic scale measuring one inch long. The rating panel members were instructed to use a measuring device to ensure this scale bar was accurate thus ensuring the proper scale of the simulation. In addition, due to the distance and scale of the Project in many of the visual simulations, the panel members were instructed to zoom into the visual simulations to a maximum of 150 percent if necessary to locate and view the Project. The rating panel members then evaluated the before and after views from each KOP and assigned each view quantitative sensitivity ratings. The ratings were based on a 9-point scale representing the scenic contribution of each of six landscape components (landform, water resources, vegetation, land use, user activity, and special considerations) with and without the Project in place.

Although not all are explicitly addressed on the evaluation form, the rating panel was directed to consider the following landscape, viewer, and Project-related factors in their evaluation of the sensitivity and the Project's visual impact:

- Landscape Composition: The arrangement of objects and voids in the landscape that can be categorized by their spatial arrangement. Basic landscape components include vegetation, landform, water, and sky. Some landscape compositions, especially those that are distinctly focal, enclosed, detailed, or feature-oriented, are more vulnerable to modifications than panoramic, canopied, or ephemeral landscapes.

- Form, Line, Color, and Texture: These are the four major compositional elements that define the perceived visual character of a landscape, as well as a project. Form refers to the shape of an object that appears unified, often defined by edge, outline, and surrounding space. Line refers to the path the eye follows when perceiving abrupt changes in form, color, or texture, usually evident as the edges of shapes or masses in the landscape/seascape. Texture, in this context, refers to the visual surface characteristics of an object. The extent to which form, line, color, and texture of a project are similar to or contrast with these same elements in the existing landscape/seascape is a primary determinant of visual impact.

[7] The simulations require a high-definition monitor measuring no less than 24 inches of useable area measured on a diagonal.

- Focal Point: Certain natural or man-made landscape features stand out and are particularly noticeable as a result of their physical characteristics. Focal points often contrast with their surroundings in color, form, scale or texture, and therefore tend to draw a viewer's attention. Examples include prominent trees, mountains, and water features. Cultural features, such as a distinctive lighthouse or steeple, can also be focal points. If possible, a proposed project should not be sited so as to obscure or compete with important existing focal points in the landscape.

- Order: Natural landscapes/seascapes have an underlying order determined by natural processes. Cultural landscapes exhibit order by displaying traditional or logical patterns of land use/development. Elements in the landscape that are inconsistent with this natural order may detract from scenic quality. When a new project is introduced to the landscape or seascape, intactness and order are maintained through the repetition of the forms, lines, colors, and textures existing in the surrounding built or natural environment.

- Scenic or Recreational Value: Designation as a scenic or recreational resource is an indication that there is broad public consensus on the value of that particular resource. The characteristics of the resource that contribute to its scenic or recreational value provide guidance in evaluating a project's visual impact on that resource.

- Duration of View: Some views are seen as quick glimpses while driving along a roadway or hiking a trail, while others are seen for a more prolonged period of time. Longer duration views of a project, especially from significant aesthetic resources, have the greatest potential for visual impact.

- Atmospheric Conditions: Clouds, precipitation, haze, and other ambient air-related conditions which affect the visibility of an object or objects. These conditions can greatly impact the visibility and contrast of landscape/seascape and project components and the design elements of form, line, color, texture, and scale, (see Section 3.2.5).

- Lighting Direction: Backlighting refers to a viewing situation in which sunlight is coming toward the observer from behind a feature or elements in a scene. Front lighting refers to a situation where the light source is coming from behind the observer and falling directly upon the area being viewed. Side lighting refers to a viewing situation in which sunlight is coming from the side of the observer to a feature or elements in a scene. Lighting direction can have a significant effect on the visibility and contrast of landscape/seascape and project elements (see Section 3.2.5).

- Project Scale: The apparent size of a proposed project in relation to its surroundings can define the compatibility of its scale within the existing landscape/seascape. Perception of project scale is likely to vary depending on the distance from which it is seen and other contextual factors.

- Spatial Dominance: The degree to which an object or landscape element occupies space in a landscape/seascape and thus dominates landscape/seascape composition from a specific viewpoint.

- Visual Clutter: Numerous unrelated built elements occurring within a view can create visual clutter, which generally has an adverse effect on scenic quality.

- Movement: Moving project components can make them more noticeable.

Following the panel's evaluation, each panel member's ratings were compiled to determine individual scores for each KOP. The scores were then averaged to determine the overall composite score for each

KOP with and without the Project in place. The degree of potential impact is determined through the reduction in the scenic quality (if any) resulting from the Project. A notable reduction in scenic quality is indicated by a score reduction that pushes the KOP into a lower scenic quality definition. The degree to which this reduction is significant is indicated by the delta between the existing and proposed view composite rating. Table 2.2.6 describes the significance of the rating panel delta scores.

Table 2.2-6 Factors Influencing Visual Impact

Score Delta (Proposed minus Existing	Effect on Scenic Quality	Description of Potential Impact to Scenic Quality
0 to 0.4	Regardless of Scenic Quality Description	Negligible impact to scenic quality. The presence of the SRWF has almost minimal to no impact on landscape, seascape and ocean, and the overall scenic quality is maintained.
0.5 to Minus 1.4	KOP Scenic Quality Description Remains the Same	Negligible impact to scenic quality. The presence of the SRWF minimally impacts the character defining features of the landscape, seascape and ocean, but the overall scenic quality is maintained.
	KOP Scenic Quality Description Changes	Minimal adverse impact to scenic quality. The presence of the SRWF somewhat effects the character defining features of the landscape, seascape and ocean and the overall scenic quality is reduced.
Minus 1.5 to Minus 2.4	KOP Scenic Quality Description Remains the Same	Minimal adverse impact to scenic quality. The presence of the SRWF somewhat effects the character defining features of the landscape, seascape and ocean and the overall scenic quality is reduced.
	KOP Scenic Quality Description Changes	Somewhat significant adverse impact to scenic quality. The presence of the SRWF competes with one or more landscape, seascape, and ocean attributes and results in an overall reduction in scenic quality.
Minus 2.5 to Minus 3.5	KOP Scenic Quality Description Remains the Same	Somewhat significant adverse impact to scenic quality. The presence of the SRWF competes with one or more landscape, seascape, and ocean attributes, but the overall scenic quality remains unchanged.
	KOP Scenic Quality Description Changes	Significant adverse impact to scenic quality. The SRWF begins to dominate certain landscape, seascape and ocean features and results in a reduction in scenic quality.
Greater than Minus 3.5	Regardless of Scenic Quality Description	Significant adverse impact to scenic quality. The SRWF becomes a dominant feature in the landscape, seascape, and ocean and results in a reduction in scenic quality.

To further define the impact producing factors associated with the SRWF, the rating panel also evaluated the Project's compatibility, scale contrast, and spatial dominance effect on water resources, landform, vegetation, land use, and user activity for each KOP. The rating scale for this evaluation ranged from 1 to 3, as outlined in Table 2.2-7, below.

Table 2.2-7 Factors Influencing Visual Impact

VIA Factor	1	2	3
Compatibility	Compatible	Somewhat Compatible	Not Compatible
Scale Contrast	Minimal	Moderate	Severe
Spatial Dominance	Subordinate	Co-Dominant	Dominant

The rating panel scores were then averaged to determine the extent to which these factors influence the overall magnitude of visual impact. The complete set of rating panel forms is provided in Appendix E.

To determine the Project's potential visual contrast experienced by viewers, the rating panel members were asked to determine the VTL applicable to each of the KOPs and the broader regional landscape they represent. Sullivan et.al. (2013) defined six VTLs to rate the visual prominence of operational offshore wind farms in the United Kingdom. Descriptions of these six VTLs are presented in Table 2.2-8.

Table 2.2-8 Visibility Threshold Level Rating Scale[8]

Visibility Rating	Description
Visibility level 1. Visible only after extended, close viewing; otherwise, invisible.	An object/phenomenon that is near the extreme limit of visibility. It could not be seen by a person who was unaware of it in advance and looking for it. Even under those circumstances, the object can be seen only after looking at it closely for an extended period.
Visibility level 2. Visible when scanning in the general direction of the study subject; otherwise, likely to be missed by casual observers.	An object/phenomenon that is very small and/or faint, but when the observer is scanning the horizon or looking more closely at an area, can be detected without extended viewing. It could sometimes be noticed by casual observers; however, most people would not notice it without some active looking.
Visibility level 3. Visible after a brief glance in the general direction of the study subject and unlikely to be missed by casual observers.	An object/phenomenon that can be easily detected after a brief look and would be visible to most casual observers, but without sufficient size or contrast to compete with major landscape/seascape elements.
Visibility level 4. Plainly visible, so could not be missed by casual observers, but does not strongly attract visual attention or dominate the view because of its apparent size, for views in the general direction of the study subject.	An object/phenomenon that is obvious and with sufficient size or contrast to compete with other landscape/seascape elements, but with insufficient visual contrast to strongly attract visual attention and insufficient size to occupy most of an observer's visual field.
Visibility level 5. Strongly attracts the visual attention of views in the general direction of the study subject. Attention may be drawn by the strong contrast in form, line, color, or texture, luminance, or motion.	An object/phenomenon that is not large but contrasts with the surrounding landscape elements so strongly that it is a major focus of visual attention, drawing viewer attention immediately and tending to hold that attention. In addition to strong contrasts in form, line, color, and texture, bright light sources such as lighting and reflections and moving objects associated with the study subject may contribute substantially to drawing viewer attention. The visual prominence of the study subject interferes noticeably with views of nearby landscape/seascape elements.
Visibility level 6. Dominates the view because the study subject fills most of the visual field for views in its general direction. Strong contrasts in form, line, color, texture, luminance, or motion may contribute to view dominance.	An object/phenomenon with strong visual contrasts that is so large that it occupies most of the visual field, and views of it cannot be avoided except by turning one's head more than 458 from a direct view of the object. The object/phenomenon is the major focus of visual attention, and its large apparent size is a major factor in its view dominance. In addition to size, contrasts in form, line, color, and texture, bright light sources and moving objects associated with the study subject may contribute substantially to drawing viewer attention. The visual prominence of the study subject detracts noticeably from views of other landscape/seascape elements.

[8] Table from Sullivan et.al., 2013

3.0 VISUAL IMPACT ASSESSMENT RESULTS

The results of the visual impact assessment are presented below in two categories. Section 3.1 presents a summary of the results of viewshed analysis and field review. Section 3.2 summarizes the existing and proposed views illustrated in the visual simulations and the results of the rating panel's impact evaluation.

3.1 Potential Project Visibility

3.1.1 Viewshed Analyses

Potential SRWF visibility, as indicated by the viewshed analyses, is illustrated in Figure 3.1-1 and summarized in Tables 3.1-1 through 3.1-4. Within the VSA, the lidar-based blade tip viewshed analysis indicates that approximately 5 percent of the land area within the VSA could have potential views of some portion of the SRWF components, based on the availability of an unobstructed line of sight (Table 3.1-1). Open, ground-level views of the Project will not be available from approximately 95 percent of the on-shore VSA where buildings/structures and vegetation screen views toward the SRWF. Forest land is the dominant land use within the mainland portions of VSA (covering approximately 54 percent of the land within a 40-mile radius of the SRWF) and will significantly reduce potential SRWF visibility throughout the area. In areas of concentrated human settlement, buildings/structures will also significantly screen outward views. Considering the screening provided by buildings/structures, vegetation, and topography, potential onshore visibility of the SRWF is largely restricted to the ocean shoreline, water bodies immediately inland of the shoreline (e.g., salt ponds and bays), and areas cleared of vegetation for agricultural purposes or large residential lots. Where shoreline screening is lacking corridors of visibility extend up to approximately 500 to 2,000 feet inland from the shoreline, before breaking up into smaller pockets of visibility and then dissipating completely.

Table 3.1-1 WTG Blade Tip – Land Area Viewshed Results Summary

Distance From the SRWF	40-Mile Radius VSA (Units in Square Miles)		
	Total Land Area	Land Area with Potential Visibility (ZVI)	Percent of Landward VSA with Visibility at this distance
0 to 10 Miles	0	0	0
10 to 20 Miles	15.0 (38.8 sq. km)	3.9 (10.1 sq. km)	26.1
20 to 30 Miles	159.7 (413.6 sq. km)	17.2 (44.5 sq. km)	10.8
30 to 40 Miles	527.0 (1364.9 sq. km)	13.7 (35.5 sq. km)	2.6
Total 40 Mile Landward Study Area	701.7 (1817.4 sq. km)	34.8 (90.1 sq. km)	5.0

Blade Tip Viewshed Analysis Results

The blade tip viewshed analysis suggests that visibility of the SRWF from Long Island will largely be restricted to the immediate shoreline on the eastern and southern shores of the island. With regard to views from sensitive sites on Long Island, areas of potential SRWF visibility are indicated within Montauk Point State Park and Camp Hero State Park on the easternmost point of the island where long distance easterly views may be available. The viewshed analysis suggests that other areas of potential visibility primarily concentrated along beaches at Hither Hills State Park, Shadmoor State Park, Amsterdam State Beach, Ditch Plains and Napeague Beaches. Viewshed analysis indicates that views of the SRWF from further

inland on Long Island will be restricted to small portions of Montauk Downs State Park, Montauk County Park, Hither Hills Woods Preserve, and along portions of State Route 27 directly east of Hither Hills Woods Preserve. However, at a distance of 40 miles from the proposed WTGs, this visibility is likely to be limited to the upper portions of the WTG blade tips, which would be difficult to perceive with the unaided eye.

The blade tip viewshed analysis results show consistent areas of potential SRWF visibility from the eastern and southern shores of Block Island, including Fred Benson Town Beach, Ballard's Beach, the Southeast Light, North Light, portions of the Block Island NWR, the Clayhead Trail and Mohegan Bluffs. Some small areas of potential visibility also occur throughout the island's interior, including the Block Island Airport, Plover Hill, and across open fields such as those surrounding Lewis Farm Road and Payne Road north of Mohegan Trail where vegetative screening is minimal. Viewshed results also suggest potential visibility from the shores of Great Salt Pond, including Charleston Beach, Harbor Neck, the Block Island Coast Guard Station, and Indian Head Neck.

Blade tip viewshed results indicate that potential visibility of the SRWF from Conanicut and Aquidneck Islands is primarily restricted to the immediate south-facing shorelines, with some areas of visibility extending inland around Beavertail State Park, Brenton Point State Park, Newport Country Club, Easton's Beach, Gardiner Pond, Nelson Pond and the Sachuset NWR. These areas include open, unvegetated land or open water, thus allowing open views that are unscreened by foreground vegetation or buildings/structures. The viewshed analysis also suggests the potential for views to the SRWF along several north-south oriented roadways, such as Beavertail Road, Third Beach Avenue, Paradise Avenue, and Wolcott Avenue, however, these views will also have visual interruption from traffic lights, overhead utilities, signage, etc. along the traffic routes. Potential visibility inland, often within open agricultural fields which typically have minimal screening elements, is indicated by the viewshed analysis at scattered locations throughout the VSA. Examples of the areas include Sandy Point Road, Mitchell Lane, Eldridge Avenue, Newport/Ocean Drive, Fox Hill Pond, and Jamestown Brook/Windmill Hill.

Visibility from Cuttyhunk Island and the other Elizabeth Islands (including Penikese, Nashawena, Pasque, Naushon, Weepecket, Nonamesset and Uncatena Islands) as predicted by the blade tip viewshed analyses, is largely limited to the southern and western shores of Cuttyhunk, Barges, Nashawena, Pasque, Naushon and Nonamesset Islands. However, several areas of inland visibility were also noted at the high point of Cuttyhunk Island, Cuttyhunk Light Oil House, West End and Bayberry Hill Roads, along with small areas between the highpoint and shoreline where the hills slope downward in the direction of the SRWF including Copicut Neck and Barges Beach. Substantial visibility of the SRWF is indicated on Penikese Island due to the lack of screening vegetation and terrain. Weepecket and Uncatena Island have no SRWF visibility due to their position on the north side of Naushon Island.

The blade tip viewshed results suggest potential SRWF visibility from Martha's Vineyard along the western and southern shores and bluffs, and to a lesser extent along the northwest portions of the island's shoreline. The most notable northwestern areas of visibility include the Wampanoag-Aquinnah Trust Land, West Basin Road, Peases Point, and Cedar Tree Neck Sanctuary. More concentrated areas of visibility are shown along the western shore around Aquinnah Cliffs, Gay Head Lighthouse, Zacks Cliffs, Long Beach, south to Squibnocket Point, and across the open water on Squibnocket Pond. On the southern side of Martha's Vineyard, areas of potential visibility extend eastward from Squibnocket Beach, Nashaquitsa Cliffs, Wequobsque Cliffs, Lucy Vincent Beach, Tisbury Great Pond Beach, Long Point Beach, and South Beach onward to Wasque Point on Chappaquiddick Island. The Project is also potentially visible along the connecting landmass between Martha's Vineyard and Chappaquiddick Island, in areas of open residential or agricultural land, and across the open water of Chilmark Pond, Black Point Pond, Tisbury Great Pond, Long Cove, Ripley Cove, Oyster Pond, Jobs Neck Pond, Edgartown Great Pond and Katama Bay. The viewshed analysis suggests little visibility from the interior portions of the island, however, there are some very small areas that occur in the vicinity of Peaked Hill in Chilmark, Old County Road in North Tisbury, and around the Martha's Vineyard Airport. There is also some shoreline visibility that extends a short distance

inland on the southwest to northeast oriented roads on the island, including but are not limited to, North Road near Peaked Hill, State Road and Middle Road near Chilmark, and Pohogonot Road at Oyster Pond. However, based on viewshed analysis results, Oak Bluffs, Vineyard Haven, and Edgartown, will not have any open views of the proposed SRWF. Although Cape Poge Bay, and Cape Poge NWR contain very discrete areas of potential visibility, this visibility typically occurs on the tops of vegetated dunes, which are not accessible by the public. Therefore, Cape Poge is not likely to have any publicly available views of the SRWF.

Nearby Nomans Land Island off Martha's Vineyard's southwest coast is indicated as having significant areas of potential SRWF visibility. However, due to the lack of available lidar data in this area, it is possible that vegetation not considered in the viewshed analysis may help screen views of the SRWF from portions of the island. Views from Nomans Land Island are also not available to the public.

Potential SRWF visibility from Nantucket, as indicated by the blade tip viewshed analysis, is concentrated along the western and southern shores of the island, including the shores of Muskeget and Tuckernuck Islands to the west of Nantucket Island. The viewshed analysis indicates that there is potential SRWF visibility from centrally located dunes on Eel Point, Esther's Island, Smith's Point, and Madaket Beach, moving eastward to Cisco Beach and Miacomet Beach. There is also some potential visibility that extends north from the southern shoreline and includes open residential lands, Red Barn Road, Ram Pasture, Miacomet Heath, and where the land slopes south toward the ocean in long, open agricultural, dune and marsh areas adjacent to the beach. Very small inland locations on Nantucket indicated as having potential visibility to the Project include Trots Hill in Dionis, residential lots on Massasoit Bridge Road, the Nantucket Public Works and Landfill, and Sanford Farm.

Blade tip viewshed results suggest some areas of potential SRWF visibility in inland portions of the mainland VSA in Rhode Island. These areas generally occur along the inland shoreline of salt ponds and tidal marshes such as Trustom Pond (Trustom NWR), Green Hill Pond, and Briggs Marsh. These locations typically have undeveloped open shorelines allowing for potential SRWF visibility across the water surface extending inland to the inland shore. However, because the inland shorelines are typically backed by dense vegetation, visibility rarely extends further inland. The viewshed analysis also indicates potential shoreline visibility along the southern border of Rhode Island at Potter Pond, East Matunuck State Beach, around the tip of the Point Judith Light House to Scarborough State Beach, Narragansett Town Beach, and over the Narrows in the Town of Narragansett. Within the eastern portion of mainland Rhode Island, the viewshed analysis indicates potential views from inland agricultural areas surrounding Little Compton, and the open water of Round Pond, Long Pond, Briggs Marsh, and Quicksand Pond. Upon reaching the Massachusetts border, the potential for water views continues on Richmond Pond, but becomes more limited at Cockeast Pond, and the Westport River due to the presence of increased shoreline development and vegetation. Shoreline areas such as Elephant Rock, Horseneck Beach, East Beach, and Little Beach are also indicated as having potential SRWF visibility. Areas of potential visibility also include Demarest Lloyd State Park, Slocums River, Mishaum Point, Salter's Point, Round Hill Town Beach, and Round Hill Point. Visibility begins to diminish along the Massachusetts mainland around Clarks Cove, Fairhaven, and Bristol. In these areas only the points and peninsulas facing the SRWF have small areas of shoreline visibility. The viewshed analysis suggests that inland areas such as New Bedford, South Dartmouth, and Falmouth will be completely screened from potential views of the SRWF.

Aviation Obstruction Warning Lighting Viewshed Analysis Results

The aviation obstruction light (AOWL) viewshed analysis (Figure 3.1-1) suggests visibility of the lights will be available from approximately 3.4 percent of total land area within the VSA (Table 3.1-2). This reduction in visibility (compared to potential blade tip visibility) can be attributed to the lower height of the lights (relative to the blade tips) combined with the screening effects of curvature of the earth, as demonstrated by the lack of visibility from some inland ponds and distant beaches that were indicated as visible in the

blade tip viewshed analysis. Areas in which the aviation lights would be significantly screened by curvature of the earth include Ninigret NWR, Judith Point Pond, Green Pond, and Potter Pond on the Rhode Island mainland. On the Massachusetts mainland, similarly, many on the coastal ponds and rivers have a notable reduction in potential visibility when considering the aviation warning lights. These include the East and West branches of the West Port River and Cockeast Pond. In addition, all of the areas of South Dartmouth, West Island, Sconticut Neck, Fairhaven, and Mattapoisett Neck are significantly screening from views of the aviation warning lights due to the curvature of the earth.

On Martha's Vineyard, the visibility of the AOWL viewshed generally matches that of the WTG blade tip viewshed. The only notable area of reduced visibility occurs at the Martha's Vineyard Airport, where the aviation warning lights would not be visible. When considering the AOWL, small reductions in the geographic area of visibility were noted at Edgartown Great Pond, Chilmark Pond, and several shoreline locations on the north portion of Marth's Vineyard, north of Menemsha Pond.

On Nantucket, shoreline visibility of the AOWLs occurs along significant portions of Muskeget Island, Tuckernuck Island, and along the southern shore of Nantucket Island. However, when compared to the blade tip viewshed analysis, the visible areas are substantially reduced, particularly to the east of Clarks Cove where curvature of the earth will completely screen the lights from view.

The east, south, and north shores of Block Island will generally have the same level of visibility of the AOWLs as described for the WTG blade tip viewshed results. Only the western portion of the island shows a decrease in potential visibility on Great Salt Pond. The similarity of the aviation warning light viewshed to the blade tip viewshed in these areas is due to the proximity of Block Island to the SRWF, which essentially eliminates the effect of curvature of the earth in reducing the visibility of the AOWLs.

Similarly, on Long Island, the high bluffs associated with Camp Hero State Park and Montauk Point State Park generally have the same level of potential visibility of the AOWLs when compared to potential blade tip visibility. However, the visibility from the Long Island shore diminishes significantly at distances beyond 35 miles. This is generally due to the curvature of the earth combined with the lower topography associated with beaches situated west of the Hamlet of Montauk, including Ditch Plains Beach and South Edison Beach.

Table 3.1-2 Aviation Obstruction Lights – Land Area Viewshed Results Summary

Distance From the SRWF	40-Mile Radius VSA (Units in Square Miles)		
	Total Land Area	Land Area with Potential Obstruction Light Visibility	Percent of Landward VSA with Visibility at this distance
0 to 10 Miles	0	0	0
10 to 20 Miles	15.0 (38.8 sq. km)	3.1 (2.6 sq. km)	20.9
20 to 30 Miles	159.7 (413.6 sq. km)	13.5 (35.0 sq. km)	8.4
30 to 40 Miles	527.0 (1364.9 sq. km)	7.4 (19.2 sq. km)	1.4
Total 40 Mile Landward Study Area	701.7 (1817.4 sq. km)	24.0 (62.2 sq. km)	3.4

In addition to land area visibility, SRWF visibility from the open ocean was also considered in the viewshed analysis. The blade tip viewshed analysis revealed that up to 96.2 percent of the ocean in the VSA could have some level of SRWF visibility (Table 3.1-3). Screened areas were only noted on portions of Block

Island Sound, Fort Pond Bay, Tobaccolot Bay, Buzzards Bay, Narragansett Bay, Vineyard Sound and Nantucket Sound. All of these screened areas resulted from the intervening land masses associated with islands and peninsulas. The aviation obstruction warning light analysis reduced visible areas to approximately 78.8 percent of the ocean (Table 3.1-4). This reduction in visibility can be largely attributed to the curvature of the earth, which will screen views of the lights at distances beyond 35 miles when viewed from sea level.

Table 3.1-3 Blade Tip – Water Area Viewshed Results Summary

Distance From the SRWF	40-Mile Radius VSA (Units in Square Miles)		
	Total Water Area	Water Area with Potential Visibility (ZVI)	Percent of Water VSA with Visibility at this Distance
0 to 10 Miles	1,176.5 (3,047.1 sq. km)	1,176.5 (3,047.1 sq. km)	100.0
10 to 20 Miles	1,576.8 (4,083.9 sq. km)	1,573.1 (4,074.3 sq. km)	99.8
20 to 30 Miles	2,053.4 (5,318.3 sq. km)	2,025.7 (5,246.5 sq. km)	98.6
30 to 40 Miles	2,312.4 (5,989.1 sq. km)	2,071.6 (5,365.4 sq. km)	89.6
Total 40 Mile Water Study Area	7,119.1 (18,438.4 sq. km)	6,846.9 (17,733.4 sq. km)	96.2

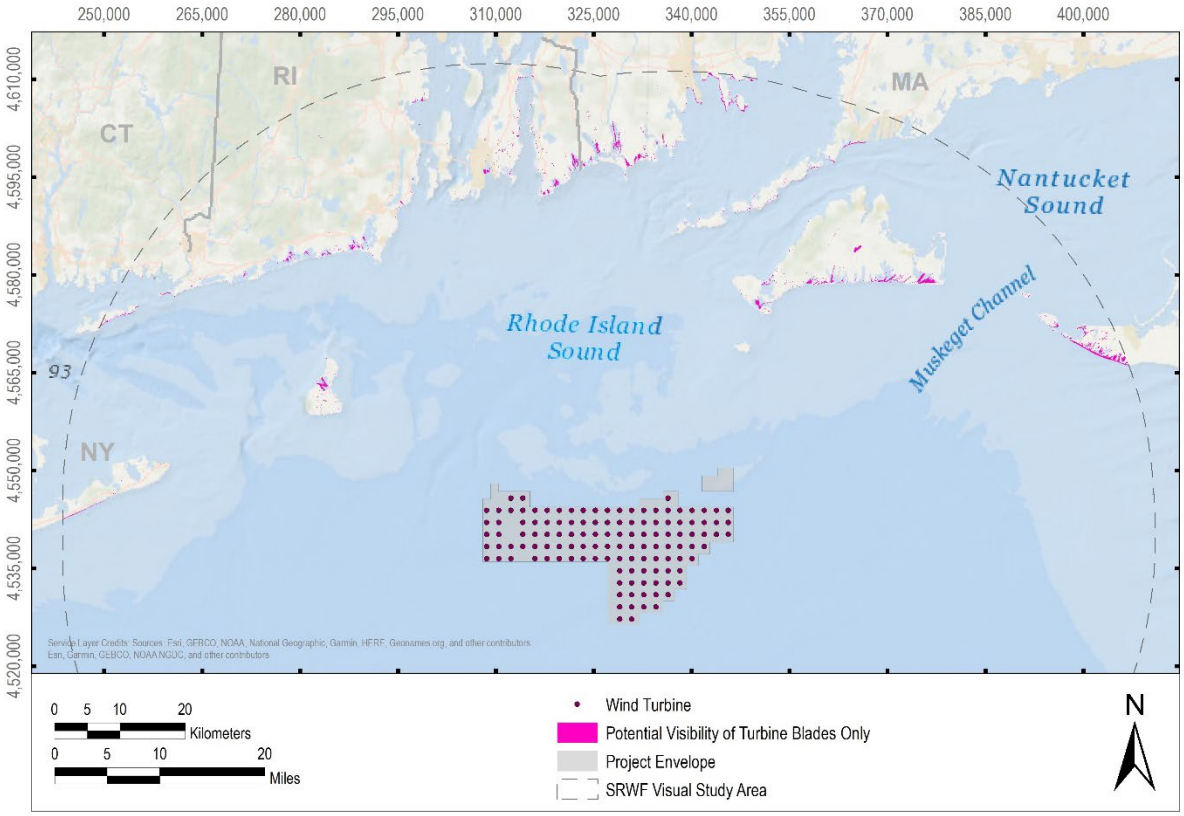
Table 3.1-4 Aviation Obstruction Light – Water Area Viewshed Results Summary

Distance From the SRWF	40-Mile Radius VSA (Units in Square Miles)		
	Total Water Area	Water Area with Potential Visibility (ZVI)	Percent of Water VSA with Visibility at this Distance
0 to 10 Miles	1,176.5 (3,047.1 sq. km)	1,176.5 (3,047.1 sq. km)	100.0
10 to 20 Miles	1,576.8 (4,083.9 sq. km)	1,572.5 (4,072.8 sq. km)	99.7
20 to 30 Miles	2,053.4 (5,318.3 sq. km)	2,001.0 (5,182.6 sq. km)	97.4
30 to 40 Miles	2,312.4 (5,989.1 sq. km)	856.4 (2,218.1 sq. km)	37.0
Total 40 Mile Water Study Area	7,119.1 (18,438.4 sq. km)	5,606.4 (14,520.5 sq. km)	78.8

It should be noted that the viewshed analysis treats all buildings/structures and vegetation as if they are completely opaque. Therefore, small woodlots and hedgerows are indicated as fully blocking views of the SRWF. It is possible that views will be available from forest edges and through thin/sparse forest vegetation. However, these views will typically be at least partially obstructed by branches (even under leaf-off conditions) and would require focused, concentrated attention to see the WTGs. It is likely that at distances beyond 20 miles, even partial screening will be effective in minimizing or eliminating SRWF visibility. It is also important to note that the lidar data used in this analysis is from multiple years, with the latest being captured in 2014. Therefore, the analysis does not reflect any changes that may have occurred since that time. However, any such changes are likely to be minor and could include the addition of new obstructions (new buildings and taller trees) as well as the removal of obstructions (tree cutting).

As mentioned previously, factors such as the visual acuity of the observer, the effects of distance, the occurrence of overcast and hazy weather conditions, and the white color and slender profile of the WTGs (especially the blades, which make up the top 371 feet [113 m] of each WTG) are not considered in this analysis. Given the narrow dimensions and limited visibility of the WTG blades, a separate analysis was

completed to determine geographic areas where the blades could potentially be visible, but the nacelle and tower portion of the WTG would be fully screened. The results of the analysis suggest that 1.5 percent of the landward VSA (44 percent of the landward ZVI) would only have potential visibility of the WTG blades (see Image 3.1-1). At distances beyond 35 miles, even if not fully screened by curvature of the earth, the blades will often be very difficult to see and can easily be obscured by minor foreground features in the landscape (e.g., utility lines, isolated tree branches), as well as small surface waves and large ocean swells. Therefore, it is unlikely that views of the Project will be available beyond 35 miles, even under the clearest possible weather conditions. With these factors considered, areas and duration of actual visibility will likely be more limited than indicated by the viewshed analyses. The areas that only include visibility of the WTG blades include the majority of inland areas on mainland Rhode Island and Massachusetts, and the majority of Nantucket Island. Blade-only visibility is also indicated within the coastal pond on the south side of Martha's Vineyard, the Martha's Vineyard Airport, Great Salt Pond on Block Island, and along the coastal beaches southwest of Montauk on Long Island (see Inset 3.1-1).



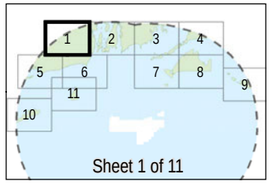
Inset 3.1-1 – Portions of the ZVI where the potential views would only include WTG blades

Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results

- Blade Tip Potentially Visible
- Blade Tip and FAA Light Potentially Visible
- Blade Tip, FAA Light, and Midtower Potentially Visible
- Blade Tip, FAA Light, Midtower, and Platform Potentially Visible
- Visual Study Area



Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap on November 10, 2020 by Environmental Design and Research. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results

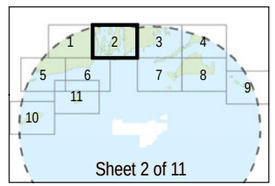
Blade Tip Potentially Visible

Blade Tip and FAA Light Potentially Visible

Blade Tip, FAA Light, and Midtower Potentially Visible

Blade Tip, FAA Light, Midtower, and Platform Potentially Visible

Visual Study Area



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Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results

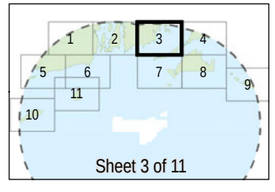
Blade Tip Potentially Visible

Blade Tip and FAA Light Potentially Visible

Blade Tip, FAA Light, and Midtower Potentially Visible

Blade Tip, FAA Light, Midtower, and Platform Potentially Visible

Visual Study Area



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Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results

- Blade Tip Potentially Visible
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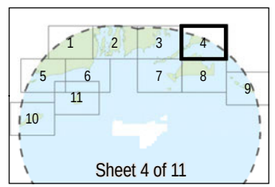
- Blade Tip, FAA Light, Midtower, and Platform Potentially Visible
- Visual Study Area



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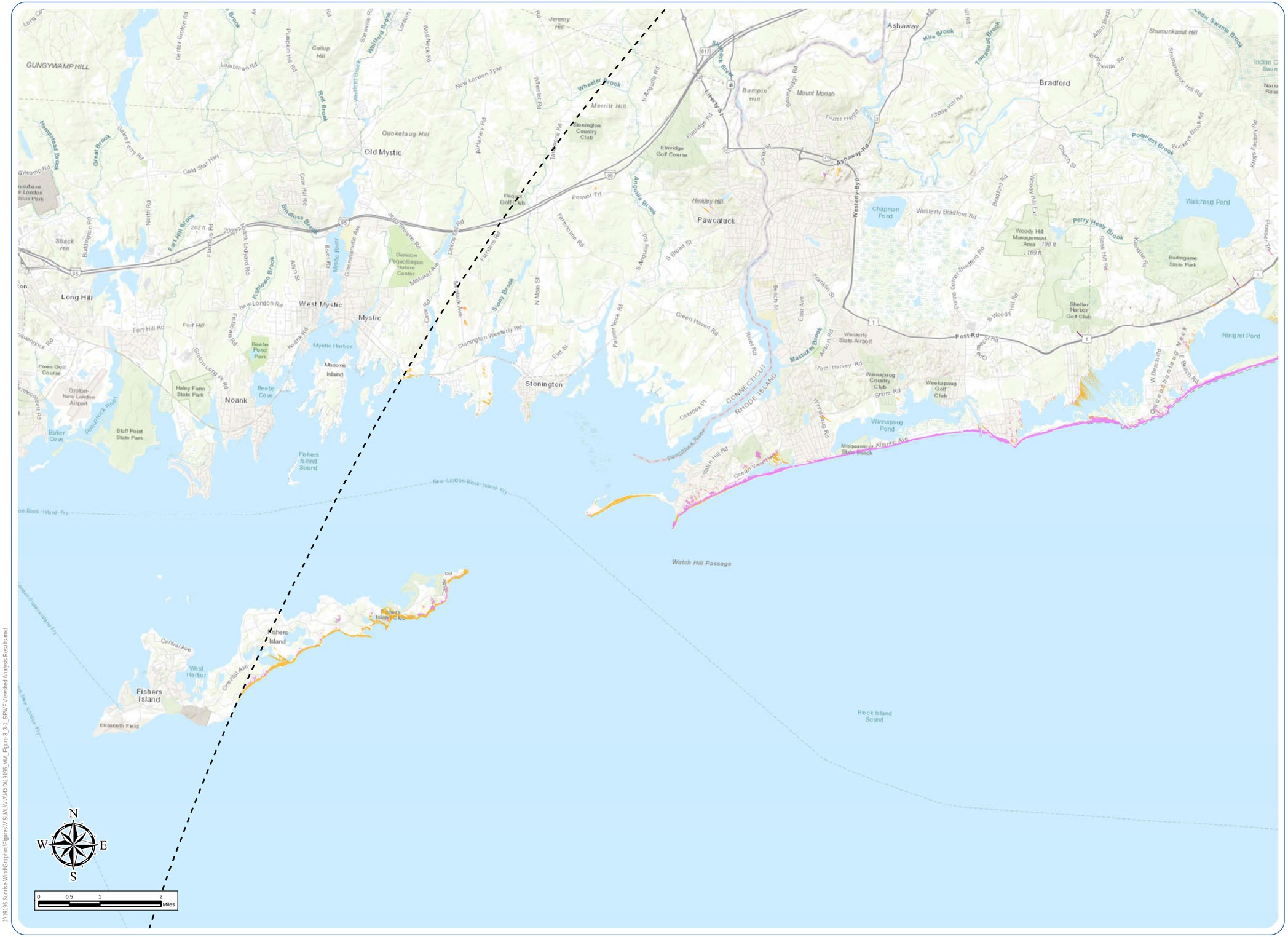
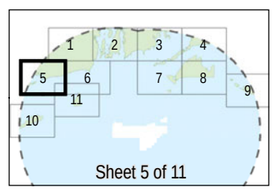
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results



- Blade Tip Potentially Visible
- Blade Tip and FAA Light Potentially Visible
- Blade Tip, FAA Light, and Midtower Potentially Visible
- Blade Tip, FAA Light, Midtower, and Platform Potentially Visible
- Visual Study Area



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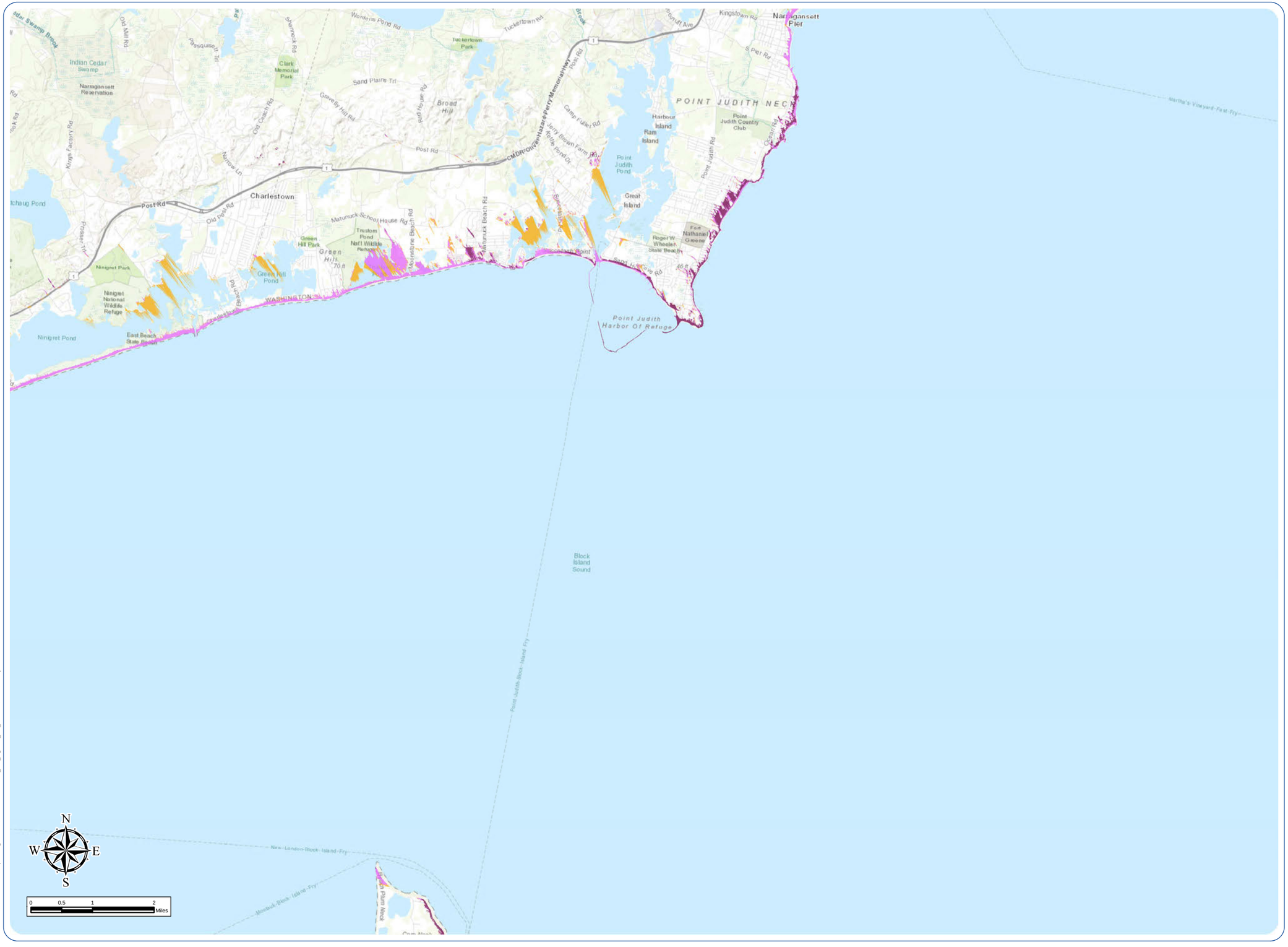
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results



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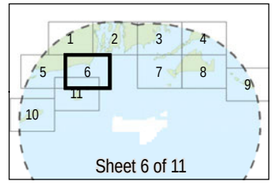
Blade Tip and FAA Light Potentially Visible

Blade Tip, FAA Light, and Midtower Potentially Visible

Blade Tip, FAA Light, Midtower, and Platform Potentially Visible

Visual Study Area



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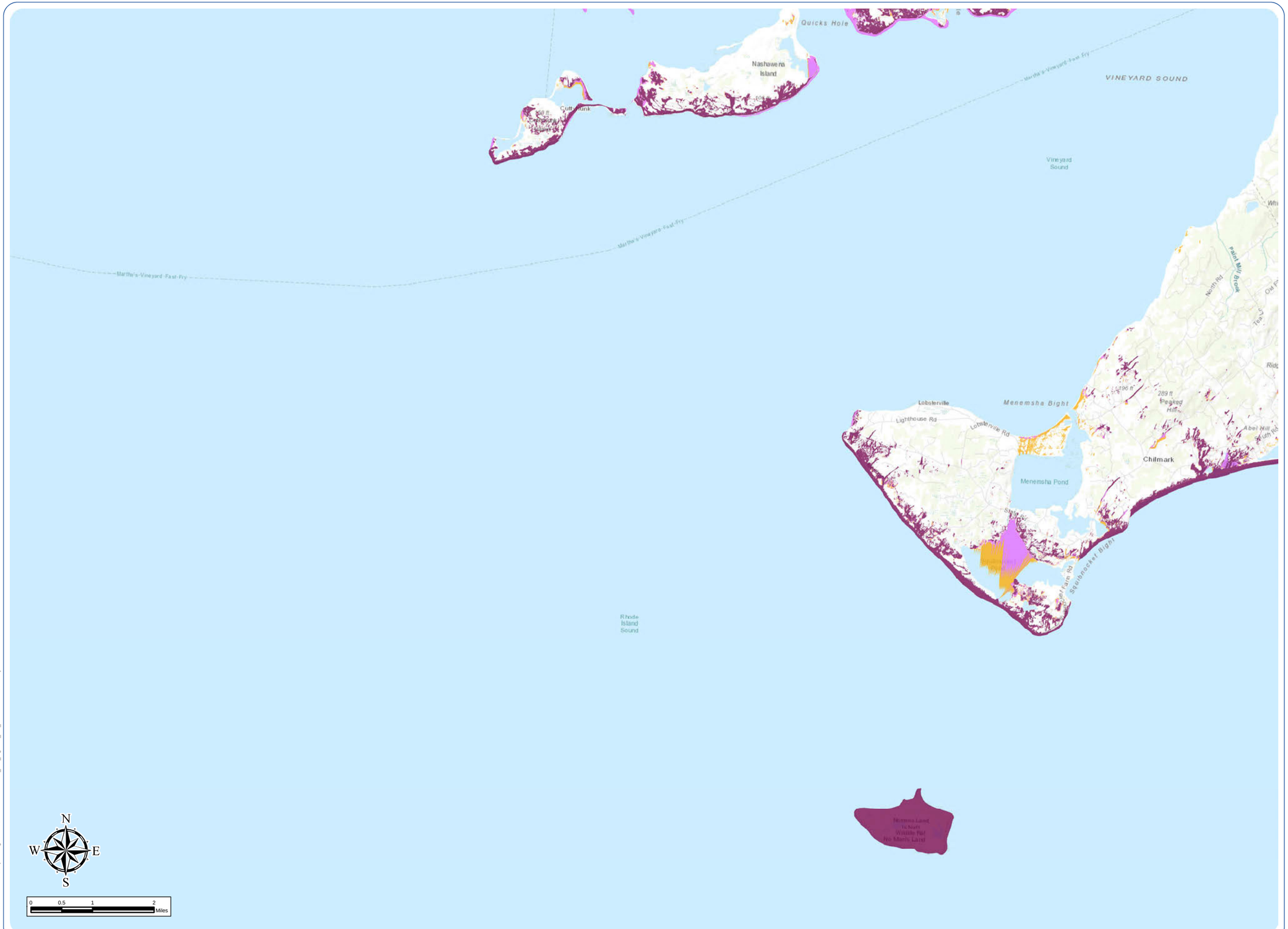
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results



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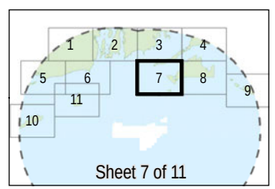
Blade Tip, FAA Light, Midtower, and Platform Potentially Visible

Visual Study Area



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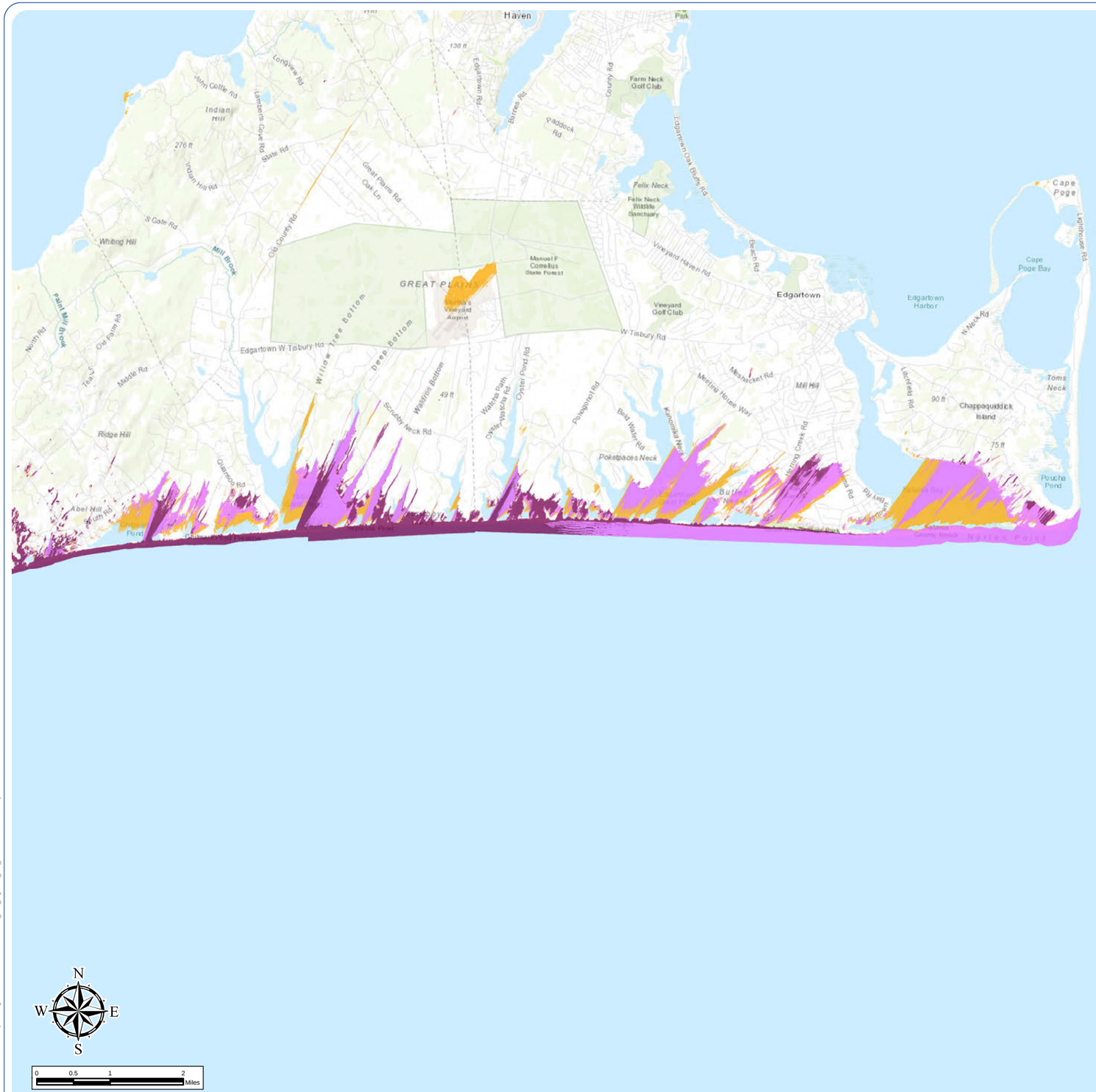
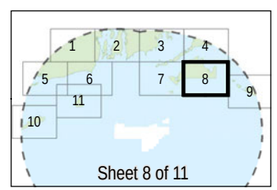
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results



- Blade Tip Potentially Visible
- Blade Tip and FAA Light Potentially Visible
- Blade Tip, FAA Light, and Midtower Potentially Visible
- Blade Tip, FAA Light, Midtower, and Platform Potentially Visible
- Visual Study Area



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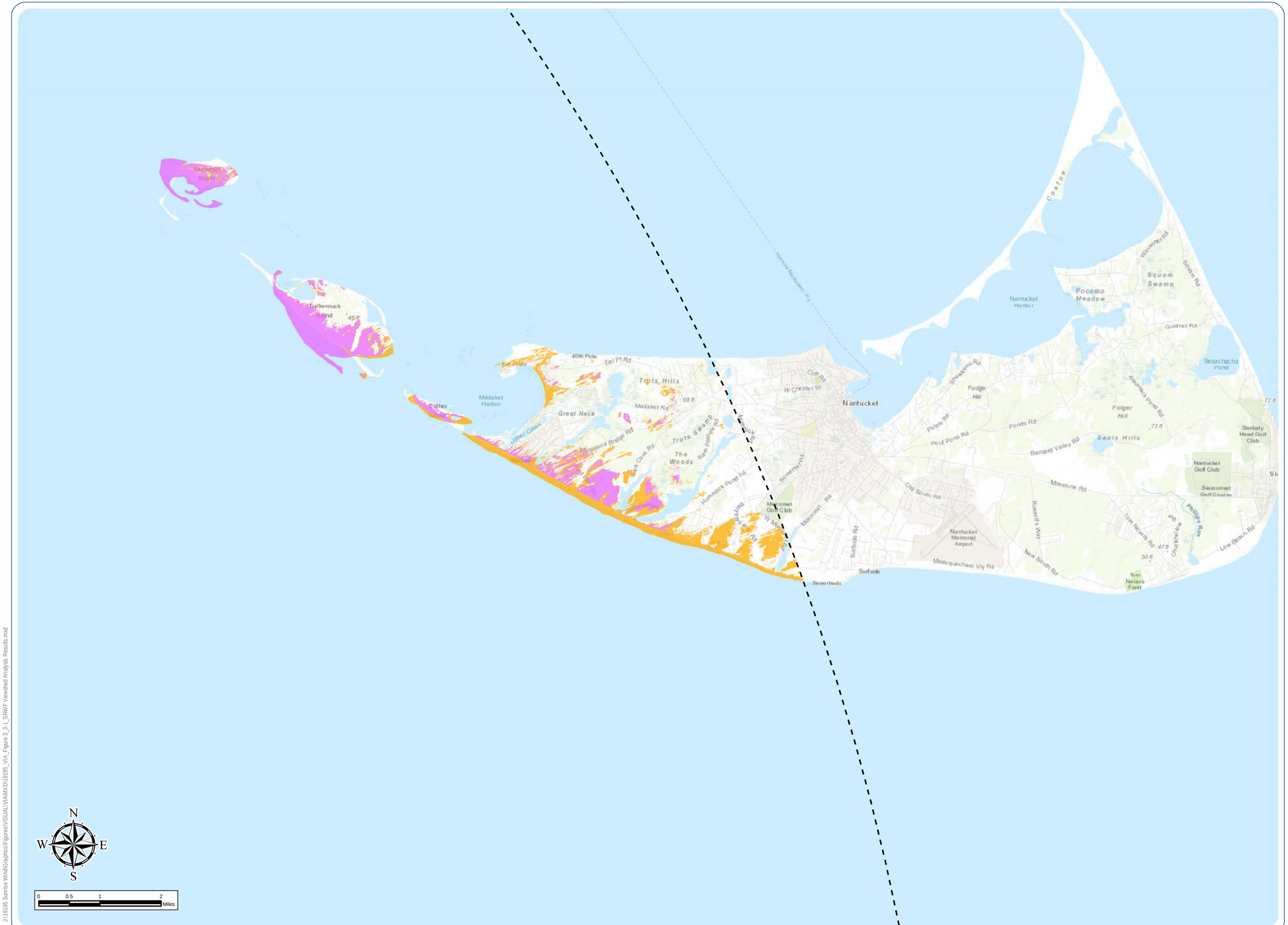
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results



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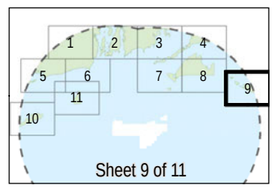
Visual Study Area



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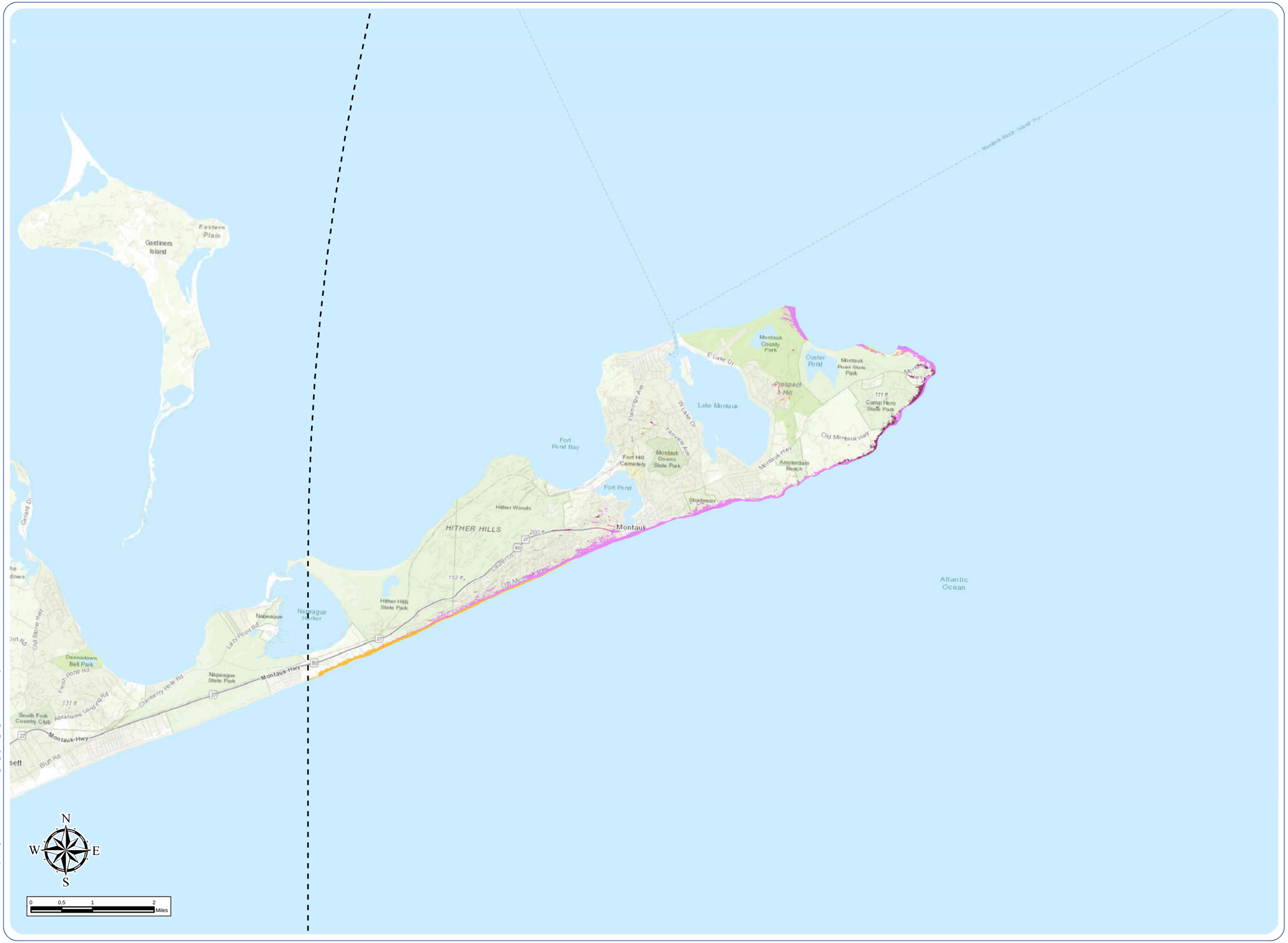
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results



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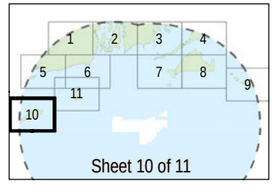
Visual Study Area



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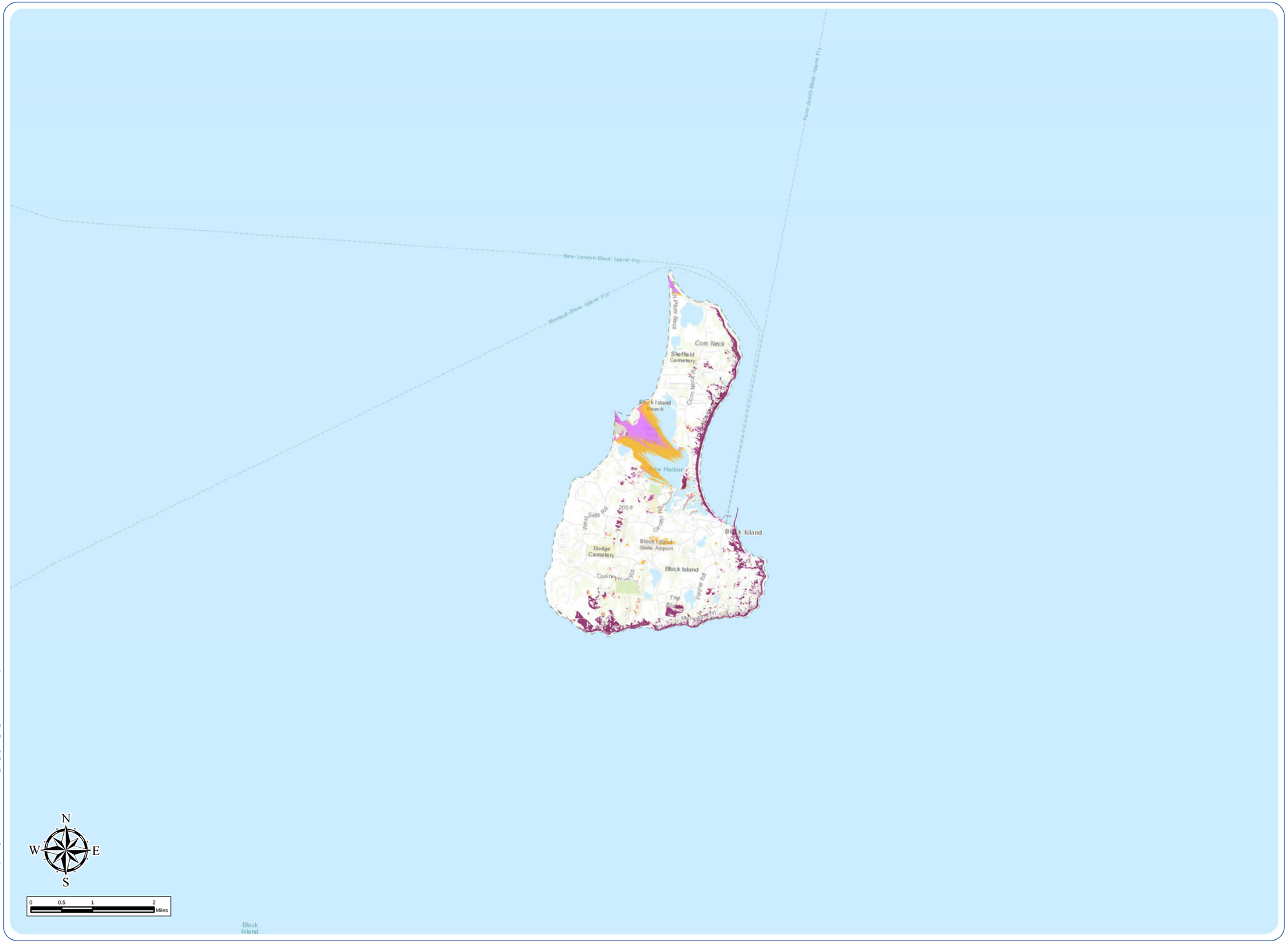
Sunrise Wind Farm Project

Outer Continental Shelf

Figure 3.3-1: Viewshed Analysis Results



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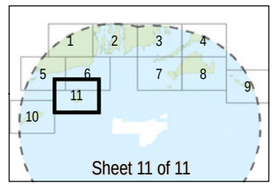
Visual Study Area



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3.1.2 Field Verification

Sunrise Wind Farm VSA

Field review largely confirmed the results of the lidar viewshed analysis. Consistent with the results of this analysis, the majority of the inland portion of the VSA was found to be screened from view of the ocean (and thus the SRWF) by vegetation and buildings/structures. Open views toward the SRWF, as indicated by visibility of the ocean, were concentrated within a mile of the ocean shoreline and were largely restricted to beaches, bluffs, open fields, salt ponds, road corridors, and cleared residential yards, where lack of foreground trees allowed for unscreened ocean views.

On Long Island, field review confirmed potential SRWF visibility along portions of the northern, eastern, and southern shoreline within the VSA. As suggested by the viewshed analysis, open views toward the Project Site were confirmed at Montauk Point State Park, Camp Hero State Park, Montauk County Park, and from all of the south shore beaches within the VSA. However, these areas of potential visibility typically only occur within approximately 600 to 700 feet of the water's edge. Due to distance from the SRWF and the effects of curvature of the earth, shoreline dunes, vegetation, and development will be very effective at screening inland views of the SRWF. Exceptions to this occur along elevated portions of Montauk Highway where the road has sufficient elevation and is oriented toward the SRWF, offering fleeting views toward the ocean and the Project Site.

On Block Island, open views toward the SRWF Site were largely restricted to beaches and bluffs along the east and south shores of the island. Visually sensitive resources with open views toward the SRWF include multiple locations along the Clayhead Trail, Fred Benson Town Beach, and Southeast Light. However, potential views were also documented from beach areas along the northern and western shorelines, including Great Salt Pond and North Light. Within the interior of Block Island, open views were confirmed from Island Cemetery and Block Island Airport. Many discrete areas of potential visibility were indicated by the viewshed analysis but were not field verified due to a lack of public access. However, private residents with southeast facing views of the ocean will very likely have open views of the SRWF.

Open views from Conanicut Island and Aquidneck Island were restricted to the south-facing shorelines of the islands, including locations such as Beavertail State Park, Brenton Point State Park, the Newport Cliff Walk, Sachuest Beach, and the Sachuest Point NWR. As suggested by the viewshed analyses, views toward the SRWF from many inland locations were generally blocked by buildings/structures and vegetation. Exceptions occur at topographic highpoints, such as Hanging Rock at Normans Bird Sanctuary and the inland portions of Brenton Point State Park.

Cuttyhunk Island in the Elizabeth Islands could have views of the SRWF along its southern and western shores, as well as from the topographic highpoint in the central portion of the island. The island reaches a maximum elevation of approximately 150 feet AMSL, which potentially would allow views of the full height of the WTGs. However, shoreline views from the island toward the SRWF would be partially screened by curvature of the earth.

Views from Martha's Vineyard were also generally restricted to the shoreline and bluffs on the western and southern sides of the island. Views toward the SRWF from the southern beaches of Martha's Vineyard, such as Lucy Vincent Beach, Squibnocket Beach, South Shore Beach, and Wasque Point all included extensive shoreline visibility toward the SRWF Site. Open inland views on Martha's Vineyard were identified at the Peaked Hill Reservation, which sits atop a substantial topographic highpoint at over 300 feet AMSL. This location offers views in the direction of the SRWF framed by dense woodland vegetation. Field review indicated that other open views from inland locations will generally be of short duration, tightly enclosed, or partially screened due to the presence of nearby topography, vegetation, and buildings/structures.

Just as with Martha's Vineyard, open views toward the SRWF Site from Nantucket were generally restricted to the western and southern shorelines and bluffs. Visibility was noted at Madaket Beach and Eel Point, however, several locations in this area were roped off and inaccessible to the public. In the areas that were visited, beyond the immediate shoreline tall, vegetated dunes served to obstruct views toward the SRWF site. Many of the inland locations on Nantucket that were indicated as visible by the viewshed analysis either had restricted public access or were on private property, and therefore were not field verified.

From the mainland, field review confirmed that views toward the SRWF were screened throughout the vast majority of the VSA. Views from rural portions of this area (even large, open agricultural fields) were generally screened by surrounding low wooded hills and/or forest vegetation. However, open views on the mainland were consistently documented along the shoreline from Westerly, Rhode Island to Antassawamock and Mattapoisett, Massachusetts; from the Woods Hole Terminal to Nobska Lighthouse; and from portions of Falmouth Harbor. These views were generally restricted to the immediate shoreline. Due to the distance of the SRWF from these locations, open views from the mainland shoreline generally will include only the upper one-half to two-thirds of the WTGs (see Section 3.2.2). Consequently, as the viewer moves inland, low vegetation, dunes, and buildings/structures will be effective at eliminating visibility completely.

The historic resources with the highest potential for SRWF visibility were those that were situated to take advantage of panoramic ocean views. Such resources include Southeast Lighthouse on Block Island, Gay Head Lighthouse on Martha's Vineyard, Beavertail Lighthouse in Jamestown, the Newport Cliff Walk on Aquidneck Island, and Watch Hill Lighthouse in Westerly, Rhode Island. These are examples of NRHP sites and districts with substantial notoriety in the region and confirmed SRWF visibility.

Appendix B lists each of the locations visited during field review along with their distance to the SRWF and a determination of potential visibility.

3.2 Project Visual Impact

3.2.1 Analysis of Existing and Proposed Views

Sunrise Wind Farm

To illustrate anticipated visual changes associated with the proposed SRWF, 50 photographic simulations from 40 unique KOPs were used to evaluate SRWF visibility and appearance within the ZVI (see Appendix C). As indicated in Section 2.2.2, these KOPs were selected based on various factors, including guidance from stakeholders, previous studies completed by BOEM, and research identifying sensitive viewing locations. In general, they were selected because they provide a clear, unobstructed view toward the SRWF from a visually sensitive site and/or represent the various LSZs and user groups that occur within ZVI.

In addition, the photos from these KOPs are meant to represent a range of viewing conditions that could be experienced within the ZVI (although almost all were taken under clear sky conditions to facilitate a high level of Project visibility). The full range of viewing conditions/viewer circumstances are not presented for each KOP. Instead, each KOP was evaluated by the rating panel based on the conditions represented in the selected photo. Thus, for any given KOP the comments included in the following section apply to the specific conditions (time of day, sun angle, lighting conditions, sky color, distance from the Project, etc.) illustrated in the photo. However, Appendix G illustrates each KOP, it distance from the Project and lighting, direction of view, and VTL rating so that simulations illustrating different conditions can be cross referenced. As a set, the total of 50 simulations presents a representative range of viewing conditions that would be experienced by viewers within the ZVI (see Section 3.2.3 for further assessment of the KOPs as a comprehensive set).

As described in Section 2.2.4, review of these existing condition images, along with visual simulations of the proposed Project, allowed for comparison of the aesthetic character of each view and viewer experience with and without the proposed Project in place. For each KOP, the visually sensitive resource(s) present at each location are described, along with the content and characteristics of the existing view, and the baseline scenic quality scores assigned by the rating panel. Consistent observations by the panel regarding existing visual character and viewer activity are summarized or quoted directly (it should be noted that all comments are included in the panel member's completed rating forms found in Appendix E). With the Project in place, the extent of its potential visibility within the affected resource(s) is summarized, followed by a description of the panel's evaluation of its effect on the view's scenic quality and viewer experience under the circumstances illustrated in the selected photo. Finally, a summary of the rating panel's assessment of the Project's degree of compatibility with the existing landscape and its spatial dominance and scale contrast is presented, along with an assessment of its VTL under the conditions illustrated at that KOP.

In this section of the report, no attempt is made to expand upon or interpret the rating panel results or speculate on how they might differ under circumstances different than those illustrated in the selected photo from each KOP. Numerical impact scores resulting from the VIA procedure are summarized in Section 3.2.3, and interpretation/explanation of the assessment results for the set of KOPs as a whole (representing the full range of viewing circumstances) is presented in the conclusions presented in Section 5.0. Potential mitigation options are reviewed in Section 4.0. Additionally, Appendix H contains a table of all KOPs, the distance from the Project, time of day, conditions represented, and VTL rating so that views with similar characteristics or alternative atmospheric and light conditions can be easily cross referenced to assist in the characterization of impacts. Where appropriate, these cross references are included in the analysis presented below.

3.2.1.1 LI01 Camp Hero State Park Overlook

Existing View

This view is from Camp Hero State Park in the Town of East Hampton on Long Island, New York. The selected viewpoint is from a designated scenic overlook in the park and falls within the Montauk Point Scenic Area of Statewide Significance (SASS). The overlook occurs along a walking path through dense scrub shrub forest atop cascading bluffs which lead to a rocky beach below. The walking path offers park visitors occasional open views to the shoreline and ocean. Walkers along the trail consistently stop at overlook locations such as this to take photographs and enjoy the view. It is used primarily by tourists and vacationers involved in passive recreational activities and is representative of the Coastal Bluffs LSZ. The existing view to the east-southeast from this location features the vegetated edge of a steep bluff in the immediate foreground, backed by the dark blue waters of the Atlantic Ocean. The ocean extends uninterrupted to the well-defined horizon, where it meets the light blue sky. The top of the bluff screens views of the shoreline, which is well below the viewer. However, views to the north include breaking waves, and views closer to the bluff's edge would include the shoreline itself.

Rating panel members indicated that the view offers a dramatic visual drop-off to the bluffs and beach below. The picturesque and undisturbed character of the view, along with the strong color contrast and horizontal line where the ocean meets the sky at the horizon were also noted by panel members. The scenic quality score for the Coastal Bluffs LSZ was 16, which indicates that this LSZ is in the Retained category. Rating panel scenic quality scores for the existing conditions photograph(s) ranged from 10.7 to 15.7 (average = 14.3), which is consistent with the scenic quality assessment of the LSZ as a whole.

Simulated View

Visibility of the SRWF in this area will be largely restricted to the immediate shoreline, bluffs along the cliff edge, and areas with open grassland specifically managed to provide open views toward the Ocean. Small

areas of visibility also occur along a portion of Old Montauk Highway (which runs parallel to the southeast facing shoreline and aligns with the SRWF). Inland from these immediate shoreline locations, potential visibility is eliminated by structures, vegetation, and topography.

With the proposed SRWF in place, the upper portions of the WTGs are visible as numerous faint white lines just above the horizon. However, at this distance (31.2 miles [50.2 km] from the nearest turbine) their light color and substantial screening provided by curvature of the earth make the WTGs difficult to see. Rating panel members indicated that under the clear conditions illustrated in the selected photo, the proposed WTGs are *"barely visible"* and *"almost disappear as the sky fades to white at the horizon"*. Some panel members noted that the turbines' white color could present contrast with the sky on the horizon, and that since the purpose of the overlook is to take in the long distance view of the ocean, if visible, the WTGs could become the focus of viewer attention at this site. However, all panel members noted the WTGs limited visibility, and indicated that they had *"a minor presence"* and *"do not dominate the view".,* suggesting that their effect on seascape character, scenic quality and viewer enjoyment of the trails and the views it offers would be limited.

Rating panel members had varied reactions to the impact of the SRWF, with VIA scores ranging from 10.3 to 15.7 (average score = 13.7). These scores indicate an average reduction of 0.6 point in comparison to the existing view. Individual rating panel members indicated reductions that ranged from 0 to 1. With the SRWF in place, the scenic quality of the view remains in the Retained category, suggesting that the SRWF will not result in significant adverse impacts to scenic quality.

Considering the compatibility, scale, and spatial dominance factors that influenced the visual impact rating at this KOP, panel members noted that the WTGs result in minimal scale contrast and were compatible with, and subordinate to, water resources, landform, vegetation, land use and user activity (see Table 3.2-4). The average rating panel VTL score associated with this KOP was a 1. This is consistent with VIA scoring and comments indicating limited visual impact and reflects the fact that the SRWF will occupy approximately 0.3° or 0.5% of the viewers' vertical field of view and approximately 15° of ocean horizon at this KOP, which constitutes approximately 12% of the 122° of ocean horizon available to the viewer (see Appendix C3).

Table 3.2-3 – Average Visual Impact Ratings – LI01

Camp Hero State Park Overlook						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.7	14.7	15.7	14.7	15.7	14.3
Proposed	10.3	14.3	14.7	13.7	15.7	13.7
Change	-0.4	-0.4	-1.0	-1.0	0.0	-0.6

Table 3.2-4 – Average Visual Impact Ratings by Resource – LI01

Camp Hero State Park Overlook			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.2	1.2	1.1
Landform	1.0	1.0	1.0
Vegetation	1.0	1.0	1.0
Land Use	1.1	1.0	1.0
User Activity	1.0	1.0	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.2 LI04 Montauk Point State Park

Existing View

This view is from Montauk Point State Park, an 862-acre park located on the eastern tip of Long Island in the Town of East Hampton, New York. This site is also within the Montauk Point SASS. The State Park is managed by NYS Office of Parks, Recreation, and Historic Preservation (OPRHP), and provides year-round outdoor recreational opportunities for the public, including saltwater fishing, wildlife viewing, and photography. The park also contains the Montauk Point Lighthouse, an iconic lighthouse located at New York's easternmost point. Montauk Point features parking areas, comfort stations, beach access points, hiking trails, a restaurant, and a freshwater pond. The selected viewpoint is located in a parking lot adjacent to the lighthouse in the Maintained Recreation Area LSZ which is typically used by tourists and other visitors for park access. The existing view to the east from this location overlooks a small section of the Montauk Highway lined with a wood guardrail, scrub vegetation, and a few street signs in the foreground backed by a large, vegetated bluff which rises in elevation from the left to right side of the image. On the right side of the view, a small gable-roofed white building (associated with the Montauk Lighthouse) is nestled within the dune vegetation. Beyond the foreground, the dark blue ocean extends out to the horizon where it meets a light blue sky. The dune topography and vegetation partially obscure the ocean creating a very focused and visually interesting scene. Just to the left of this frame, the BIWF can be seen in its entirety at a distance of 17.0 miles (27.4 km).

Rating panel members indicated that the dune vegetation, lighthouse building, and ocean present an interesting setting and a nice composition. The scenic quality classification for the Maintained Recreation Area LSZ was 15, which indicates this LSZ is in the Retained category. Rating panel scores for the existing conditions photograph(s) ranged from 12.7 to 17.3 (average = 15.6), which is consistent with the LSZ scenic quality description of the broader LSZ.

Simulated View

Visibility of the SRWF in this area will be largely restricted to the parking area, shoreline, and beach areas along the east-facing portions of Montauk Point. However, several points along the Montauk Highway (which runs perpendicular to the east facing shoreline and aligns with the SRWF) have discrete areas of potential SRWF visibility framed by foreground vegetation, structures, and topography. Inland from these limited locations, the areas of potential visibility are eliminated by vegetation and topography.

With the proposed SRWF in place, the WTGs appear as white features along the central portion of the horizon. Due to their distance from the viewer (30.6 miles [49.2 km] from the nearest proposed WTG), the WTGs appear small, with different portions of individual WTGs (ranging from single blades to portions of the nacelle and tower) visible above the horizon due to curvature of the earth. One panel member noted *"the proposed turbines are visible from this location as they just break the horizon line so that the top of the turbines and blades are visible, however, the scale and lightness of the installation against the light colored sky reduces the visual impact."* However, another panel member stated that *"The field of turbines is visible along the horizon and will become somewhat of a focus to the viewer, as there are no other objects to draw one's attention on the open water. They are at a great distance, so they are not overwhelming".* Limited WTG visibility and focus on the lighthouse and its immediate surroundings suggest that impact on scenic quality, viewer activities, and enjoyment of the view will be limited at this location.

Rating panel members had varying reactions to the Facility's impact, with VIA scores ranging from 12.7 to 16.3 (average score = 14.3). These scores indicate an average reduction of 1.3 points in comparison to the existing view, with individual rating panel members indicating reductions that ranged from 0 to 2.7. With the SRWF in place. The average reduction of 1.3 indicates that the KOP remains in the Retained category and impacts resulting from the SRWF would be negligible.

Considering the compatibility, scale, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings demonstrate that the WTGs result in moderate scale contrast and were somewhat compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-6). Considering spatial dominance, panel members suggest that the WTGs are subordinate to water resources, landform, and vegetation, and co-dominant with land use and user activity. The average rating panel VTL score at this KOP was a 3 which indicates "*an object/phenomenon that can be easily detected after a brief look and would be visible to most casual observers, but without sufficient size or contrast to compete with major landscape/seascape elements*" (Sullivan et al., 2013). The SRWF will occupy approximately 0.3° or 0.5% of the viewers' vertical field of view and approximately 15° or 16% of the available ocean horizon (see Appendix C3). In comparison to the view from Camp Hero State Park Overlook, the ocean horizon at Montauk Point is tightly framed by foreground features making the WTGs appear slightly more prominent than they would in an otherwise open, unobstructed view.

Table 3.2-5 – Average Visual Impact Ratings – LI04

Montauk Point State Park						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	12.7	16.3	17.3	15.0	16.7	15.6
Proposed	12.7	16.3	14.7	13.0	15.0	14.3
Change	0.0	0.0	-2.7	-2.0	-1.7	-1.3

Table 3.2-6 – Average Visual Impact Ratings by Resource – LI04

Montauk Point State Park			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.8	1.8	1.4
Landform	1.6	1.6	1.0
Vegetation	1.5	1.6	1.0
Land Use	1.5	1.6	1.5
User Activity	1.9	1.8	1.5
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

Simulated View - Nighttime

In addition to the daytime simulation of the SRWF at Montauk Point State Park, the rating panel also evaluated a simulation of the proposed Project at this KOP during nighttime conditions (see Tables 3.2-7 and 3.2-8). Under nighttime conditions the rating panel score for the existing view averaged 11.1 indicating this KOP is in the Partially Retained category. With the SRWF in place, the AOWLs and amber USCG navigation lights associated with the proposed WTGs are visible on the horizon across the right side of the view. One rating panel member commented, "*The red warning lights of the proposed turbines on the horizon are very small in scale due to the viewing distance but are clustered in a limited location on the horizon. The blinking of the existing Block Island turbines and the proposed turbines, in addition to the moving watercraft lights would create the potential for non-sequential blinking, movement and become visually overwhelming to the viewer*". The proposed nighttime view received an average rating score of 9.7 indicating that the AQOLs would result a reduction to the Modified category. This reduction and the decrease of 1.4 suggests somewhat significant adverse visual impacts would result from the SRWF AOWLs and USCG navigation lights. This is consistent with the average rating panel VTL score of 4 at this KOP under clear nighttime conditions.

Table 3.2-7 – Average Visual Impact Ratings – LI04 NI

Montauk Point State Park - Nighttime						
	KAC	**RCS**	**JMG**	**NHR**	**SMB**	**Average**
Existing	9.7	8.8	11.8	11.5	13.7	11.1
Proposed	9.3	8.8	9.0	10.2	11.3	9.7
Change	0.3	0.0	-2.8	-1.3	-2.3	-1.4

Table 3.2-8 – Average Visual Impact Ratings by Resource – LI04 NI

Montauk Point State Park - Nighttime			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	2.3	1.6	1.9
Landform	1.4	1.4	1.4
Vegetation	1.5	1.5	1.7
Land Use	1.7	1.7	1.7
User Activity	2.0	2.0	2.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.3 CI01 Cuttyhunk Island

Existing View

This view is from Cuttyhunk Island (Town of Gosnold), Massachusetts. This site is located within the Elizabeth Islands State Scenic Area and is representative of the Coastal Scrub/Shrub LSZ. Cuttyhunk Island is located in Buzzards Bay, south of New Bedford, Massachusetts and is largely undeveloped. It hosts a small population of year-round residents and a modest influx of tourists and vacationers during the summer season. The selected viewpoint is located at the top of Tower Hill Road near a World War II artillery battery or fire control tower on Lookout Hill and is adjacent to a network of trails and sand roads that lead to nearby residences. The trails are typically used by residents and vacationers for hiking, sightseeing, and wildlife viewing. The Draft Open Space and Recreation Plan for the Town of Gosnold states, *96% of the land on Cuttyhunk is classified as "Distinctive Scenic Landscape". Lookout Hill (elevation 154 feet) provides an unobstructed, 360-degree view that can stretch for 28 miles on a clear day*. The existing view to the south-southwest from this location looks out from a height of land across a landscape of low rolling hills, dominated by scrub/shrub vegetation, toward the open water of the Atlantic Ocean. The landscape represented in the view is devoid of any evidence of human development. However, the broader context of this location includes views of a large radio tower, houses, and the historic relics of the batteries. The ocean appears relatively calm, with a dark blue surface that is broken only by a bright white corridor of reflected sunlight. The clear blue-sky transitions to a band of white clouds at the horizon line.

Rating panel members indicated that the view offers a panoramic view of the ocean, which *"appears to go on forever"*. The focus is on the water, but the landform creates a solid base frame. Due to the lack of visible development, the panel described the landscape as having a *"pristine"* and *"untamed"* character. The rating panel scores for the existing conditions photographs ranged from 13.3 to 16.7 (average = 14.5), are consistent with the Retained Category of the Coastal Scrub/Shrub LSZ.

Simulated View

Large areas of contiguous visibility of the SRWF will be available from Cuttyhunk Island on the south and southwest facing shorelines and slopes (surrounding Bayberry Hill Road) due to the dramatic rise in topography, the existence of relatively low scrub/shrub vegetation, and the relative absence of other obstructions. These areas of visibility break up into small, discrete areas once the topography begins to slope eastward and northward before diminishing completely at the town center and most heavily populated portion of the island.

With the proposed SRWF in place, well defined rows of WTGs can be seen along almost the full field of view. Under the lighting and weather conditions illustrated in the selected photo, the WTGs are clearly visible. Elevated viewer position and somewhat closer distance to the nearest turbine (25.8 miles [41.5 km]) allow for significant portions of the towers to be seen above the horizon line. Strong backlighting has the WTGs in shadow, which makes them appear dark against the light sky in the background and contrasts with the bright white color of the reflected sunlight on the ocean surface. WTG visibility is also accentuated in those rows where the turbines overlap with one another, thus increasing their visual weight. Although one panel member indicated that not many viewers would experience this view, and that the SRWF did not alter scenic quality, in general the panel felt that the quantity and extent of WTGs along the horizon had an adverse visual effect. This effect included drawing the viewer's eye away from the landscape in the foreground and *"adding visual clutter to an otherwise pristine view".* The large quantity of turbines causes them to *"read as a mass in the landscape",* and their regular spacing contrasts with the calm ocean and rugged natural vegetation in the foreground. The previous presence of the turbines alters the viewer's experience of a more natural undeveloped seascape.

Rating panel members assigned VIA scores ranging from 9.3 to 13.7 (average score = 11.4). These scores indicate an average reduction of 3.1 points in comparison to the existing view, with individual rating panel members indicating reductions that ranged from 0 to 5.3. With the SRWF in place, the KOP is reduced from a Retained category to Partially Retained. These scores suggest that significant adverse impacts could result from the operation of the SRWF in the clear conditions illustrated in the visual simulation.

Considering the scale and compatibility factors that influenced the visual impact rating at this viewpoint, panel ratings indicate that the WTGs result in moderate scale contrast and were somewhat compatible with landform, vegetation, land use and user activity. They were rated as not compatible with water resources (see Table 3.2-10). Considering spatial dominance, panel members indicated that the WTGs are co-dominant with the water resources, landform, vegetation, land use, and user activity. Average rating panel VTL scores anticipated that the Project visibility from this KOP is consistent with a VTL of 4, which indicates "*[the* SRWF*] is obvious and with sufficient size or contrast to compete with other landscape/seascape elements, but with insufficient visual contrast to strongly attract visual attention and insufficient size to occupy most of an observer's visual field"* (Sullivan et al., 2013). This is consistent with the extent of the horizon and vertical field of view that the SRWF will occupy in views from this KOP. The SRWF will occupy approximately 0.4° or 0.7% of the viewers vertical field of view and will occupy approximately 44° of the ocean horizon which accounts for 33% of the total ocean horizon (132°) available (see Appendix C3).

Table 3.2-9 – Average Visual Impact Ratings – CI01

Cuttyhunk Island						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	14.0	13.7	13.3	16.7	14.7	14.5
Proposed	10.3	13.7	10.7	13.0	9.3	11.4
Change	3.7	0.0	2.7	3.7	5.3	3.1

Table 3.2-10 – Average Visual Impact Ratings by Resource – CI01

Cuttyhunk Island			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	2.5	2.3	2.3
Landform	1.8	1.8	1.8
Vegetation	1.9	1.7	1.5
Land Use	1.8	1.6	1.6
User Activity	1.9	2.1	1.7
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.4 MM01 Gooseberry Island

Existing View

This view is from Gooseberry Island, a small island located off the coast in the Town of Westport, Massachusetts. This site is also located near Gooseberry Public Beach, south of Horseneck Beach State Reservation on the mainland, and within the Westport South Dartmouth State Scenic Area. The selected KOP is in the Coastal Scrub/Shrub LSZ and located on a walking trail adjacent to the rocky coastline that is typically used by tourists and residents for shoreline access. The existing view to the southwest from this location is dominated in the foreground by low growing scrub vegetation and a dirt walking path overlooking a rocky shoreline backed by an unbroken expanse of open ocean that extends to the horizon. Several sailboats are barely visible in the distance. The cloudless sky in the background transitions from light blue overhead to white at the horizon.

Rating panel members indicated that the view is fairly pristine, with only an informal footpath cutting through the view and several indiscernible forms at the horizon that present as small vertical lines protruding from the water. Zooming in confirms these are sailboats in the distance. The setting appears calm and serene. Rating panel scores for the existing conditions photographs ranged from 12.3 to 15.0 (average = 13.9), which is consistent with the Retained category and the overall Coastal Scrub/Shrub LSZ rating.

Simulated View

This KOP is representative of the views that occur from along and near the shore of Gooseberry Island, where unscreened visibility of the Project will be possible. Viewers will approach the shoreline from the parking lot and walking path, oriented in a generally north-south direction, which is located on the inland portion of the Island. As viewers walk south on the walking path to access the shore, visibility in this area will be intermittent due to the screening effects of terrain and the grassy vegetation that covers the majority of the island. From these inland areas, potential visibility will include less than half of the proposed WTGs.

With the proposed SRWF in place, the upper portion of the WTGs' nacelle and rotors can be seen from this KOP as a series of fine dark lines against the sky at the horizon. Due to their distance from the viewer (30.7 miles [49.4 km] from the nearest proposed WTG), the turbines appear small. However, the number and density of the turbines does add a presence to the majority of the ocean horizon. Under variable atmospheric or lighting conditions the WTGs would be more difficult to perceive, if not completely obscured. Examples from similar distances illustrating variable lighting conditions include, Newport Cliff Walk (AI03) and Sachuest Beach (AI06).

Rating panel members had varied reactions to the impact of the SRWF, with VIA scores ranging from 11.0 to 13.3 (average score = 12.5). These scores indicate an average reduction of 1.3 points in comparison to the existing view, which reduces the KOPs scenic quality from the Retained category to the Partially Retained category but suggests that minimal visual impacts would result from the SRWF. Individual rating panel members indicated reductions that ranged from 0.0 to 4.0. At the low end of this range, panel members indicated that the WTGs were *"barely visible"* and were *"insignificant to the existing view and do not contrast with the surroundings".* Panel members indicating the higher degrees of visual change noted that the WTGs *"add a texture to the horizon that is otherwise only present in the vegetation in the foreground"* and *"despite the turbines being small in size on the horizon, there is a visual density due the to the turbines being stacked upon each other".* Despite their limited visibility, the visual density of the WTGs along the horizon line, their overlap and movement, and their presence as the only man-made features in the view present contrast with the existing view and result in an overall reduction in scenic quality. This could have an adverse effect on viewers visiting this KOP specifically for its scenery and ocean views, but is unlikely to diminish the experience of those more focused on swimming, sunbathing and other beach activities.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, rating panel members noted that the WTGs result in minimal scale contrast and were generally compatible with landform, vegetation, land use and user activity, but had moderate scale contrast and were somewhat compatible with water resources (see Table 3.2-12). Considering spatial dominance, panel members suggest that the WTGs are subordinate to water resources, landform, vegetation, land use, and user activity. The average rating panel VTL score associated with this KOP was a 2, which indicates that *"An object/phenomenon that is very small and/or faint, but when the observer is scanning the horizon or looking more closely at an area, can be detected without extended viewing. It could sometimes be noticed by casual observers; however, most people would not notice it without some active looking"* (Sullivan et al., 2013). The SRWF will occupy approximately 0.22° or 0.4% of the viewers' vertical field of view and will occupy approximately 40° of the ocean horizon, which constitutes approximately 43% if the total available ocean view (see Appendix C3). Despite the relatively wide horizon occupation, the vertical occupation is minimal due to the distance of the WTGs and the effects of curvature of the earth, which supports the VTL 2 determination.

Table 3.2-11 – Average Visual Impact Ratings – MM01

Gooseberry Island						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	15.0	13.3	12.7	13.3	15.0	13.9
Proposed	13.3	13.3	11.7	13.3	11.0	12.5
Change	-1.7	0.0	-1.0	0.0	-4.0	-1.3

Table 3.2-12 – Average Visual Impact Ratings by Resource – MM01

Gooseberry Island			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.6	1.5	1.4
Landform	1.1	1.1	1.1
Vegetation	1.3	1.3	1.3
Land Use	1.4	1.3	1.1
User Activity	1.4	1.4	1.4
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.5 MM04 Nobska Lighthouse

Existing View

This view is from the grounds in front of the Nobska Lighthouse, on a mainland peninsula in the Town of Falmouth, Massachusetts. This slightly elevated site is also near the Nobska Beach Association Public Beach and the NRHP-listed Nobska Point Lighthouse. The selected KOP is in the Maintained Recreation Areas LSZ. From this elevated position the view overlooks two wooden fences, Church Street and dense roadside vegetation which drops off to the water below. The landform of Martha's Vineyard is clearly visible from the left to the center of the view partially enclosing the Ocean, within which a small sailboat and a red buoy can be seen. The existing view to the south-southwest from this location is dominated in the foreground by roadside fencing on either side of Church Street and dense green vegetation overlooking an expanse of dark blue ocean. The landform of Martha's Vineyard fades from dark blue to light gray from left to right as the distance to the horizon increases. The sky is light blue with some low white haze transitioning to white at the horizon.

Rating panel members indicated that the view is a *"utilitarian overlook"* with *"some [roadside] infrastructure creating some clutter in the foreground".* The calm sound with interesting landform in the distance creates a *"quaint, seaside scene".* Rating panel members had relatively consistent reactions to the existing conditions photograph, with four out of five panel members scores falling between 16.0 and 16.7, and one panel member indicating a score of 12.0. The average score for all panelists was 15.4, which is consistent with the Maintained Recreation Areas LSZ's Retained categorization.

Simulated View

This KOP is representative of the views that occur from the grounds immediately surrounding the Nobska Lighthouse and nearby portions of Church Street and the Nobska Lighthouse visitor parking lot. From these areas, views of the SRWF will be intermittent due to roadside vegetation along Church Street and other obstructions, such as fencing or signage. Visibility of the SRWF from further inland, 200-300 feet beyond the shoreline, will be fully screened by the increasing intrusion of terrain, vegetation, and structures. From areas along the shoreline to the west, such as the Nobska Beach Association Public Beach and portions of Church Street that are adjacent to it, views of the SRWF will generally be less obstructed and more continuous due to the sparsity of intervening vegetation. However, the intervening landform of Martha's Vineyard will screen a greater portion of the turbines from this less elevated position.

With the proposed SRWF in place, the WTGs are difficult to discern from this KOP with the naked eye due to their distance from the viewer (34.7 miles [55.8 km] from the nearest proposed WTG). Like the existing

conditions ratings, rating panel members had a similar range of VIA scores at this KOP. Four of the five rating panel members indicated VIA scores (16.0 to 16.7, while and one of the panelists had a VIA score of 12.0. Individual rating panel members indicated reductions that ranged from 0.1 to 0.3. At the low end of this range, one panel member indicated that the *"Proposed conditions are at a great distance and can barely be discerned in the best of atmospheric conditions. This project has virtually no visual impact."* Comments from other panel members indicated: *"installation is not perceivable in this view"*; *"Turbines not visible on the horizon."*; and *"Distance and curvature obscure the proposed turbines to the point where they are nearly invisible"*. The SRWF resulted in an average score of 15.3, which represents an average reduction of 0.1 point in comparison to the existing view. These scores indicate a negligible magnitude of visual change and therefore no adverse impact on scenic quality or viewer activity/enjoyment resulting from the SRWF (see Table 3.2-13).

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel members noted that the WTGs result in minimal scale contrast and were compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-14). Considering spatial dominance, panel members suggest that the WTGs are subordinate to water resources, landform, vegetation, land use, and user activity. The average VTL score associated with this KOP was a 1, which indicates *"An object/phenomenon that is near the extreme limit of visibility. It could not be seen by a person who was unaware of it in advance and looking for it. Even under those circumstances, the object can be seen only after looking at it closely for an extended period"* (Sullivan et al., 2013).

Negligible visual impact at this KOP can be attributed to the distance of the Project from the viewer and the fact that the SRWF will occupy approximately 0.01° or 0.2% of the viewers' vertical field of view and approximately 29° of the horizon, only 7% of which will occur over open ocean (see Appendix C3). The remaining horizon that that SRWF occupies will occur over, or be screened by, the landform of Martha's Vineyard.

Table 3.2-13 – Average Visual Impact Ratings – MM04

Nobska Lighthouse						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	12.0	16.0	16.3	16.0	16.7	15.4
Proposed	12.0	16.0	16.0	16.0	16.7	15.3
Change	0.0	0.0	-0.3	0.0	0.0	-0.1

Table 3.2-14 – Average Visual Impact Ratings by Resource – MM04

Nobska Lighthouse			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.0	1.0	1.0
Landform	1.0	1.0	1.0
Vegetation	1.0	1.0	1.0
Land Use	1.0	1.0	1.0
User Activity	1.0	1.0	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.6 MM06 Demarest Lloyd State Park

Existing View

This view is from the beachfront at Demarest Lloyd State Park, within the South Dartmouth State Scenic Area, located in the Town of Dartmouth, Massachusetts. This State Park totals approximately 200 acres and is situated on the Slocums River Estuary, which empties into Buzzards Bay. It is managed by the Massachusetts Department of Conservation and Recreation (MassDCR), and provides year-round outdoor recreational opportunities for the public, including swimming, beach combing, hiking, picnicking, fishing, wildlife viewing, environmental education, and photography. Facilities include picnic tables, rest rooms, and walking trails that traverse forests, coastal dunes, and salt marshes. The selected viewpoint is located on the beach, which is accessed by a short path from the main parking area lined with low growing woody shrubs. It is representative of the Shoreline Beach and Coastal Scrub/Shrub LSZs. The existing view to the south from this location overlooks a rocky, pebble beach in the immediate foreground that continues along the curving shoreline into the middle ground and background. Exposed stones below the high tide line create a dark band between the upper beach and the water's edge. Open water that is a mix of blue and green colors extends to the horizon on the left side of the view, where a distant low landmass is visible. From the right side to the center of the view, the water is enclosed by the curving mainland shoreline, which includes scrubby forest vegetation in various shades of green. An irregular line of the treetops defines the horizon in this portion of the view and blocks views of more distant landscape features. A few beach goers are visible in the foreground and the sky is blue overhead. Thin clouds give the sky a whiter color at the horizon line.

Rating panel members indicated that *"this is a more complex open water view with landform and vegetation wrapping around into the distance to frame the view. There is landform in the distance to act as a focal point in this view"*. Rating panel scores for the existing conditions photograph(s) ranged from 11 to 16.7 (average = 13.9), which is consistent with the Retained category applied to the Shoreline Beach and Coastal Scrub/Shrub Forest LSZs.

Simulated View

Visibility of the SRWF from this KOP will be representative of shoreline views that will be available at Demarest Lloyd State Park surrounding, and north of, the main parking area. Locations south of the parking area will be partially or fully screened from view by development associated with Barneys Joy Point Military Reservation which sits in the foreground-middle ground of the view.

With the proposed SRWF in place, the WTGs can be seen as a series of fine dark lines that extend above the ocean between the distant land mass on the horizon and the nearer point of land. Due to their distance from the viewer (33.1 miles [53.3 km] from the nearest proposed WTG), the turbines appear small. As one panel member noted, *"while they are visible, they are located at a far enough distance not to be prominent".* Another member stated, *"the proposed turbines have little presence in this view".*

Rating panel members had consistent reactions to the SRWF's impact, with VIA scores ranging from 11 to 15.7 (average score = 13.5). These scores indicate an average reduction of 0.3 point in comparison to the existing view, indicating that it remains in the Retained category. Individual rating panel members indicated reductions that ranged from 0.3 to 1 (see Table 3.2-15). While some panel members felt that the curving shoreline and point of land in the background would draw the viewer's eye to the WTGs on the horizon, all indicated that their impact would be modest. Panel members stated that the spacing of the turbines, the complexity of the landscape, and the appearance of the WTGs as an extension of the land (due to their location and similar perceived height) help mitigate their visual impact. VIA scores and rating panel comments indicate that the SRWF would have negligible effect on scenic quality and viewer activities at Demarest Lloyd State Park.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings indicate that the WTGs result in minimal scale contrast and were compatible with, and subordinate to, water resources, landform, vegetation, land use and user activity (see Table 3.2-16). The average VTL score associated with this KOP was a 2. This is score correlates with the SRWF will occupying approximately 0.15° or 0.3% of the viewers' vertical field of view and approximately 37° of the horizon (see Appendix C3). From this KOP the majority of the ocean horizon occupied intervening headlands and islands and therefore the SRWF occupies 100% of the 10° of ocean horizon.

Table 3.2-15 – Average Visual Impact Ratings – MM06

Demarest Lloyd State Park						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	11.0	15.0	16.7	14.3	12.3	13.9
Proposed	11.0	15.0	15.7	13.3	12.7	13.5
Change	0.0	0.0	-1.0	-1.0	0.3	-0.3

Table 3.2-16 – Average Visual Impact Ratings by Resource – MM06

Demarest Lloyd State Park			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.3	1.1	1.2
Landform	1.3	1.2	1.3
Vegetation	1.2	1.1	1.3
Land Use	1.4	1.4	1.1
User Activity	1.4	1.3	1.3
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.7 MM07 Fort Taber District

Existing View

This view is from Fort Taber District, a 47-acre town park and historic area located in the Town of New Bedford on mainland Massachusetts. This site is also near Clark's Point Lighthouse, and Tabor South Extension Public Beach. The site is located at the tip of a peninsula in Buzzards Bay just beyond the New Bedford wastewater treatment facility and includes open lawn, walking paths, benches, a beach, parking lots, playgrounds, community facilities, a museum and preserved Civil War era buildings and structures. The selected viewpoint is located on an open lawn southeast of Fort Rodman within the Maintained Recreation Area LSZ and is typically used for passive recreational activities by tourists and local visitors. The existing view to the south from this location overlooks an expanse of manicured lawn, a sliver of blue ocean with heavy boat activity, and distant landforms on part of the horizon. The horizon line is crisp, and the sky is light blue with thin white clouds.

Rating panel members indicated that the view is complex. It is focused by landforms which frame open water and direct viewer attention toward islands and heavy boat traffic in the ocean. Rating panel scores for the existing conditions photograph at this KOP ranged from 10.7 to 17.3 (average = 14.1), which is consistent with the Retained category applied to the Maintained Recreation Area LSZ.

Simulated View

This KOP is representative of visibility along the southern shoreline, parking lots, and open fields associated with the Fort Taber District, as well as views further west associated with the wastewater facility. Visibility is not indicated along the northern shoreline of the peninsula. Generally, views of the SRWF beyond this peninsula are screened from view due to the combined screening effect of curvature of the earth, the presence of large buildings and contiguous rows of homes, landscape vegetation, and forest.

With the proposed SRWF in place, the WTGs can be seen as a series of light gray lines on the horizon. Due to their distance from the viewer (37.8 miles [60.8 km] from the nearest proposed WTG), only the blade tips of some turbines are visible, despite the clear weather. Rating panel members had varying reactions the Facility's impact, with VIA scores ranging from 10.7 to 17.0 (average score = 14.1). Due to the near imperceptibility of the turbines, these scores indicate an average reduction of 0.1 point in comparison to the existing view indicating that it remains in the high scenic quality classification with the Project in place (see Table 3.2-17). Individual rating panel members indicated reductions that ranged from 0.0 to 0.3. There was general agreement among panel members that the SRWF would be highly unlikely to impact visual quality or viewer enjoyment of the district. *"The presence of the turbine tips on the horizon are barely visible amongst the marine clutter on the horizon. Even under the best of atmospheric and wave action conditions, the tips are very difficult to perceive."* One panel member noted that the activity of the location, including people on the lawn and boats on the water, further distracts from the turbines. Some added that the turbines themselves could be mistaken for boats. With the SRWF in place, the VIA scores and rating panel comments indicate that the Project would result in negligible change and no adverse visual impact at this KOP.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings demonstrated that the WTGs would likely result in minimal scale contrast and were generally compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-18). Considering spatial dominance, panel ratings indicated that the WTGs are subordinate to water resources, landform, vegetation, land use, and user activity. The average VTL associated with this KOP was a VTL of 1. The SRWF will occupy approximately 0.9° or 0.2% of the viewer's vertical field of view and approximately 32° of the horizon. However, the limited extent of open ocean at the horizon and the fact that most of the horizon occupied by the SRWF occurs over land, appears to account for the low VTL score. Due to the minimal available ocean horizon at this location (approximately 10°) the SRWF occupies all of the available ocean horizon, and the remaining horizon is occupied, or screened, by intervening terrain or vegetation.

Table 3.2-17 – Average Visual Impact Ratings – MM07

Fort Taber District						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.7	14.7	17.3	13.7	14.3	14.1
Proposed	10.7	14.7	17.0	13.7	14.3	14.1
Change	0.0	0.0	-0.3	0.0	0.0	-0.1

Table 3.2-18 – Average Visual Impact Ratings by Resource – MM07

Fort Taber District			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.3	1.0	1.0
Landform	1.3	1.0	1.0
Vegetation	1.2	1.0	1.0
Land Use	1.2	1.0	1.0
User Activity	1.2	1.0	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.8 MV02 Philbin Beach

Existing View

This view is from Philbin Beach, located in the Town of Aquinnah (Martha's Vineyard), Massachusetts. This site is a public beach on the southwest shore of Martha's Vineyard that is used by residents and tourists for swimming, sunbathing, beach combing, surf fishing, and other recreational activities. Philbin Beach provides limited parking access to residents and homeowners within the Town of Aquinnah. However, the beach can also be accessed by bus or on foot via a 0.8-mile walking path originating at Aquinnah Circle. The beach is part of the Gay Head West Tisbury State Scenic Area and the selected KOP, located near the high tide line, is representative of the Shoreline Beach LSZ. The selected view to the southwest from this KOP represents the primary viewer orientation for users of this beach. However, dynamic views of the coastal bluffs northeast or southeast of the beach would also provide visual interest, but these views would not likely include the SRWF (Inset 3.2-1). The existing view to the southwest from this location includes a short stretch of sloping sandy beach in the immediate foreground. The beach transitions to a band of dark rocks that have been exposed by the low tide. Small waves are breaking against the rocks, but further offshore the ocean appears relatively calm. The ocean has a uniform dark blue color that extends to the horizon where it meets the light blue/white sky. A low point of land (Nomans Land Island) extends into the view along the horizon line on the left, and sunlight lightens the color of the water surface and sky on the right.

Inset 3.2-1 – View to the southeast and West from Philbin Beach

Rating panel members described this panoramic view as *"visually dynamic"* and *"a very pristine open water view"*. The large rocks dominate the foreground, and the horizon line is strong and uninterrupted in the background.

Rating panel sensitivity scores for the existing conditions photograph(s) ranged from 10.7 to 15.7 (average = 14.3), which is also consistent with the Retained scenic quality category and the Shoreline Beach LSZ as a whole.

Simulated View

The viewshed analysis suggests that unobstructed visibility of the SRWF will be largely restricted to the shoreline along this western edge of Martha's Vineyard. However, due to the presence of the westward-facing sloping hills, the viewshed analysis suggests that partial visibility of the SRWF extends inland across areas where there are large clearings, including roadway corridors like Moshup Trail, Old South Road, and Windy Hill Drive before breaking up into discrete areas where views of less than half of the WTGs will be available due to screening provided by vegetation, structures, and topography.

With the proposed SRWF in place, numerous turbines can be seen along a significant portion of the horizon line. Because of their distance from the viewer (21.0 miles [33.8 km] to the nearest turbine), only the upper portions of the WTGs are visible, and they diminish in scale moving from left to right across the view. From this location their spacing appears less regular than in some other views. Rating panel members had varying reactions to the impacts associated with the SRWF, with VIA scores ranging from 9.8 to 15.3 (average score = 12.2). These scores indicate an average reduction of 2 points in comparison to the existing view indicating a reduction to a Partially Retained seascape (see Table 3.2-19). Individual rating panel members indicated reductions that ranged from 0 to 4.3. These scores were largely associated with the number and extent of visible turbines. As one panel member noted *"when they are visible, they have a moderate impact as they spread across a large portion of the horizon line".* The WTGs become a new focal point, but it was noted that *"the dark forms of the boulders and rocks dominate the foreground and draw the eye away from the turbines".* It was also noted that the WTGs appear to be approximately the same height as Nomans Land Island, *"continuing this offset from the water across the view".* Rating panel scores and comments suggest the likelihood of somewhat significant adverse impact to scenic quality and viewer enjoyment of the scenery at this KOP.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings suggest that the WTGs would result in minimal scale contrast and compatibility with landform, vegetation, and land use, and moderate scale contrast and are somewhat compatible with water resources and user activity (see Table 3.2-20). Similarly, considering spatial dominance, panel members indicated that the WTGs are subordinate to landform, vegetation, and land use, and co-dominant with water resources and user activity. The average rating panel score anticipated that Project visibility from this KOP is consistent with a VTL of 3. This level of impact appears to correlate with the extent of the horizon and vertical field of view that the SRWF will occupy from this KOP. The SRWF will occupy approximately 0.41° or 0.7% of the viewer's vertical field of view, it will occupy approximately 46° of the ocean horizon. The SRWF would occupy approximately 34% of the 136° of the available ocean/horizon view (see Appendix C3).

Table 3.2-19 – Average Visual Impact Ratings – MV02

Philbin Beach						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.5	15.3	15.8	14.8	14.5	14.2
Proposed	9.8	15.3	12.2	13.5	10.2	12.2
Change	0.7	0.0	3.7	1.3	4.3	2.0

Table 3.2-20 – Average Visual Impact Ratings by Resource – MV02

Philbin Beach			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.1	2.0	1.6
Landform	1.0	1.0	1.2
Vegetation	1.2	1.2	1.2
Land Use	1.4	1.4	1.2
User Activity	1.8	1.9	1.6
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.9 MV03 Lucy Vincent Beach

Existing View

This view is from Lucy Vincent Beach, located in the Town of Chilmark on Martha's Vineyard, Massachusetts. The site is a resident-only beach which is open to the general public only during the off-season. It is also part of the Gay Head West Tisbury Unit State Scenic Area. The site is approximately 10 acres in size and includes open water and sandy beach surrounded by bluffs covered in scrubby vegetation. A 0.2-mile (0.3 km) walking trail allows access between two points on the beach through the vegetated bluff. The site is accessible via Lucy Vincent Beach Road which terminates at a parking lot for beach visitors. Lucy Vincent Beach is maintained and operated by the Town of Chilmark. It provides recreational opportunities for town residents including swimming, sunbathing, walking, nature viewing, fishing, and photography. Non-residents only have access to these activities only during the off-season. From the shoreline area, the views of the SRWF will only be possible when viewers are looking southwest towards the coastal bluffs. Viewers will generally approach the shoreline from the parking lot, which is located further inland. From the parking lot they will proceed in a generally east-west direction along the walking path. From the pathway, views of the SRWF will be obstructed by intervening vegetation and occur only intermittently between patches of scrubby vegetation while walking west towards the parking lot. While walking towards the beach areas, the viewer's gaze will generally be focused away from the SRWF and down the pathway corridor to the east or to the open ocean to the east and south. The selected KOP is located on western side of the walking trail adjacent to the Shoreline Bluffs LSZ and is representative of the views that are possible along the shore of the Lucy Vincent Beach, where the lack of foreground screening elements provides the most unobstructed views available from this area. . The existing view to the

southwest features and a populated beach that is mostly enclosed by coastal bluffs. Dark boulders protrude from the surf near the shoreline. In the foreground scrub vegetation is situated on an elevated plane.

Rating panel members indicated that the view contains an interesting, picturesque scene which is dramatized by the distant coastal bluffs, but notably cluttered by heavy human beach use. Rating panel scores for the existing conditions photographs ranged from 13.3 to 17.0 (average = 15.8), which is consistent with the Retained category assigned to the broader Coastal Bluff LSZ.

Simulated View

The viewshed analysis indicates consistent visibility of the SRWF along this stretch of beach. Visibility of the SRWF from areas further inland, such as from the tidal pond backing the beach or from residential yards, will be very limited due to screening provided by mature trees, structures, and intervening topography.

With the proposed SRWF in place, the proposed turbines can be seen along the horizon and behind a distant landform. They appear as a series of faint grey lines against the sky. Due to their distance from the viewer (22 miles [35.4 km] from the nearest WTG), the turbines appear small and do not dominate the view. Hazy, midday conditions somewhat diminish the visibility of the turbines. A clearer day could result in greater contrast between the turbines and the sky resulting in greater Project visibility. Rating panel members had a fairly wide range of reactions to the impact of the SRWF, with VIA scores ranging from 11.3 to 15.7 (average score = 13.8). These scores indicate an average reduction of 2 points in comparison to the existing view, with individual rating panel members indicated reductions that ranged from 0.0 to 4.7. At the low end of this range, panel members indicated that the SRWF *"sits lightly on the horizon due to its light color and well-spaced positioning that avoids excessive stacking of the turbines on top of each other"*, and that, *"the distance and scale minimizes their visual impact, especially given that the users of the viewpoint would likely be more focused inward towards the ongoing beach activities and water sports."* The panel member indicating the highest degree of visual change noted the abundance of turbines which *"completely occupies the horizon".* One panel member noted, *"The quantity of turbines clutters up what was otherwise a prime, pristine view…"* The VIA scores indicate and rating panel comments indicate that the KOP remains in the Retained category with the Project in place, and minimal adverse visual impacts are anticipated under the conditions illustrated in the visual simulation.

Considering the compatibility, scale, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings indicated that the WTGs result in minimal scale contrast and compatibility with vegetation, but moderate scale contrast and are somewhat compatible with water resources, landform, land use, and user activity. In regard to spatial dominance, the panel indicated that the WTGs are subordinate to vegetation, but co-dominant with other landscape/seascape features (see Table 3.2-22). The average rating panel VTL score associated with this KOP was a 4.

The VTL score appears to relate to the distance of the Project from the viewer, the interplay of headland screening from the Gay Head Cliffs, and the extent of the horizon and vertical field of view that the SRWF will occupy from this KOP. The SRWF will occupy approximately 0.38° or 0.7% of the viewers vertical field of view and will occupy approximately 39° of the horizon, approximately 16% of which occurs over open ocean. Views of the ocean horizon constitute approximately 127° from this KOP.

Table 3.2-21 – Average Visual Impact Ratings – MV03

Lucy Vincent Beach						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	13.3	15.7	16.0	17.0	17.0	15.8
Proposed	12.7	15.7	11.3	14.0	15.3	13.8
Change	-0.7	0.0	-4.7	-3.0	-1.7	-2.0

Table 3.2-22 – Average Visual Impact Ratings by Resource – MV03

Lucy Vincent Beach			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.9	2.1	1.9
Landform	1.5	1.5	1.7
Vegetation	1.4	1.4	1.4
Land Use	1.8	1.8	1.6
User Activity	2.0	1.8	1.6
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

Photo Rendering - Sunset

In addition to the daytime simulations of the SRWF, the rating panel also evaluated a photographic rendering of the SRWF from Lucy Vincent Beach during sunset (see Tables 3.2-23). With the proposed Project in place, the SRWF becomes a dominant feature in the view. Under these lighting conditions, the Project's contrast with natural conditions is accentuated. The average rating panel score associated with the sunset view from this KOP was a 12.3 (a decrease of 3.5), indicating a reduction to the Partially Retained category. The average panel VTL score associated with the sunset view from this KOP will increase to a VTL 5. Comparing this sunset simulation to the typical, daytime condition presented above, it is reasonable to assume that visual impacts resulting from the SRWF will be variable throughout the day, but likely greater during clear evenings during sunset when the WTGs and OCS–DC are strongly backlit. Under the conditions presented in the visual simulation, the SRWF could result in significant adverse visual impacts.

Table 3.2-23 – Average Visual Impact Ratings – MV03 SS

Lucy Vincent Beach - Sunset						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	13.3	15.7	16.0	17.0	17.0	15.8
Proposed	12.3	15.7	8.3	12.7	12.3	12.3
Change	-1.0	0.0	-7.7	-4.3	-4.7	-3.5

Table 3.2-24 – Average Visual Impact Ratings by Resource – MV03 SS

Lucy Vincent Beach - Sunset			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	2.5	2.5	2.5
Landform	1.7	1.8	1.7
Vegetation	1.4	1.4	1.4
Land Use	1.8	2.2	2.0
User Activity	2.2	2.4	2.2
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.10 MV05 Moshup Beach

Existing View

This view is from Moshup Beach in the Town of Aquinnah, Massachusetts. This site is a popular public beach on the southwest shore of Martha's Vineyard. It also occurs within the Gay Head West Tisdale State Scenic Area. The viewpoint is located on a walking path which connects Aquinnah Circle, and the Aquinnah Cultural Center through the Coastal Dunes LSZ providing beach access to area residents and visitors to the island. The existing view to the south-southwest from this location features a grassy dune in the immediate foreground, backed by breaking surf along the shoreline. The dunes block views of the beach itself, except for a few large rocks and some small patches of cobbles. This type of view is considered a primary view along this section of beachfront. Beyond the breaking waves, the blue green ocean with occasional white caps extends to the horizon. Reflected sunlight on the left side of the view gives this portion of the ocean a bright white color. The sky overhead is clear and blue, but transitions to white and partly cloudy at the horizon. This creates strong color contrast at the horizon line where the ocean meets the sky.

Rating panel members indicated that the view is highly scenic and lacks man-made features. The focus is out of the water, but the dunes frame the view *"in an elegant way".* One of the panel members indicated that the combination of natural features in this view evokes a reaction that appeals to all five senses. Rating panel scenic quality scores for the existing conditions photographs at this KOP ranged from 13.2 to 16.3 (average = 15.3), which is consistent with the Retained category which was also applied to the Coastal Dunes LSZ as a whole.

Simulated View

Visibility of the SRWF from this KOP will be representative of anticipated views from the elevated coastal dunes in this area. The expanse of visible WTGs associated with the SRWF is also anticipated to be consistent with that of shoreline views. Visibility of the SRWF in the surrounding area, as predicted by the viewshed analysis, potentially extends inland more than 1,000 feet in some places due to higher topography than near the shore and the lack of screening vegetation and structures. Views of the SRWF are possible from nearby trails and roadways that follow the shoreline, such as Moshup Trail. Further inland, along the south shore of the island, vegetation clearing associated with multiple residences allow for outward views toward the SRWF due to the south facing slopes and the large swaths of maintained landscapes. However, this visibility is much more limited due to intervening vegetation in the middle ground. Beyond these homes,

forest vegetation significantly limits visibility of the SRWF, breaking it up into discrete pockets of visibility that would likely go unnoticed by passersby.

With the proposed SRWF in place, a large number of WTGs can be seen on the horizon along almost the full field of view. Under the conditions illustrated, the WTGs are highly visible. This is especially true on the left side of the view where the turbines appear closer (21.2 miles [34.1 km] to the nearest WTG), and strong backlighting makes them appear dark against the light sky in the background and the bright white color of the reflected sunlight on the ocean surface. WTG visibility is also accentuated in areas where the turbines overlap with one another, thus increasing their visual weight. This "stacking" phenomenon will also be further accentuated when the WTGs are in motion and the blade overlap becomes variable, potentially drawing viewer attention to the horizon during clear conditions.

Rating panel members had highly variable reactions to the SRWF's impact at this KOP, with VIA scores ranging from 9.3 to 15.7 (average score = 12.0). These scores indicate an average reduction of 3.3 points in comparison to the existing view which indicates that the KOP drops to the Partially Retained category. Individual rating panel members indicated reductions that ranged from 0 to 6. Rating panel members noted that the number and extent of turbines create *"visual clutter"* and *"don't fit in with the otherwise pristine view"*. Although foreground dunes and surf initially hold the viewer's attention, it quickly jumps to the turbines on the horizon, which become a focal point in the view. One panel member indicated that the WTGs contribute to the composition of the view, but also felt that the tranquility of the view was interrupted by their presence. Under the conditions illustrated in the visual simulation, the SRWF could result in significant adverse impacts to scenic quality.

Considering the scale and spatial dominance factors that influenced the visual impact rating at this viewpoint, panel members noted that the WTGs result in moderate scale contrast and were co-dominant with landform, vegetation, land use and user activity. However, in regard to water resources, the panel indicated that the turbines presented severe scale contrast and were dominant (see Table 3.2-26). Considering compatibility, panel members indicated that the WTGs are somewhat compatible with water resources, landform, vegetation, land use, and user activity. The average rating panel VTL score associated with this KOP was a 5. This is consistent with the clear contrast presented by the WTGs and the fact that the SRWF will occupy approximately 0.43° or 0.8% of the viewers' vertical field of view and approximately 46° of the horizon, all of which will occurs over open ocean. Views of the ocean horizon make up approximately 134° of the view from this KOP and the SRWF occupies a relatively small 35% of this (see Appendix C3).

Table 3.2-25 – Average Visual Impact Ratings – MV05

	Moshup Beach					
	KAC	RCS	JMG	NHR	SMB	Average
Existing	13.3	15.7	15.3	16.0	16.3	15.3
Proposed	11.7	15.7	9.3	13.0	10.3	12.0
Change	-1.7	0.0	-6.0	-3.0	-6.0	-3.3

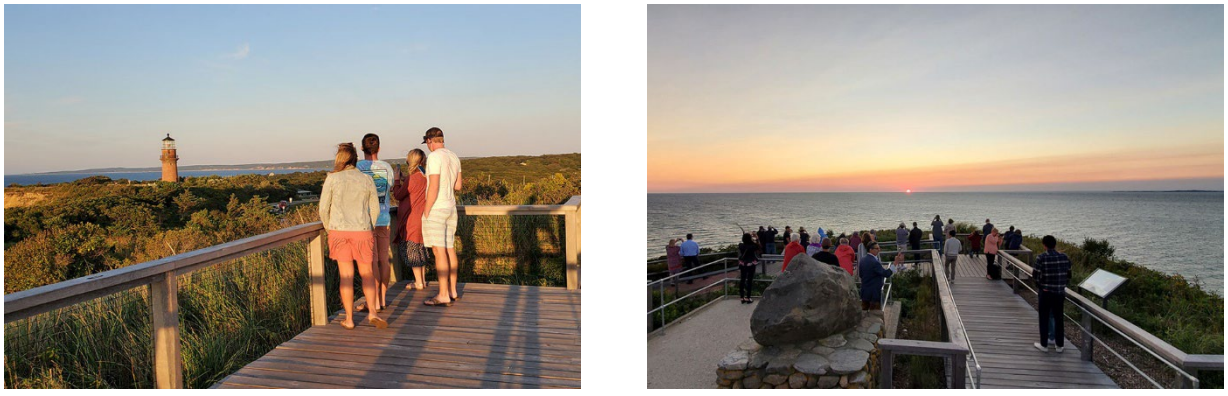
Table 3.2-26 – Average Visual Impact Ratings by Resource – MV05

Moshup Beach			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.4	2.6	2.5
Landform	1.7	1.7	1.6
Vegetation	1.7	1.7	1.8
Land Use	1.9	1.9	1.7
User Activity	2.1	1.9	1.9
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.11 MV07 Aquinnah Overlook

Existing View

This view is from Aquinnah Overlook, which is within the Gay Head National Natural Landmark, located in the Town of Aquinnah on Martha's Vineyard, Massachusetts. This site is also contained within the Gay Head Aquinnah Shops State Historic Area and the Gay Head West Tisbury Unit State Scenic Area. The Aquinnah Overlook is a dedicated viewing platform, providing opportunities for sweeping views of the ocean, beach, shoreline bluffs, and natural vegetation. It is a component of a larger tourism site which includes a restaurant, museum, shops, walking trails, and parking. The Aquinnah Overlook platform provides a unique, dynamic viewing opportunity spanning nearly 360 degrees. To the north on a clear day Cuttyhunk Island and mainland Massachusetts are clearly visible in the background with the Aquinnah Lighthouse providing a foreground focal point atop the dramatic bluffs that plunge precipitously into the ocean (Inset 3.2-2). This view to the north is the most commonly observed by visitors during the day. During the evening in spring, summer, and fall, people are nearly entirely focused on the setting sun in the west, but often shift their focus to look at the lighthouse and bluffs. Observations made during several site visits suggest that the primary views are from west to northeast.



Inset 3.2-2 – View to the Northeast and West from Aquinnah Overlook

The selected viewpoint is located on the viewing platform, at the north terminus of a walkway connecting the adjacent shops and restaurant building. Aquinnah Overlook is within the Shoreline Bluff LSZs. The existing view to the south southwest from this location (toward the Project site) contains an expansive ocean view with a small landform (Nomans Land Island) in the distance on the horizon. The foreground of the view features the restaurant perched on the bluff surrounded by a dense carpet of low green vegetation draped over the topography. The bottom of the view is framed by a split rail fence. The blue-sky overhead fades to a whitish blue at the horizon. The presence of haze mutes the contrast of elements at or near the horizon, as indicated by the view of Nomans Land Island.

Rating panel members indicated that the KOP is frequently visited and highly valued due to its elevated position which offers visual access to an array of natural and manmade features. While one of the members described the overall appearance as *"quaint"*, some others indicated that the building and its modern utilities such as antennas and vents, diminished the overall quality of view. Rating panel scores for the existing conditions photographs ranged from 14.0 to 16.7 (average = 15.7), which is consistent with the Retained category applied to the Shoreline Bluffs LSZ as a whole

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Simulated View

As indicated above, from the viewing platform, open views are available in all direction. However, stepping down from the viewing platform, visibility will be almost entirely obscured by the bluff vegetation, topography, and the Aquinnah Shops. Once viewers move beyond the shops and into Aquinnah Circle visibility toward the SRWF becomes available. This would include only a small portion of the WTGs until one reaches the highpoint of the circle where more expanse views exist to the south. Moving inland to the north and east, potential Project visibility diminishes quickly as the road descends in elevation and becomes enclosed by forest vegetation. The walking trails leading south from Aquinnah Circle will have multiple south-facing views as the trail descends the south-facing slope to the ocean.

With the proposed SRWF in place, the WTGs can be seen as a dense mass of thin white lines extending over about half of the horizon within the viewing frames (considered collectively). Reviewers suggested that the addition of the WTGs resulted in a noticeable contrast between the existing and proposed conditions. As one panel member described, *"The large quantity of visible turbines along the horizon gives the appearance of a city or built up island in the distance."* At a distance of 21.5 miles (34.6 km) to the nearest proposed WTG, the turbines appear small. However, panel members generally agreed that the large number of turbines would be likely to *"disrupt the tranquility of the existing view"* and become a *"dominant feature"* of the view. *"The visitor to the shop and cafe seating would no longer be solely focused on the expanse of the ocean and how it meets the horizon between sunrise and sunset, but the viewer would be focused on the interplay of those elements in conjunction with the panoramic view of the wind farm. "*This concern did not apply to the offshore substations, which were described as being, *"very difficult to interpret on the horizon line and can be easily missed or thought to be shipping freighters."*

Rating panel members had varying reactions the SRWF impact, with VIA scores ranging from 12.7 to 15.3 (average score = 13.9). These scores indicate an average reduction of 1.9 points in comparison to the existing view. Individual rating panel members indicated reductions that ranged from 0.0 to 3.3. At the low end of this range, panel members indicated that the WTGs were faintly visible on a portion of the horizon and were in competition with other unattractive man-made visual elements. The panel member indicating the highest degree of visual change said, *"The addition of a large number of more turbines disrupts the tranquility of the existing view and will be noticeable, especially on clear days."* Based on the VIA scores assigned by the rating panel, this KOP remains in the Retained category and minimal visual impacts are anticipated under the lower contrast, clear conditions presented in the visual simulation.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, rating panel scores indicated that the WTGs would result in minimal contrast with vegetation, moderate contrast with landform and land use, and severe scale contrast with water resources and user activity. WTGs are generally considered compatible with vegetation, somewhat compatible with landform, land use, and user activity, but not compatible with water resources (see Table 3.2-28). Similarly, spatial dominance, panel members believe that the WTGs are subordinate to vegetation, co-dominate with landform, land use, and user activity, but dominant over water resources. The average rating panel VTL score associated with this KOP was a 4. This is consistent with the finding that the SRWF will occupy approximately 0.47° or 0.9% of the viewers' vertical field of view and approximately 46° or 36% of the available ocean horizon (see Appendix C3).

Table 3.2-27 – Average Visual Impact Ratings – MV07

Aquinnah Overlook						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	14.0	15.3	16.0	16.7	16.7	15.7
Proposed	12.7	15.3	13.7	13.3	14.3	13.9
Change	-1.3	0.0	-2.3	-3.3	-2.3	-1.9

Table 3.2-28 – Average Visual Impact Ratings by Resource – MV07

Aquinnah Overlook			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.5	2.7	2.6
Landform	1.7	1.7	1.7
Vegetation	1.4	1.2	1.4
Land Use	1.9	2.1	2.0
User Activity	2.3	2.5	2.4
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

Photo Rendering - Sunset

In addition to the daytime simulations of the SRWF, the rating panel also evaluated a photographic rendering of the proposed Project from the Aquinnah Overlook during sunset (see Tables 3.2-29). Under these conditions, the WTGs are more visible due to backlighting and become dominant features in the view that present appreciable contrast with the existing natural features in the view. The sunset visual simulation received an average rating score of 12.3 (a decrease of 3.5) indicating the view would be reduced to the Partially Retained category and the SRWF would result in significant adverse impacts to this seascape view under the high contrast conditions presented in the visual simulations. Due to this increase in visibility and color contrast, the average rating panel VTL score associated with this KOP during clear sunset conditions was 5.

Table 3.2-29 – Average Visual Impact Ratings – MV07 SS

Aquinnah Overlook - Sunset						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	14.0	15.3	16.0	16.7	16.7	15.7
Proposed	12.7	15.3	9.3	12.7	11.3	12.3
Change	-1.3	0.0	-6.7	-4.0	-5.3	-3.5

Table 3.2-30 – Average Visual Impact Ratings by Resource – MV07 SS

Aquinnah Overlook - Sunset			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.7	2.7	2.7
Landform	1.7	1.8	1.8
Vegetation	1.4	1.3	1.5
Land Use	1.9	2.1	2.1
User Activity	2.1	2.3	2.4
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

Simulated View – Nighttime

Nighttime simulations of the SRWF from the Aquinnah Overlook were also evaluated by the rating panel (see Tables 3.2-31). The existing nighttime view received an average rating score of 11.8 indicating the Partially Retained category. The reduction in scenic quality of the nighttime view was largely attributed to the lack of discernible landscape features within the view. Additionally, at night viewer exposure would decrease significantly given the lack of nighttime bus services and lack of overnight accommodations nearby. With the SRWF in place, the scenic quality score was reduced to 8.8 indicating a reduction of 3.0. which reduces the scenic quality to the Modified category. As such, the SRWF AWOLs could result in significant adverse impacts to the seascape at night under the clear conditions represented in the visual simulation. One rating panel member suggested, *"The magnitude of the proposed turbine warning lights on the horizon dominates the viewing experience from this vantage point. If the prime use of this site at night is to stargaze, it would be difficult to ignore the blinking mass of lights on the horizon despite the far viewing distance and small scale of the lights."* Under nighttime conditions the average rating panel VTL score associated with this KOP was 4.

Table 3.2-31 – Average Visual Impact Ratings – MV07 NI

Aquinnah Overlook - Nighttime						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	11.8	10.2	13.8	12.5	10.7	11.8
Proposed	9.2	10.2	7.0	10.5	7.3	8.8
Change	-2.7	0.0	-6.8	-2.0	-3.3	-3.0

Table 3.2-32 – Average Visual Impact Ratings by Resource – MV07 NI

Aquinnah Overlook - Nighttime			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.1	2.0	2.2
Landform	1.5	1.6	1.7
Vegetation	1.4	1.4	1.4
Land Use	1.9	2.2	2.2
User Activity	2.2	2.2	2.2
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.12 MV09 Gay Head Lighthouse

Existing View

This view is from Gay Head Lighthouse, which is perched atop the dramatic bluffs on the western end of the island of Martha's Vineyard in the Town of Aquinnah, Massachusetts. This site is also near the Gay Head Cliffs National Natural Landmark, Moshup Beach, and the Gay Head West Tisbury State Scenic Area Units 100 and 94. The selected KOP is located in the Maintained Recreational Area LSZ and is directly adjacent to the Coastal Bluffs LSZ. Gay Head Lighthouse is an important, functioning aid to navigation, but also a significant historic resource and major tourist attraction in the area. It is located near the Aquinnah Overlook (MV07) and Edwin D Vanderhoop House (MV13) all of which compose a network of destinations for locals and tourists during the summer season. This elevated view to the south-southeast contains built infrastructure including the Aquinnah Circle Drive, a parking lot, power lines, and expanses of maintained lawn and coastal scrub vegetation leading up to the edge of the nearby bluffs. Visitors to this iconic lighthouse often photograph the lighthouse itself from the quaint lawns and stone walls that adorn the mowed paddock leading up to the base (See Inset 3.2-3). During the height of the tourism season the lighthouse is open to climb during daylight hours. From the observation platform viewers can obtain dramatic 360-degree views of the Gay Head Cliffs to the north and west, Vineyard Sound and Cuttyhunk Island to the north, Martha's Vineyard inland areas to the east, and the Atlantic Ocean and Nomans Land Island to the south. All of these views would be considered primary views as nearly every viewer completes a walk of the entire platform.

Inset 3.2-3 – View of Aquinnah Lighthouse and to the Northeast from Aquinnah Lighthouse

The elevated view from the lighthouse platform toward the Project site encompasses sweeping views of the open ocean beyond the built elements (buildings, infrastructure, cars, benches, solar panels etc.) and vegetation that dominate the foreground. The sky in the background transitions from light blue overhead to white at the horizon, with a few small areas of high clouds/overcast visible.

Rating panel members indicated that while the view offers a panoramic, sweeping view of the ocean, it also includes numerous discordant elements in the foreground, contributing to a degree of visual clutter in the view. Rating panel scores for the existing conditions photograph(s) ranged from 12.7 to 17.3 (average = 15.3), which is consistent with the Retained category applied to the broader Maintained Recreation Area LSZ.

Simulated View

The viewshed analysis and field review indicate intermittent visibility of portions of the SRWF will be available from the lighthouse grounds due to the presence of a vegetative buffer between the lighthouse and Aquinnah Circle. As described in MV07, the views of the ocean and the SRWF become more intermittent as viewers travel south from the top of Aquinnah Circle and descend in elevation.

With the proposed SRWF in place, the side-lit WTGs are faintly visible along a significant portion of the ocean horizon. Due to the existing sky conditions and the turbines' distance from the viewer (21.6 miles [34.8 km] from the nearest proposed WTG), the WTGs are difficult to distinguish from the light blue background sky. Rating panel members had varying reactions to the visual impact resulting from the SRWF, with VIA scores ranging from 12.3 to 16.0 (average score = 13.6). These scores indicate an average reduction of 1.7 points in comparison to the existing view, but would remain in the Retained category (see Table 3.2-33). Individual rating panel members indicating reductions that ranged from 0.0 to 5.7. At the low end of this range, panel members indicated that the infrastructure and activities in the foreground detracted from the view and the WTGs were *"not visible on the horizon*", or *"almost imperceptible on the horizon".* Panel members who indicated the highest degree of visual change noted that the WTGs would be more visible during other times of the day, at night, and during differing atmospheric conditions while also noting that *"during less visible circumstances, the impact could be greatly diminished".* Due to the relatively low contrast conditions presented in the visual simulation, it is anticipated that the SRWF would result in minimal visual impacts to the seascape from this KOP.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings demonstrate that the WTGs result in minimal scale contrast and were generally compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-34). Similarly, considering spatial dominance, panel members suggest that the WTGs are subordinate to water resources, landform, vegetation, land use, and user activity. The average VTL score at this location was 2. The VTL score is not consistent with the extent of horizon and vertical field of view that the SRWF will occupy from this KOP. The SRWF will occupy approximately 46° of the ocean horizon. Of the128° of ocean horizon available, the SRWF would occupy approximately 36%. Considering the vertical horizon, the SRWF will occupy approximately 0.47° or 0.9% of the human vertical field of view. The low VTL score is likely the result of the low contrast conditions presented in the visual simulation.

Table 3.2-33 – Average Visual Impact Ratings – MV09

Gay Head Lighthouse						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	12.7	14.7	17.3	15.7	16.0	15.3
Proposed	12.3	14.7	11.7	13.3	16.0	13.6
Change	-0.3	0.0	-5.7	-2.3	0.0	-1.7

Table 3.2-34 – Average Visual Impact Ratings by Resource – MV09

Gay Head Lighthouse			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.2	1.2	1.2
Landform	1.2	1.2	1.0
Vegetation	1.3	1.2	1.0
Land Use	1.4	1.2	1.2
User Activity	1.2	1.2	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

Photo Rendering - Sunset

In addition to the daytime simulations of the Project, the rating panel also evaluated a photographic rendering of the proposed SRWF from Gay Head Lighthouse during sunset (see Tables 3.2-35). Under this condition, with the proposed SRWF in place, the WTGs become significantly more visible and tends to dominate the ocean view. One rating panel member suggested that "…t*he dark gray color of the turbines is highly contrasting with the lighter, pink-russet color of the sunset sky, thereby highlighting the extent that the wind farm fills the view*." Another panel member commented that, "*While camouflaged in the white haze of the daytime simulation, the turbines are clearly visible along the entire horizon in this view*." The proposed sunset view received an average rating score of 11.0 (a decrease of 4.3), indicating a reduction to the Partially Retained Category and suggesting significant adverse visual impacts under the high contrast conditions presented in the visual simulation. The average VTL score of 5 also reflects the WTG's increased contrast during sunset conditions.

Table 3.2-35 – Average Visual Impact Ratings – MV09 SS

Gay Head Lighthouse - Sunset						
	KAC	**RCS**	**JMG**	**NHR**	**SMB**	**Average**
Existing	12.7	14.7	17.3	15.7	16.0	15.3
Proposed	12.3	14.7	7.0	12.7	8.3	11.0
Change	-0.3	-0.0	-10.3	-3.0	-7.7	-4.3

Table 3.2-36 – Average Visual Impact Ratings by Resource – MV09 SS

Gay Head Lighthouse - Sunset			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	2.5	2.7	2.7
Landform	1.8	1.8	1.8
Vegetation	1.6	1.8	1.8
Land Use	2.2	2.4	2.4
User Activity	2.5	2.5	2.5
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.13 MV10 South Beach State Park

Existing View

This view is from South Beach State Park (locally referred to as Katama Beach), in the Town of Edgartown on Martha's Vineyard, Massachusetts. This site consists of approximately 3 miles (4.8 km) of barrier beach along the southern shore of the island. This beach offers comfort stations, parking, and bus services and is heavily used by residents and visitors for sunbathing, beachcombing, and general recreation. The selected KOP is located just above the high tide line on South Beach and is representative of the Shoreline Beach LSZ. The existing view to the southwest from this location overlooks a section of open sandy beach in the immediate foreground that slopes down sharply to the breaking surf where a lone fisherman can be seen. Beyond the breaking waves, the open ocean extends the horizon, transitioning from blue green to dark blue in color. A single buoy is the only man-made feature visible on the water. A strong, well defined horizon line is created where the dark blue ocean meets the light blue sky. Some thin clouds offshore transition to clear blue skies overhead.

Rating panel members indicated that the view is a classic New England beach scene that offers a panoramic ocean view. The rather abrupt topographic change on the beach in the foreground results in a compression of the middle ground view. As one panel member noted, *"there is little complexity to the view, so the focus is on the open water horizon"*. Rating panel scores for the existing conditions photograph(s) ranged from 11.2 to 15.7 (average = 13.9), which is consistent with the Retained category applied to the Shoreline Beach LSZ as a whole.

Simulated View

The viewshed analysis suggests that this entire stretch of South Shore Beach could have views of the entire SRWF. However, the topography and vegetation associated with the dunes diminishes this potential visibility as one travels inland away from the beach. In more inland areas, narrow corridors of visibility run along roads oriented toward the SRWF and within agricultural fields that have more open views toward the ocean.

With the proposed SRWF in place, numerous white WTGs are clearly visible on the horizon. Due to their distance from the viewer (27.1 miles [43.6 km] from the nearest turbine), a substantial portion of the WTGs are screened by curvature of the earth, which makes the turbines appear relatively small. However, under the sky/lighting conditions illustrated in the selected photo, the turbines appear bright white against the darker blue sky and present strong color contrast with the dark ocean. In places, the WTGs appear somewhat random, while in other places well defined rows and stacking of multiple turbines can be seen.

Rating panel members had varying reactions to the SRWF's impact, with VIA scores ranging from 9.8 to 15.7 (average score = 11.9). These scores indicate an average reduction of 2 points in comparison to the existing view which results in a reduction to the Partially Retained category and somewhat significant impacts to the scenic quality of the seascape under the conditions presented in the visual simulation. Individual rating panel members indicated reductions that ranged from 0 to 4.7. Panel members who indicated the highest degree of visual change suggested that the large quantity of turbines create *"visual clutter"* along the horizon that draws viewer attention. One panel member noted, *"the proposed turbines create a level of contrast that renders them highly noticeable in clear visibility. The large cluster of turbines on the horizon reads as an entity unto itself and becomes a focus"*. However, at 27.1 miles, it is anticipated that any degree of atmospheric perspective is likely to result in reduced contrast. Examples of this condition are illustrated from Matunuck Beach (RI11) and Newport Cliff Walk (AI03). In these examples the SFWF which resulted in minimal impacts under lower contrast conditions.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings suggest that the WTGs result in minimal scale contrast considering landform and

vegetation, and moderate scale contrast with water resources, land use, and user activity. Similarly, WTGs found to be compatible with landform and vegetation, and somewhat compatible with water resources, land use and user activity (see Table 3.2-38). Considering spatial dominance, panel members suggest that the WTGs are subordinate to water resources, landform, vegetation, and land use, but co-dominant with user activity. The average VTL score from this KOP was a 3. This is consistent with the high visibility and clear contrast presented by the turbines, tempered by their occupancy of approximately 0.26° or 0.5% of the vertical field of view and 27° of the horizon occur over the open ocean (see Appendix C3).

Table 3.2-37 – Average Visual Impact Ratings – MV10

South Beach State Park						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	11.2	15.7	15.2	14.2	13.2	13.9
Proposed	9.8	15.7	10.5	12.5	10.8	11.9
Change	-1.3	0.0	-4.7	-1.7	-2.3	-2.0

Table 3.2-38 – Average Visual Impact Ratings by Resource – MV10

South Beach State Park			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.7	1.7	1.3
Landform	1.3	1.2	1.3
Vegetation	1.2	1.2	1.2
Land Use	1.6	1.8	1.4
User Activity	1.9	1.8	1.7
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.14 MV11 Wasque Point

Existing View

This view is from Wasque Point on Chappaquiddick Island, east of Martha's Vineyard, Massachusetts. Chappaquiddick Island is a small peninsula within the town of Edgartown which hosts a variety of public lands used for hiking, sunbathing, beachcombing, and wildlife viewing. The selected viewpoint is located at the Wasque Swimming Beach on the southern shore of the island and is representative of the Shoreline Beach LSZ. This location is accessed by a gravel roadway and gravel parking areas directly adjacent to the shoreline. Many visitors to this beach also take advantage of the walking trails atop the relatively low bluffs defining the adjacent uplands. In this area the viewers will have less frequent views in the direction of the SRWF due to the orientation of the trail. However, picnic tables and informal overlooks occur intermittently, allowing extended viewing opportunities toward the SRWF. The existing view illustrated at this KOP likely represents the primary viewing direction associated with visitors that come to sit on the beach or otherwise engage in passive, stationary activities. This view to the west-southwest features a narrow expanse of open water in the immediate foreground backed by an exposed sandbar. Beyond the sandbar the open ocean extends to the horizon. Both the backwater in the foreground and the ocean in the background have a rough texture and dark blue color on the right side of the view. This color transitions to bright white where sunlight is reflecting off the water on the left. The sky is light blue, with some broken clouds that are more abundant at the horizon than overhead. The horizon line is clear and well defined on

the right side of the view but obscured on the left by the bright sunlight reflecting off the water and the clouds.

Rating panel members indicated that the view is visually dynamic due to the interwoven water and sand bar. The scene appears relatively pristine, with no evidence of human activity. Rating panel scores for the existing conditions photograph(s) at this KOP ranged from 12.5 to 15.2 (average = 13.9), which is consistent with the Retained category also applied to the larger Shoreline Beach LSZ.

Simulated View

Visibility in the vicinity of this KOP is generally limited to the southern shoreline of Chappaquiddick Island. A few narrow corridors of potential visibility occur along roads that are oriented perpendicular to the shoreline and in the direction of the SRWF on the southern inland portion of the island. The majority of the area comprising Chappaquiddick Island is indicated as being screened from views of the SRWF due to the combined effects of curvature of the earth, topography, and vegetation. A very small spot of visibility occurs at Cape Poge, but this area occurs within the sensitive vegetated dunes where public access is not allowed. Consistent visibility is indicated along the shoreline adjacent to this KOP. Visibility extending inland behind this KOP is indicated along the rising topography to Wasque Avenue but is highly variable due to the undulating topography and vegetation lining the dunes and bluffs.

With the proposed SRWF in place, the upper portions of the WTGs are visible above the horizon in the left half of the view. Due to back lighting illustrated in this view, the turbines appear dark against the bright white sky. However, because of distance (29.4 miles [47.3] from the nearest WTG), the towers are largely obscured due to curvature of the earth, with their degree of exposure decreasing from left to right. In places the turbines line up in rows, and the overlapping/stacking of WTGs in these rows add to their visibility/visual weight. One panel member noted that "*the sun creates a hot spot in the view that partially obstructs the visibility of the turbines, the wind farm is low in profile and the color is similar to the deep color of the ocean helping to blend them into the water wave action".*

With one exception, rating panel members had relatively consistent reactions the SRWF's impact, with VIA scores ranging from 11.8 to 13.3 (average score = 12.6). These scores indicate an average reduction of 1.3 points in comparison to the existing view which indicates a reduction to the Partially Retained category (see Table 3.2-39). Individual rating panel members indicated reductions that ranged from 0 to 3. As one panel member noted, *"the proposed turbines create a level of contrast that renders them noticeable but not overwhelming"*. Their volume and regular spacing reflect their man-made character in an otherwise natural setting, and the WTGs *"add an edge to what is otherwise an infinite view out to the water"*. However, the panel also felt that the *"the sandbar in the midground of the view tends to divert the viewer's attention away from the horizon and thus away from the turbines, minimizing impact".* With the SRWF in place, minimal impacts to scenic quality are expected.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, the rating panel suggested that the WTGs result in minimal scale contrast with all landscape features, except water resources and user activity, which both received a rating of moderate scale contrast. The panel also indicated that the WTGs were generally compatible with landform, vegetation, and user activity, and somewhat compatible with water resources and land use (see Table 3.2-40). Considering spatial dominance, panel members indicated that the WTGs are subordinate to all rated resources. The average VTL score associated with this KOP was a 3 which correlates with the SRWF occupying approximately 0.24° or 0.4% of the viewers vertical field of view and a relatively small 20° or 18% of the available ocean horizon (see Appendix C3).

Table 3.2-39 – Average Visual Impact Ratings – MV11

	Wasque Point					
	KAC	RCS	JMG	NHR	SMB	Average
Existing	12.5	13.3	15.2	14.8	13.8	13.9
Proposed	11.8	13.3	12.2	13.5	12.2	12.6
Change	0.7	0.0	3.0	1.3	1.7	1.3

Table 3.2-40 – Average Visual Impact Ratings by Resource – MV11

Wasque Point			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.9	1.9	1.3
Landform	1.4	1.4	1.2
Vegetation	1.2	1.2	1.2
Land Use	1.6	1.4	1.2
User Activity	1.3	1.5	1.3
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.15 MV12 Peaked Hill

Existing View

This view is from Peaked Hill Reservation, located in the Town of Chilmark on Martha's Vineyard, Massachusetts. This site is owned by the Martha's Vineyard Land Bank Commission and was identified as a sensitive site by the Wampanoag Tribe of Gay Head (Aquinnah). The site is a prominent wooded highpoint on Martha's Vineyard that is representative of the Forest LSZ and is used by members of the general public (tourists and residents) for hiking, sightseeing, and wildlife viewing. There is evidence of frequent use by local residents who typically walk from nearby homes or an informal gravel parking lot and Peaked Hill Road accommodates drivers. The main area of activity occurs on the walking paths west and north of the selected KOP in heavily wooded areas with minimal outward views. However, the selected KOP is located adjacent to a large clearing and telecommunications tower. The existing view to the south-southwest from this elevated site looks over treetops in the immediate foreground to a forested landscape in the middle ground. Areas of the island in the background include small open fields and homes, and a pond (Menemsha Pond) on the right side of the view. Beyond this, the open water of the ocean can be seen extending to the horizon. Both the land and ocean in the background appear somewhat hazy and washed out. The sky overhead is blue, but very white at the horizon, resulting in limited contrast with the water at the horizon line.

Rating panel members indicated that the view is unique due to its elevated perspective and the abundance of natural forest vegetation. Interesting landforms in the distance, along with buildings and the pond, represent focal points in this view. Rating panel scores for the existing conditions photographs ranged from 11.7 to 15 (average = 12.8), which is consistent with the Partially Retained category applied to the larger Forest LSZ.

Simulated View

As noted previously, the KOP on Peaked Hill represents a unique viewer position that takes advantage of one of the few western facing views of the ocean. Regional visibility of the SRWF in this area is largely restricted to cleared elevated areas such as the parking area and open paddock to the east. Thick forest vegetation sounding these areas significantly screens outward views.

With the SRWF in place, the proposed WTGs are faintly visible along the horizon line. The effects of distance (22.9 miles [36.9 km] to the nearest turbine) and the hazy conditions minimize their color contrast with the sky. As one rating panel member *indicated "the atmospheric conditions in the view minimize[s] the visual impact of this installation from this viewpoint and it would be easy to miss them due to the ghostly haze they exist within"*. Although they would certainly be more visible under less hazy conditions, the selected photo illustrates a clear day, and one panel member noted that the WTGs *"would not likely be visible at all on an overcast or more humid day".*

With one exception, rating panel members had fairly consistent reactions to the SRWF impact, with VIA scores ranging from 9.3 to 14.0 (average score = 12.0). These scores indicate an average reduction of 0.8 point in comparison to the existing view, which indicates that the view remains Partially Retained with the Project in place. This reduction in score suggests the visual impacts would be negligible under the conditions presented in the visual simulation. Individual rating panel members indicating reductions that ranged from 0 to 2.3. At the low end of this range, panel members indicated that the WTGs were difficult to see and did not dominate the view. As one panel member stated, *"the dark green forest cover in the foreground view remains dominant, even with the turbine installation in place".* Another panel member noted that *"the turbines can be seen, but they are not likely to become the focus"*. However, the panel member indicating the highest degree of visual change noted that the turbines add *"an industrial element to the view", and that when in motion "the entire horizon will be activated"*. He further notes that there is an endless quality to the existing view, and that *"the proposed turbines present a stopping point to the view and add a massive focal point to what is otherwise open water".*

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel results suggest that the WTGs result in minimal scale contrast and were generally compatible to all rated resources except water resources, in which the SRWF was considered somewhat compatible. (see Table 3.2-42). Similarly, considering spatial dominance, panel members indicated that the WTGs are subordinate to landform, vegetation, land use, and user activity, and somewhat compatible with water resources. The average rating panel VTL score associated with this KOP was a 2. Although the SRWF will occupy approximately 0.46° or 0.8% of the viewers' vertical field of view and approximately 39° of the horizon, (see Appendix C3) forest vegetation screens visibility of some of the ocean horizon and the WTGs from this KOP.

Table 3.2-41 – Average Visual Impact Ratings – MV12

	Peaked Hill					
	KAC	RCS	JMG	NHR	SMB	Average
Existing	11.7	13.0	12.7	15.0	11.7	12.8
Proposed	11.7	13.0	12.0	14.0	9.3	12.0
Change	0.0	0.0	-0.7	-1.0	-2.3	-0.8

Table 3.2-42 – Average Visual Impact Ratings by Resource – MV12

Peaked Hill			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.7	1.5	1.3
Landform	1.3	1.2	1.2
Vegetation	1.0	1.1	1.1
Land Use	1.1	1.2	1.1
User Activity	1.4	1.4	1.4
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

Simulated View - Sunset

In addition to the daytime simulations of the SRWF, the rating panel also evaluated a photographic rendering of the proposed Project from Peaked Hill during sunset (see Tables 3.2-43). With the proposed SRWF in place, a rating panel member suggested "*the lighting conditions at sunset create a high level of contrast and the make the turbines stand out on the horizon line*". Another panel member said, "*The sunset view is starkly different than the daytime view where the turbines were mostly concealed by viewing distance, scale and atmospheric haze. In this view the clear evening sun with the back lighting of the turbines against the deep orange-russet color of the sky dominates the view*." The proposed sunset view received an average rating score of 10.1 (a decrease of 2.7), suggesting the view becomes Modified as a result of the Project. As such, significant adverse visual impacts are expected during this clear, high contrast lighting scenario. At sunset the average VTL rating for this KOP increased from 2 (under typical conditions) to 5.

Table 3.2-43 – Average Visual Impact Ratings – MV12 SS

Peaked Hill - Sunset						
	KAC	**RCS**	**JMG**	**NHR**	**SMB**	**Average**
Existing	11.7	13.0	12.7	15.0	11.7	12.8
Proposed	11.0	13.0	7.0	13.0	6.7	10.1
Change	-0.7	0.0	-5.7	-2.0	-5.0	-2.7

Table 3.2-44 – Average Visual Impact Ratings by Resource – MV12 SS

Peaked Hill - Sunset			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	2.4	2.4	2.1
Landform	1.8	1.9	2.0
Vegetation	2.0	2.2	2.0
Land Use	1.7	1.9	1.9
User Activity	2.1	2.1	2.2
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.16 MV13 Edwin D Vanderhoop

Existing View

This view is from Edwin D. Vanderhoop Homestead, a NRHP-listed site and the location of the Aquinnah Cultural Center, on the Gay Head Cliffs in the western-most portion of Martha's Vineyard. The Aquinnah Cultural Center is a restored historic home with seasonal public access within the Coastal Bluffs LSZ. The selected view would typically be experienced by tourists and residents from the walking trails and mown grass areas on site or on their way to the museum or to Moshup Beach. The existing view overlooks dense dune shrubs in the foreground before dropping down the unseen bluffs and out to the ocean.

Rating panel members suggested the view is *"highly textural with a rich tapestry of vegetative cover against the rich blue of the ocean and sky"* and *"a pristine view over a landform and out into open water"*. Additionally, a panel member noted that this view is *"a good representation of the pleasing natural aesthetic [typical] in this area."* The existing conditions photograph scores ranged from 14.3 to 17.0 (average = 16.2), which is consistent with the Retained category applied to the Coastal Bluffs LSZ as a whole.

Simulated View

Potential visibility of the SRWF in this area, as demonstrated by the viewshed analysis, extends inland more than 1,000 feet in some places due to higher, sloping topography, and the lack of other visual obstructions around Aquinnah Circle. Views at this KOP are consistent with those available in immediately surrounding areas. However, due to topographic screening provided by the cliffs to the west of the KOP visibility may be slightly less than in areas closer to the shore. These more exposed views are represented in KOPs MV05, MV07, and MV09. Views of the SRWF from these areas are possible from nearby trails and roadways where most of the WTGs may be visible, at least to some degree, before moving inland, where potential WTG visibility gradually decreases, in number and extent, and then dissipates entirely on the north side of the island.

With the proposed SRWF in place, the WTGs are visible as light gray towers, nacelles, and rotors that extend above the horizon throughout the full field of view until the WTGs become concealed behind the bluff on the right side of the view. The towers are evenly spaced and in a regularized pattern for most of the view. Under the conditions illustrated in the selected photo, visibility of the proposed WTGs is reduced by the atmospheric haze at a distance of 21.5 miles (34.6 km). Although the selected photo is typical of a clear summer day, under clearer conditions, the WTGs will present higher visual contrast and would likely

become a more dominant feature in the view. One rating panel member suggested, "*The proposed wind farm dominates a portion of the wide Ocean view from the listed National Register Historic Site lawn area, and while extensive in quantity, the wind turbines are well spaced with very little stacking and bisecting which assists to eliminate the visual clutter of the view*." Another rating panel member found that, "*the large quantity of turbines create visual clutter which contrast[s] with an otherwise natural, pristine setting*."

As suggested by the comments, panel members had variable reactions to the visual impact of the SRWF, with VIA scores ranging from 11.3 to 16.3 (average score = 12.9). These scores indicate an average reduction of 3.3 points in comparison to the existing view which indicates that the scenic quality category is Partially Retained (see Table 3.2-45). Individual panel members indicated reductions that ranged from 0 to 5.3. The panel member at the low end of this range suggested that while the turbines were clearly visible, their lack of color contrast resulting from haze made them co-dominant with existing landscape features. The panel member at the high end of this range suggested that the turbine would become the focus of viewer attention. Panel members' average ratings suggest that the presence of the SRWF would result in significant adverse visual impacts under the clear conditions presented in the visual stimulation. However, drawing from the results presented at nearby Aquinnah Overlook (MV07) under typical viewing conditions, at times, the visual impacts resulting from the Project would be minimal.

The SRWF WTGs were considered not compatible with water resources, but were somewhat compatible with landform, vegetation, land use, and user activity (see Table 3.2-46). Considering spatial dominance, panel members suggest that the WTGs are co-dominant with water resources, landform, vegetation, land use, and user activity as indicated by the composite scores for each category. The average VTL score associated with this KOP was a 4. This reflects the fact that the SRWF will occupy approximately 0.47° or 0.9% of the viewers' vertical field of view and will occupy approximately 46° of the horizon, 49% of which will occur over open ocean (see Appendix C3).

Table 3.2-45 – Average Visual Impact Ratings – MV13

	Edwin D Vanderhoop					
	KAC	RCS	JMG	NHR	SMB	Average
Existing	14.3	16.3	17.0	16.7	16.7	16.2
Proposed	13.3	16.3	11.7	11.7	11.3	12.9
Change	-1.0	0.0	-5.3	-5.0	-5.3	-3.3

Table 3.2-46 – Average Visual Impact Ratings by Resource – MV13

Edwin D Vanderhoop			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.6	2.6	2.3
Landform	2.0	2.0	1.8
Vegetation	1.8	1.8	1.6
Land Use	1.8	1.7	1.5
User Activity	1.9	1.9	1.7
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.17 NI10 Madaket Beach

Existing View

This view is from Madaket Beach located in the Town of Nantucket, Massachusetts. This site also occurs within the Nantucket Historic District. Madaket Beach is on the southwest edge of Nantucket Island, and is owned and operated by the Town of Nantucket. This sandy beach is situated between the open ocean to the southwest and private residential development to the northeast. It can be accessed via a small parking area on Madaket Road. The selected viewpoint is located on the beach, south of the parking area in the Shoreline Beach LSZ. It is typically used by residents for shoreline swimming, sunbathing, picnicking, beach combing, enjoyment of nature, and other typical beach activities. The beach does not have comfort stations, concessions, or any other amenities beyond the parking area. The existing view to the west-southwest from this location shows a populated sandy beach in the foreground with open water and sky views as a backdrop. Conditions are somewhat overcast and hazy. To the right (northwest) of the selected frame, the edge of the parking area, cars, and people sitting on concrete barrier blocks are visible. Behind the parking lot a garage and house with deck can be seen. The beach and dune vegetation stretch from the middle ground toward the horizon.

Rating panel members indicated that the view appears as a *"common beach scene with lawn chairs, umbrellas, well-traveled sand, small waves lapping at the shore, calm water to the horizon and a gray blue cloudy sky. The water is a matte gray that blends with the cloudy sky, blurring the horizon across the view."* Amongst the panel members, there was little deviation from this rather general beach description. Rating panel scores for the existing conditions photograph ranged from 10.8 to 15.8 (average = 13.8), which is consistent with the Retained category applied to the Shoreline Beach LSZ.

Simulated View

The viewshed analysis indicates consistent visibility of the SRWF along the entire southern and western shore of Nantucket. However, at a distance of 37.0 miles (59.5 km) from the nearest proposed WTG it is anticipated that this visibility will be limited to the upper portions of the nacelle and blades. This potential visibility is relatively consistent along the shore, and on occasion narrow corridors of visibility extend inland along roads or open fields. However, these areas of visibility will be discrete and will only include portions of a small number of WTGs, suggesting that they would go unnoticed by casual observers.

With the proposed SRWF in place, the WTGs appear as grey lines on the horizon. Due to their distance from the viewer, the turbines appear small. Panel members indicated that, "*The addition of the turbines on the horizon is almost indiscernible to the beach viewer due to the limited exposure of the turbines above the horizon line. Because of the overcast sky the WTGs are partially obscured by the atmospheric haze, however, their appearance may be more defined on a clear day or under back lit conditions. In addition, the visual noise and clutter of the beach goers' umbrellas, chairs, game activities, etc. would likely draw the viewers' attention before the tips of the spinning turbine rotors would enter their field of view, if at all."* Other rating panel comments did not stray far from this sentiment stating, "*The turbines have little impact on this viewpoint due to their limited visibility. It is possible they will be noticed under clear conditions, but they do not dominate the landscape*."

Rating panel members scores ranged from 10.8 to 14.8 (average score = 13.4). These scores indicate an average reduction of 0.4 points in comparison to the existing view which indicates that the scenic quality category is now Partially Retained. Individual rating panel members indicating reductions that ranged from 0.0 to 1.0 (see Table 3.2-47), suggesting negligible visual impacts on scenic quality and viewer activities.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this viewpoint, panel members noted that the WTGs result in minimal scale contrast and were generally compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-48).

Considering spatial dominance, panel members suggest that the WTGs are subordinate to water resources, landform, vegetation, land use, and user activity. The average VTL score from this KOP is a 1. This is reflective of the limited visual presence of the proposed Project from this KOP. The SRWF will occupy approximately 0.1° or 0.2% of the viewers' vertical field of view and will occupy approximately 10° or 6% of the extensive ocean horizon available at this KOP (see Appendix C3).

Table 3.2-47 – Average Visual Impact Ratings – NI10

Madaket Beach						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.8	14.7	15.8	14.5	13.0	13.8
Proposed	10.8	14.7	14.8	13.5	13.0	13.4
Change	0.0	0.0	-1.0	-1.0	0.0	-0.4

Table 3.2-48 – Average Visual Impact Ratings by Resource – NI10

Madaket Beach			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.3	1.2	1.0
Landform	1.4	1.4	1.0
Vegetation	1.2	1.2	1.2
Land Use	1.2	1.2	1.0
User Activity	1.2	1.2	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

Simulated View – Clear Conditions

In addition to the daytime simulation of the SRWF described above, the rating panel also evaluated a photographic rendering of the proposed Project from Madaket Beach under clear atmospheric conditions (see Tables 3.2-49). With the proposed SRWF in place under optimal viewing conditions, the panel members generally agreed that "*the proposed turbines are at such a great distance as to be minimally seen on the horizon line*." The view illustrating clear conditions received an average rating score of 13.3 (a decrease of 0.5), indicating a minimal visual impact and the average VTL score remained a 1. These results suggest minimal adverse impact on scenic quality and beach goer activities, even under high visibility conditions.

Table 3.2-49 – Average Visual Impact Ratings – NI10 CL

Madaket Beach – Clear Conditions						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.8	14.7	15.8	14.5	13.0	13.8
Proposed	10.8	14.7	14.5	13.5	13.0	13.3
Change	0.0	0.0	-1.3	-1.0	0.0	-0.5

Table 3.2-50 – Average Visual Impact Ratings by Resource – NI10 CL

Madaket Beach – Clear Conditions			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.3	1.3	1.1
Landform	1.4	1.4	1.0
Vegetation	1.2	1.2	1.2
Land Use	1.2	1.2	1.0
User Activity	1.2	1.2	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.18 NL01 Nomans Land Island

Existing View

This is a simulated view from the Nomans Land Island NWR, representative of the Coastal Bluff LSZ, about three miles southwest of Martha's Vineyard off the coast of Massachusetts in the Town of Chilmark. The uninhabited island contains approximately 612 acres of land under the jurisdiction of the U.S. Fish & Wildlife Service but is not staffed or open to the public due to the presence of potential unexploded ordinance. The existing, elevated view from the island bluffs to the west-southwest looks out over a broad expanse of the Atlantic Ocean. Both the existing and proposed conditions at this KOP are represented by photographic renderings because public access to the refuge is prohibited. The KOP is set at a location off a foot path and overlooking bluffs along the west-southwest edge of the island. The edge of the bluff is dominated by coastal vegetation, which provides an edge to the shoreline in the foreground.

Rating panel members indicated that open water from the shoreline to the horizon dominates this *"pristine"* view although noting that the location has restricted access and very low use. Panel members noted the site as compromised by human activity leading to a lack of regular use of this resource by the public, while limited access by the Wampanoag Tribe of Gay Head must be considered in the assessment. Panel members also described the *"panoramic view"*, the *"dramatic bluffs",* the *"low coastal vegetation framing the foreground and the horizon line serving as the focal point."* Rating panel scores for the existing conditions photograph(s) ranged from 11.3 to 16.7 (average = 14.8), which indicates a Retained seascape category. This is consistent with the Coastal Bluff LSZ as a whole.

Simulated View

The geospatial data for Nomans Land Island do not include lidar coverage and therefore the viewshed analysis does not account for vegetative screening, and thus likely overstates potential SRWF visibility as a result of the bare-earth conditions used in the analysis. It is anticipated that the island's interior would likely include some level of vegetative screening and that the bluffs along the northern shoreline of the island present the highest degree of potential SRWF visibility.

With the proposed SRWF in place, the WTGs can be seen on the horizon spanning the view. The WTGs appear as darkened vertical lines against the sunset backdrop of the sky and stand out against the horizontal plain of the open water. The WTGs at the center and right side of the view align to form neat lines while of the remaining WTGs appear scattered across the horizon. The nearest WTG would be 15.6 miles (25.1 km) south-southwest of this KOP. Rating panel members focused on the amount and expanse of WTGs noting the SRWF turbines *"populate the entire horizon in this view, appearing as stark silhouettes"*, and *"The high quantity and man-made aesthetic of the wind turbines disrupts an otherwise completely natural view."*

Rating panel members' VIA scores ranged from 8.7 to 13.3 (average score = 10.6). These scores indicate an average reduction of 4.2 points in comparison to the existing view indicating a reduction to the Partially Retained category (see Table 3.2-51). Individual rating panel members indicated reductions that ranged from 0.0 to 8.0. Panel members described the effect of the SRWF on an otherwise undeveloped view: *"While their [WTGs] distance minimizes some level of the actual contrast and spatial dominance; their presence is the new focus of the view [and] is incompatible with the nature of this remote location."* However, given the lack of public access to this KOP, the effect on viewer activity/enjoyment would be negligible at this KOP.

Considering the compatibility, scale contrast, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings indicated that the WTGs were generally compatible with vegetation, somewhat compatible with landform, land use, and user activity, but not compatible with water resources (see Table 3.2-52). Scale contrast similarly was minimal for vegetation, but moderate for water resources, landform, land use, and user activity. Considering spatial dominance, panel ratings suggest that the WTGs are co-dominate to water resources, landform, vegetation, land use, and user activity. The average rating panel VTL score associated with this KOP was *a* 4. This is reflective of the fact that the SRWF will occupy approximately 0.66° or 1.2% of the viewers' vertical field of view and 55° of the ocean horizon which constitutes 29% of the 187° panorama ocean view at this KOP (see Appendix C3).

Table 3.2-51 – Average Visual Impact Ratings – NL01

Nomans Land Island						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	11.3	13.3	16.7	16.0	16.7	14.8
Proposed	11.0	13.3	8.7	11.0	9.0	10.6
Change	-0.3	0.0	-8.0	-5.0	-7.7	-4.2

Table 3.2-52 – Average Visual Impact Ratings by Resource – NL01

Nomans Land Island			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	2.6	2.2	2.4
Landform	1.6	1.6	1.6
Vegetation	1.4	1.4	1.6
Land Use	2.0	1.8	2.0
User Activity	2.2	2.0	2.4
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.19 AI01 Brenton Point State Park

Existing View

This view is from Brenton Point State Park, representative of the Maintained Recreation Area LSZ, which is located within the Newport/Ocean Drive State Scenic Area in the Town of Newport, Rhode Island. This site is also within the Ocean Drive Historic District/National Historic Landmark. Brenton Point State Park includes 89 acres at the southwestern tip of Aquidneck Island and provides open views of the Atlantic Ocean and Narragansett Bay The selected viewpoint is located on a maintained lawn area that is typically used by tourists and residents for walking and recreation while enjoying views of the adjacent seascape and coastline. The existing view to the south-southeast from this location features an open view of the ocean framed by a field of mowed lawn in the foreground with an access road and sidewalk cutting through it. There are parked cars visible in the middle ground along with a two-lane road close to the shore on the left, which contributes to the flat/horizontal character of the view. There is a sailboat close to the horizon line that adds visual interest by breaking up the ocean view. Cloudless blue sky overhead fades to near white at the horizon, providing a strong contrast between the water and sky across the entire view. The water is a rough textured dark blue, with small waves breaking at the shore.

Rating panel members indicated that the view is focused on the open water and that the foreground is utilitarian in nature due to the mowed lawn, parking area, and paved roadways. Rating panel scores for the existing conditions photographs ranged from 10.7 to 16.3 (average = 13.8), which is consistent with the Retained category assigned to the Maintained Recreation Area LSZ as a whole.

Simulated View

This KOP is representative of the views that are available from the open lawn area, parking lot, and segment of Ocean Drive at the southern tip of Brenton Point State Park. Due to the presence of the south-facing sloping terrain in this area, the viewshed analysis suggests that Project visibility will extend inland across this area of public open space and into the adjacent Newport Country Club before breaking up into discrete areas of visibility of less than half of the WTGs due to screening provided by vegetation, structures, and topography. A majority of WTG visibility, as shown by the viewshed, is limited to the nacelle and blade tips only.

With the proposed SRWF in place, the nacelles and rotors of numerous WTGs are visible in the background along the horizon. The nearest WTG would be 28.9 miles (46.5 km) from this KOP. Rating panel members noted that the SRWF is difficult to see on the horizon and at a quick glance the turbines are barely noticeable

and could be mistaken for boats. If the sky were hazy or cloudy, it is unlikely that they would be visible from this KOP. However, when viewing conditions are good, the span, density and blade movement of the installation across this panoramic view will by its very nature draw viewer attention to the wind farm on the horizon line. For those who can see the turbines, they could become somewhat of a focus, as the view is mainly open water with few other objects to focus on. While the number of turbines that can be seen along the horizon is high, their distance renders them barely visible, and they may go unnoticed by many viewers.

Rating panel members VIA scores at this KOP ranging from 10.3 to 15.3 (average score = 13.5). These scores reflect an average reduction of 0.3 points in comparison to the existing view, which indicates that view remains in the Retained classification. Individual rating panel members indicating reductions that ranged from 0.3 to 1.0 (see Table 3.2-53). All rating panel members noted that the SRWF would be barely visible due to the distance of the WTGs from the KOP. Consequently, their effect on scenic quality and viewer activity/enjoyment at this KOP is expected to be negligible under the atmospheric and lighting conditions present. A higher contrast lighting scenario is illustrated in the KOP from nearby Newport Cliff Walk (AI03) from which the SRWF resulted in minimal visual impacts.

Considering the compatibility, scale, and spatial dominance factors that influenced the visual impact rating at this KOP, panel member noted that the WTGs result in minimal scale contrast with landform, vegetation, and land use, but moderate scale contrast with water resources and user activity. Generally, the WTGs were considered compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-54). Considering spatial dominance, panel ratings suggest that the WTGs are subordinate to water resources, landform, vegetation, land use, and user activity. The average VTL score associated with this KOP was a 1. However, under variable lighting conditions such as those illustrated from Newport Cliff Walk (AI03) or Sachuest Point NWR (AI05), the turbines may become more visible and may result in a VTL 2 or 3 when the WTGs are strongly backlit by the morning sun under clear conditions. The SRWF will occupy approximately 0.27° or 0.5% of the viewers' vertical field of view and will occupy approximately 36° or 29% of the open ocean horizon (see Appendix C3).

Table 3.2-53 – Average Visual Impact Ratings - AI01

Brenton Point State Park						
	KAC	**RCS**	**JMG**	**NHR**	**SMB**	**Average**
Existing	10.7	14.7	16.3	13.3	14.0	13.8
Proposed	10.3	14.0	15.3	13.3	14.0	13.4
Change	-0.3	-0.7	-1.0	0.0	0.0	-0.4

Table 3.2-54 – Average Visual Impact Ratings by Resource - AI01

Brenton Point State Park			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.1	1.5	1.1
Landform	1.3	1.1	1.1
Vegetation	1.1	1.1	1.1
Land Use	1.1	1.1	1.0
User Activity	1.3	1.5	1.1
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

Simulated View - Nighttime

In addition to the daytime simulation of the SRWF at Brenton Point State Park, the rating panel also evaluated a simulation of the proposed Project at this KOP during nighttime conditions (see Tables 3.2-55 and 3.2-56). Rating panel scenic quality scores for the existing nighttime view ranged from 9.5 to 13.0 (average = 11.8), which indicates that this view at night would be in the Partially Retained category.

With the SRWF in place, rating panel members noted that, "*The jet black night sky is altered by the appearance of the turbine lights along the horizon line, however, the lights are small in scale due to the viewing distance although the blinking sequence of such a large turbine arrangement would cause the viewer to take notice despite the small size*." Rating panel members had varied recreations to the impact of the SRWF, with VIA scores ranging from 6.0 to 10.3 (average = 8.9). These scores indicate an average reduction of 2.8 in comparison to the existing nighttime view which indicates a reduction to the Modified category and significant adverse visual impacts. This conclusion is consistent with the average rating panel VTL score of 3 during nighttime conditions.

Table 3.2-55 – Average Visual Impact Ratings - AI01 NI

Brenton Point State Park - Nighttime						
	KAC	**RCS**	**JMG**	**NHR**	**SMB**	**Average**
Existing	11.2	9.5	14.3	10.8	13.0	11.8
Proposed	8.5	9.5	10.3	10.3	6.0	8.9
Change	2.7	0.0	4.0	0.5	7.0	2.8

Table 3.2-56 – Average Visual Impact Ratings by Resource - AI01 NI

Brenton Point State Park - Nighttime			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	2.0	2.0	2.3
Landform	1.4	1.4	1.4
Vegetation	1.4	1.4	1.4
Land Use	2.0	2.0	2.0
User Activity	2.1	2.1	2.3
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.20 AI03 Newport Cliff Walk

Existing View

This view is from the Newport Cliff Walk located in the Town of Newport, Rhode Island. The Cliff Walk is a National Recreation Trail that provides an opportunity for shoreline views of the Newport mansions and the adjacent ocean for numerous tourists and area residents. The Newport Cliff Walk has dynamic scenery along its entire 3.5-mile length. Views along the trail are primarily directed along the coast and include the

numerous historic and contemporary homes, landscaped gardens, and beautiful coastal bluffs descending to the waters of Narragansett Bay (See Inset 3.2-3). However, during numerous field visits to this resource, tourists were frequently observed stopping along portions of the trail to take in views of the ocean and Narragansett Bay. The selected KOP, at the southernmost portion of the Cliff Walk, offers the closest view toward the SRWF site. It is representative of the Maintained Recreation Area and Shoreline Residential LSZ's and occurs within the Newport/Ocean Drive State Scenic Area and the NRHP-listed Newport Historic District. The existing view to the south-southeast from this location features a large, exposed rock formation along the shoreline in the foreground, backed by an expanse of relatively calm open ocean. The evening light has much of the rocks in shadow, making them appear dark against the deep blue of the ocean. The color of the ocean against the clear, light blue sky creates a well-defined and unbroken horizon line. A single boat just beyond the rocks is the only man-made object in the view.

Inset 3.2-3 – View Along Newport Cliff Walk from Rough Point Mansion

Rating panel members indicated that the rock formation along the shoreline provides strong color contrast with the ocean and a high level of visual interest in the foreground. Strong contrast of the light sky with the dark ocean at the horizon was also noted. Rating panel scores for the existing conditions photograph(s) ranged from 11.3 to 16.5 (average = 13.8), which is consistent with the Retained category applied to the Shoreline Residential and Maintained Recreation Area LSZs.

Simulated View

Visibility of the SRWF in this area will be largely restricted to the south facing open terrain that slopes down to the shoreline. The viewshed analysis indicates that views of the entire SRWF extend inland for approximately 500 feet in some locations before breaking up into discrete areas with views of less than half of the WTGs due to screening provided by vegetation and structures. Views of the SRWF occur along the full length of the Cliff Walk on the eastern and southern shoreline of Aquidneck Island.

With the proposed SRWF in place, the rotors of the WTGs are visible just above the horizon line across most of the view. At this distance (28.6 miles [46.0 km]) the WTGs result in an alteration to the level horizon line, but their form is not clear. For this reason, most of the rating panel members felt that, despite their density and number, the WTGs did not dominate the view. However, while one panel member characterized the WTGs as *“barely visible”*, another indicated that *“the wind turbines would be visually noticeable and distracting from this vantage point”*.

Rating panel members had varying reactions to the SRWF's impact, with VIA scores ranging from 10.2 to 15.7 (average score = 12.7). These scores indicate an average reduction of 1.1 points in comparison to the existing view, indicating that the view becomes Partially Retained as a result of the operational Project. Individual rating panel members indicated reductions that ranged from 0 to 2.0. These VIA scores indicate minimal adverse visual impacts would result from the SRWF (see Table 3.2-57). As discussed in the description of impacts for Brenton Point State Park, variable lighting and atmospheric conditions can vary the potential impacts associated with the Project from negligible during clear afternoons to significant at night.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, the panel members suggested that the WTGs would result in minimal scale contrast with landform, vegetation, and land use, and moderate scales contrast with water resources and user activity. Generally, the WTGs were considered compatible with water resources, landform, vegetation, and land use, and somewhat compatible with user activity (see Table 3.2-58). Considering spatial dominance, panel ratings suggest that the WTGs are subordinate to all rated resources. The SRWF will occupy approximately 0.23° or 0.4% of the viewer's vertical field of view and approximately 37° or 27% of the available ocean horizon (see Appendix C3). This is consistent with the average rating panel VTL score of 2.

Table 3.2-57 – Average Visual Impact Ratings - AI03

Newport Cliff Walk						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	11.8	15.7	16.5	13.8	11.3	13.8
Proposed	10.2	15.7	14.5	12.2	11.2	12.7
Change	-1.7	0.0	-2.0	-1.7	-0.2	-1.1

Table 3.2-58 – Average Visual Impact Ratings by Resource - AI03

Newport Cliff Walk			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.4	1.7	1.3
Landform	1.3	1.2	1.2
Vegetation	1.3	1.3	1.2
Land Use	1.4	1.2	1.2
User Activity	1.6	1.7	1.3
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.21 AI05 Sachuest Point National Wildlife Refuge

Existing View

This view is from Sachuest Point, a National Wildlife Refuge (NWR) located in the Town of Middletown on Aquidneck Island, Rhode Island. This site is also part of the Sachuest Point State Scenic Area. The NWR totals approximately 242 acres and is situated on a peninsula flanked by the Sakonnet River and Sachuest Bay. It is managed by the USFWS, and provides year-round outdoor recreational opportunities for the

public, including fishing, wildlife viewing, nature interpretation, environmental education, and photography. The NWR also includes a visitor's center (Inset 3.2-4) and parking area at the base of the peninsula. The selected viewpoint is located on a walking trail (Inset 3.2-4) adjacent to the Coastal Scrub/Shrub LSZ that is typically used by tourists and residents for shoreline access. The initial and interior portions of the trail have minimal visibility of the bay and ocean, but views become available as the trail nears the end of the peninsula. The existing view to the south-southeast from the selected KOP overlooks a rocky shoreline in the immediate foreground backed by an unbroken expanse of open ocean that extends to the horizon. A small rocky island on the right side of the view is the only obvious interruption in the ocean surface. The back-lit rocks are largely in shadow, and dark in color, while the slightly choppy water surface is a mix of blue, white, and black colors. The sky in the background transitions from light blue overhead to a pinkish white at the horizon.

Inset 3.2-4 – View of the Sachuest Point NWR Welcome Center and Trails

Rating panel members indicated that the view appears relatively undisturbed and wild, with very little evidence of human presence. Other than small waves breaking against the rocks, the setting appears calm and serene. Rating panel scores for the existing conditions photograph ranged from 11.7 to 15.0 (average = 13.3), which is consistent with the Partially Retained category of scenic quality. This is inconsistent with the overall rating for the Coastal Scrub/Shrub LSZ which was categorized as Retained. While this KOP occurs within the Coastal Scrub/Shrub LSZ, the defining features of this zone are not apparent in the existing conditions photograph, which likely contributed to its slightly lower scenic quality category.

Simulated View

Visibility of the SRWF in this area includes the southeast portion of the Sachuest Point Peninsula where low vegetation and relatively flat topography allow for open views toward the ocean, yet much of the visibility in this area will be limited to the WTG nacelles and above. Visibility of the SRWF is eliminated near the Visitor Center to the north due to topography and the presence of taller vegetation inland from the immediate shoreline. However, it appears that the majority of the trail loop occurs within the area of potential visibility of the SRWF.

With the proposed SRWF in place, the WTGs can be seen as a series of fine dark lines against the sky at the horizon. Due to their distance from the viewer (29.8 miles [48.0 km] from the nearest proposed WTG), the turbines appear small, despite the clear weather and backlighting which enhance their visibility and contrast with the sky. Rating panel members indicated that the WTGs were *"barely visible"* and *had "very little presence in the view"*. Even the panel member indicating the highest degree of visual change noted that the WTGs *"are not overwhelmingly visible"*. Rating panel members had varying reactions to the

SRWF's impact, with VIA scores ranging from 10.7 to 13 (average score = 12.1). These scores indicate an average reduction of 1.1 point in comparison to the existing view which indicates continued moderate scenic quality at this KOP Table 3.2-59). Individual rating panel members indicated reductions that ranged from 0 to 2.3. The scenic quality category remains Partially Retained and negligible visual impacts are expected to result from the SRWF under the high-contrast conditions presented in the visual simulation. This is consistent with other KOPs illustrating high-contrast conditions within the 29 to 30 mile distance zone. For example, at Trustom Pont NWR (RI06) which is 29 miles from the SRWF, despite high contrast viewing conditions, the WTGs lacked sufficient scale to compete with the existing seascape elements in the view.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, rating panel scores suggest that the WTGs result in minimal scale contrast with landform, vegetation, land use and user activity, and moderate scale contrast with water resources. When compared to compatibility WTGs are considered generally compatible to landform, vegetation, and user activity, but somewhat compatible with water resources and land use, (see Table 3.2-60). Considering spatial dominance, panel ratings suggest that the WTGs are subordinate to water resources, landform, vegetation, land use, and user activity.

The average rating panel VTL score at this KOP was a 3. The SRWF will occupy approximately 0.23° or 0.4% of the viewer's vertical field of view and approximately 38° or 31% of the open ocean horizon (see Appendix C3).

Table 3.2-59 – Average Visual Impact Ratings - AI05

Sachuest Point National Wildlife Refuge						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	11.7	13.0	14.3	15.0	12.3	13.3
Proposed	10.7	13.0	12.7	12.7	11.7	12.1
Change	-1.0	0.0	-1.7	-2.3	-0.7	-1.1

Table 3.2-60 – Average Visual Impact Ratings by Resource - AI05

Sachuest Point National Wildlife Refuge			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.6	2.0	1.4
Landform	1.2	1.2	1.0
Vegetation	1.1	1.0	1.0
Land Use	1.6	1.4	1.2
User Activity	1.4	1.4	1.2
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.22 AI06 Sachuest Beach (Second Beach)

Existing View

This view is from Sachuest Beach (or Second Beach), a town-owned public beach and RV campground located in the Town of Middletown on Aquidneck Island, Rhode Island. This site is also adjacent to Hanging Rock, Norman Bird Sanctuary, Greg Craig State Scenic Area, and Sachuest Point NWR. The beach is representative of the Shoreline Beach LSZ and is used by local resident and tourists for a variety of recreational activities. The existing view to the south from the selected KOP is an open, expansive view of a busy beach in the immediate foreground leading to the dark blue water of Narragansett Bay. The beach is scattered with people and sandcastles, and a white lifeguard stand dominates the left side of the view. There are knee-high waves cresting at the shore, which add to the energy and sense of activity. A thin peninsula with a rocky shore and minimal vegetation extends into the view from the left side and divides the ocean from the sky. There is a small, distant rock outcropping that interrupts the open water at the horizon in the center of the view, which is framed by the light blue, nearly cloudless sky.

Rating panel members indicated that the view features an expanse of clean beach and an open view of the ocean. It represents a busy, active area of high public use. Rating panel scores for the existing conditions photograph(s) ranged from 9.8 to 16.7 (average = 13.3), which is consistent with the Partially Retained scenic quality category. This is inconsistent with the Shoreline Beach LSZ scenic quality category, which was Retained. Factors that reduced the scenic quality scores in this view include the perception that this is a heavily used, often crowded beach located in a mainly utilitarian seascape which is not pristine or natural.

Simulated View

Viewshed analysis suggests that visibility of the SRWF in this area will be largely restricted to the beach which has unobstructed views to Narragansett Bay and the Atlantic Ocean out to the horizon. However, these views of the WTGs will be limited to the nacelle and blade tips only due the KOP's distance from the SRWF. The viewshed analysis also suggests potential visibility may be available from the nearby inland ponds (Gardiner Pond and Nelson Pond).

With the nearest turbine 31 miles (49.9 km) from this KOP, the WTGs are barely visible above the horizon line due to the effects of curvature of the earth and atmospheric perspective. As such, the lower portions of the WTGs (up to the rotor hub) are not visible. One panel member described the turbines as *"almost imperceptible"*, others stated, *"barely visible from this distance/viewpoint"* and *"the rock outcropping just right of center offer a natural distraction and draw attention away from the turbines."* Rating panel members noted that the turbines would be easily missed by viewers due to the foreground distraction of people, wave action and beach activities. In general, reviewers' comments indicated the SRWF would not be noticeable and if visible would not appreciably affect viewer activities or enjoyment. Rating panel members assigned VIA scores ranging from 9.8 to 16.0 (average score = 13.2). These scores indicate an average reduction of 0.1 points in comparison to the existing view which indicates the Partially Retained categorization is maintained. Individual rating panel members indicated reductions that ranged from 0.0 to 0.7. With the SRWF in place, negligible visual impacts are anticipated. Morning conditions at this location may result in greater visibility of the WTGs, but as illustrated in the view from Hanging Rock (AI07), the visual impacts are still anticipated to be negligible under high contrast conditions.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings suggest that the WTGs result in minimal scale contrast and were compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-62). Considering spatial dominance, panel ratings similarly demonstrated that the WTGs are subordinate to water resources, landform, vegetation, land use, and user activity. The average rating panel VTL score associated with this KOP was a 1. This is consistent with the VIA scores, and correlates with SRWF occupancy of approximately

0.2° or 0.4% of the viewers vertical field of view and will occupy approximately 37° or 31% of the open ocean horizon (see Appendix C3).

Table 3.2-61 – Average Visual Impact Ratings - AI06

Sachuest Beach (Second Beach)						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	9.8	14.3	16.7	13.0	12.7	13.3
Proposed	9.8	14.3	16.0	13.0	12.7	13.2
Change	0.0	0.0	0.7	0.0	0.0	0.1

Table 3.2-62 – Average Visual Impact Ratings by Resource - AI06

Sachuest Beach (Second Beach)			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.1	1.1	1.0
Landform	1.0	1.0	1.0
Vegetation	1.0	1.0	1.0
Land Use	1.0	1.1	1.0
User Activity	1.0	1.0	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.23 AI07 Hanging Rock

Existing View

This view is from Hanging Rock within the Norman Bird Sanctuary in the Town of Middletown, Rhode Island. Hanging Rock is a prominent rock outcrop near Second Beach that is a popular gathering place and overlook for local residents. The site is also located along the Paradise Avenue Scenic Byway and within the Paradise Rocks State Scenic Area. The selected KOP is in the Coastal Scrub/Shrub LSZ, although at this location the landscape is significantly altered. The selected KOP is representative of the primary view from this specific location. However, scenic views are available to the north as shown in Inset 3.2-5, below and views from all the trails within Norman Bird Sanctuary leading up to hanging rock would not include views of the ocean or the SRWF (Inset 3.2-5). The existing view to the south-southeast from this KOP features an engineered water impoundment in the immediate foreground, backed by the paved parking lot for Second Beach. The parking lot contains a small building, lifeguard chairs, and other associated man-made features. A band of low dunes separates the parking area from the beach, and blocks views of the beach itself. Beyond the dunes, the calm water of the Atlantic Ocean extends from the middle ground into the background. A point of land curves in from the left to the middle of the view, enclosing a small bay. The ocean and sky are both light blue in color, with areas of reflected sunlight adding bright white highlights to the water's surface.

Rating panel members described the existing view as being dominated by man-made features that are not visually appealing. The curving coastline creates some visual interest, but built features are the focus of viewer attention. Rating panel scores for the existing conditions photograph(s) ranged from 11.7 to 12.7 (average = 12.1), which is consistent with the Partially Retained category. This is inconsistent with the

Coastal Scrub/Shrub LSZ which was Retained which is likely due to the KOPs position on the edge of the LSZ where it transitions to a more utilitarian and human-manipulated seascape. As such, the lack of the defining characteristics of this LSZ, and the abundance of man-made features likely account for the lower scenic quality category.

Inset 3.2-5 – Northerly Views from Hanging Rock and Norman Bird Sanctuary Trails

Simulated View

Visibility of the SRWF in this area will be largely restricted to the shoreline along Second Beach, and unobstructed views across the open water of Nelson and Gardiner Ponds along the southeastern shore of Aquidneck Island (two additional KOPs are located nearby including Second Beach and Sachuest Point which provide additional information on regional visibility). Additional areas of potential SRWF visibility exist northeast of Gardiner Pond along Hanging Rock Road, as well as east of the pond along Third Beach Road, where views would be available across low-lying coastal wetland areas. Visibility in this area is limited to the WTG nacelles and blade tips only.

With the proposed SRWF in place, the upper portions of the WTG rotors can be seen against the sky at the horizon line. The effects of distance (31.1 miles [50.1 km] to the nearest WTG), and reflected light on the ocean surface, partially obscure their visibility. However, overlap of individual WTGs and their movement will make them noticeable. Panel members indicated that visual clutter in the foreground of this view remains the focus of viewer attention, and that the WTGs have a limited visual effect. As stated by one of the panel members the WTGs *"are visible but have little impact due to distance. Additionally, the conditions in the foreground have a level of complexity that draw viewer attention and compete with any infrastructure visible on the horizon"*. Rating panel members had fairly consistent reactions to the SRWF's impact, with VIA scores ranging from 11 to 12.7 (average score = 11.7). These scores indicate an average reduction of 0.5 point in comparison to the existing view which indicates that scenic quality remains Partially Retained (see Table 3.2-63). Individual rating panel members indicated reductions that ranged from 0 to 1.3, suggesting that the SRWF will result in negligible visual impacts at this KOP. This is also supported by the cluster of KOPs within 2 miles of this locations, including Sachuest Point NWR (AI05), Easton's Beach (A109), and Sachuest Beach (AI06), which all received a negligible visual impact determination. However, as illustrated from Brenton Point State Park (AI01) significant nighttime visual impacts could be expected on very clear nights when the AWOLs are active (see mitigation discussion in Section 4.0).

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel results suggested that the WTGs result in minimal scale contrast and were compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-64). Considering spatial dominance, panel ratings suggest that the WTGs are subordinate to water resources, landform,

vegetation, land use, and user activity. The average rating panel VTL score associated with this KOP was a 2. This is consistent with VIA scoring and comments, and correlates with the SRWF occupying approximately 0.21° or 0.4% of the viewers' vertical field of view and approximately 26° or 39% of the open ocean horizon (see Appendix C3).

Table 3.2-63 – Average Visual Impact Ratings - AI07

	Hanging Rock					
	KAC	RCS	JMG	NHR	SMB	Average
Existing	12.3	12.7	11.7	12.0	12.0	12.1
Proposed	11.0	12.7	11.3	12.0	11.3	11.7
Change	-1.3	0.0	-0.3	0.0	-0.7	-0.5

Table 3.2-64 – Average Visual Impact Ratings by Resource - AI07

	Hanging Rock		
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.2	1.2	1.1
Landform	1.0	1.0	1.0
Vegetation	1.0	1.0	1.0
Land Use	1.2	1.0	1.0
User Activity	1.3	1.1	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.24 AI09 Easton's Beach

Existing View

This KOP is located on Easton's Beach in the Town of Newport, Rhode Island. This site is also near Newport/Ocean Drive, the Bellevue Avenue Historic District, and the Kay Street-Catherine Street-Old Beach Road Historic District. Easton's Beach, also known as First Beach, is a very popular public beach and a Newport landmark to locals and vacationers. It is used by local residents and tourists for swimming, sunbathing, and other recreational activities. The selected viewpoint is located at the top of the beach (above the high tide line) and is representative of the Shoreline Beach LSZ. This view is generally representative of what would be seen by a beach goer whose attention is focused on the ocean horizon, foreground waves, or other activities occurring on the beach itself. However, amenities not apparent in this view are likely to support a host of viewers that will not be focused on the ocean or the water. These include the wide sidewalks along a busy vehicular road (Memorial Avenue) located directly behind the viewer, the Save the Bay Exploration Center a few hundred feet east of the viewer, and the Newport Cliff Walk just west of the viewer. With this multitude of amenities, user experience in the vicinity of this KOP will be highly variable. Given the number of beachgoers using this area during the summer months, quiet, serene views to the ocean horizon are not likely the primary viewer experience at this location. The existing view to the southeast includes the exposed reddish-brown surface of the beach at low tide in the immediate foreground.

The color of the beach is presumably due to red algae, which also appears to discolor the water at the shoreline. Small rivulets of water are visible draining from this relatively flat area of exposed sand to the shallow water and small waves at the shoreline. Beyond the gently breaking waves, the dark blue, rough-textured surface of the ocean extends to the horizon line, where it meets the light blue sky. Several distant ships are visible as dark specks on the horizon.

Rating panel members indicated that the viewpoint offers a panoramic ocean view with little evidence of human activity. Several panel members commented on the red algae on the exposed beach, which one member described as *"off putting in the view and "a barrier to both the background view and the desire to move through it into the ocean".* Rating panel scores for the existing conditions photograph(s) ranged from 10.5 to 16 (average = 13.7), which is consistent with the Retained category applied to the Shoreline Beach LSZ.

Simulated View

Visibility indicated at this KOP is consistent with that found along much of Easton's Beach and the roadway behind it. While visibility of the SRWF in this area will be limited to WTG nacelles and blade tips only, the viewshed suggest potential visibility across the majority of Easton's Beach, parking area, and Memorial Boulevard (138A). Visibility to the west of this KOP follows the Ocean shoreline occasionally interrupted by shoreline development. Minimal Project visibility was observed moving southward along the Cliff Walk where development and vegetation reduce outward views of the bay.

With the proposed SRWF in place, blade tips of the WTGs are barely visible as a cluster fine white lines at the horizon on the right side of the view. Due to their distance from the viewer (30.9 miles [49.7 km] from the nearest proposed WTG), the turbines are largely obscured by curvature of the earth and appear very small, despite the clear weather conditions. As one panel member noted, *"any atmospheric haze or heavy wave action will like[ly] obscure them from view from this viewpoint"*. The panel members agreed that the turbines are difficult to perceive and would *"likely go unnoticed most of the time by most viewers".* As one panel member noted, *"conditions will need to be quite clear and lighting conditions favorable to create enough contrast for the turbines to be noticed"*. Another panel member stated that the turbines' *"distance from the shore and light color helps them recede into the horizon and they do not significantly affect the quality of the view"*.

Rating panel members had consistent reactions to the SRWF's impact, with VIA scores ranging from 10.5 to 16 (average score = 13.5). These scores indicate an average reduction of 0.2 point and the view remains in the Retained category (see Table 3.2-65). Individual rating panel members indicated reductions that ranged from 0 (indicated by three panel members) to 0.7. With the SRWF in place, these viewpoint scores indicate negligible visual impacts under the conditions represented in the visual simulation. High contrast conditions could occur during the morning under clear conditions (see AI07 and AI03) which could result in slightly elevated visual impacts. At night, when the conditions are clear, and the AWOLs are active, significant visual impacts are anticipated (See Brenton Point State Park [AI01]).

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel members indicated that the WTGs present minimal scale contrast and were compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-66). Considering spatial dominance, panel ratings suggest that the WTGs are subordinate to all rated landscape features. The average rating panel VTL score at this KOP was a 1. This is consistent with rating panel scores and comments and correlates with the SRWF's occupying approximately 0.21° or 0.4% of the viewer's vertical field of view and approximately 36° or 55% of the open ocean horizon (see Appendix C3).

Table 3.2-65 – Average Visual Impact Ratings - AI09

Easton's Beach						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.5	16.0	15.5	14.7	11.7	**13.7**
Proposed	10.5	16.0	15.2	14.0	11.7	**13.5**
Change	0.0	0.0	0.3	0.7	0.0	**0.2**

Table 3.2-66 – Average Visual Impact Ratings by Resource - AI09

Easton's Beach			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.2	1.0	1.0
Landform	1.0	1.0	1.0
Vegetation	1.2	1.1	1.1
Land Use	1.2	1.2	1.0
User Activity	1.2	1.2	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.25 BI02 Great Salt Pond

Existing View

This view is from Great Salt Pond located in the Town of New Shoreham (Block Island), Rhode Island. Great Salt Pond, also known as New Harbor, is a 673-acre tidal harbor that connects to Block Island Sound. It provides docking and mooring opportunities for vessels and shelter from heavy seas. Great Salt Pond is one of the most popular yacht harbors in the Northeast, with approximately 1,000 visiting boats moored on a typical summer weekend. The pond is also popular for paddling and fishing and is part of the Great Salt Pond State Scenic Area. This site includes a variety of other visually sensitive resources and activities, including a USCG Lifesaving Station Historic Site, a State Beach, and State Boat Ramp. The selected viewpoint is located on the western shore of Great Salt Pond, near the channel that connects the pond with the open ocean. It is representative of the Salt Pond/Tidal Marsh and Developed Waterfront LSZ's. Inset 3.2-6 below provides a view to the north from Great Salt Pond in the vicinity of the KOP. As illustrated in this photograph, this view includes far fewer discordant elements than the selected KOP photo, and for typical beachgoers, this is likely the primary view. However, boats returning to harbor would have views toward the SRWF, similar to the existing view to the east-southeast from this location. This view is dominated by the calm, open water of the pond, which extends from the foreground into the middle ground. Pilings from an adjacent pier and several marker buoys can be seen nearby on the water's surface. In the background, multiple moored boats are visible on the pond, including a large schooner. The far (eastern) edge of the pond is defined by a low vegetated berm with a strip of exposed sand at the waterline and large houses that extend above its crest. The land mass of the berm and the rooftops of the associated homes represent the visible horizon, and block views of more distant landscape features, including the ocean. The sky overhead, and at the horizon, is clear and blue.


Inset 3.2-6 – Northerly View from Great Salt Pond (Left). Selected KOP (Right)

Rating panel members indicated that the view across Great Salt Pond is a pleasant view with bustling activity. Along with numerous boats on the water, one panel member observed *that "there is a mixture of residential structures, [dunes] and sail masts dotted along the horizon. The large dual mast sailboat dominates the viewer's attention given the scale and size of the boat".* Rating panel scores for the existing conditions photograph(s) ranged from 10.7 to 14 (average = 12.2), which is consistent with a Partially Retained category. This is also generally consistent with the categories applied to the Pond/Tidal Marsh LSZ and Developed Waterfront LSZ.

Simulated View

Visibility of the SRWF in this area will be concentrated along the Great Salt Pond's shoreline, excluding Cormorant Cove, and the western shore of the Great Salt Pond Inlet. Visibility is also indicated across the flat sandy scrub lands that extend to the ocean side beach (See BI08, Fred Benson Beach), and in discrete locations on the eastern side of the inlet where views may be available through and over more dense vegetation stands. While the viewshed analysis indicates mainly nacelle and blade tip only visibility, some turbine towers are predicted to have visibility in this area. However, screening resulting from curvature of the earth, vegetation, topography, and structures will significantly obscure the SRWF and make it difficult to distinguish WTG components from foreground visual clutter.

With the proposed SRWF in place, the WTGs are present as thin vertical elements along the horizon that are almost imperceptible. As one panel member described, *"the large residences, ship masts and built forms such as utility poles, cell towers and event structures clutter the mid-ground view and limit the perception of the rotor blade tips above the landmass"*. Echoing this observation, another panel member stated, *"the turbines are barely visible and will not be noticed due to the existing built conditions that occur closer to the viewer"*. Rating panel members had relatively consistent reactions the Facility's impact, with the VIA scores of all panel members indicating no change in comparison to the existing view (i.e., all scores indicated a 0-point change). This is consistent with panel member comments regarding minimal visibility of the SRWF and their comment such as *"the proposed turbines do not have a presence in this view"* and "*the turbines have no impact from this vantage point*. With the SRWF in place, no visual impacts are anticipated.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this viewpoint, panel members noted that the WTGs result in minimal scale contrast, and are compatible with, and subordinate to, water resources, landform, vegetation, land use and user activity (see Table 3.2-68). The average rating panel VTL score associated with this KOP was a 1, which is consistent with VIA scoring and rating panel comments. The SRWF could theoretically occupy approximately 0.44° or 0.8% of

the viewers vertical field of view and 29° of the horizon, none of which will occur over open ocean (see Appendix C3). However, the intermittent visibility of the WTGs suggests that this horizon occupation is substantially smaller due to the screening provided by landform, vegetation, and structures.

Table 3.2-67 – Average Visual Impact Ratings - BI02

Great Salt Pond						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.7	13.3	14.0	11.7	11.2	12.2
Proposed	10.7	13.3	14.0	11.7	11.2	12.2
Change	0.0	0.0	0.0	0.0	0.0	0.0

Table 3.2-68 – Average Visual Impact Ratings by Resource - BI02

Great Salt Pond			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.0	1.0	1.0
Landform	1.0	1.0	1.0
Vegetation	1.0	1.0	1.0
Land Use	1.0	1.0	1.0
User Activity	1.0	1.0	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.26 BI04 Southeast Lighthouse

Existing View

This view is from Southeast Light, a National Historic Landmark located in the Town of New Shoreham on Block Island, Rhode Island. This site is also within the Mohegan Bluffs State Scenic Area and is representative of the Maintained Recreation Area LSZ. Southeast Light is a very popular tourist destination, and the grounds have year-round access with tours of the lighthouse structure occurring during the summer and fall seasons. The selected viewpoint is located approximately 250 feet south of the lighthouse on an open maintained lawn area which extends to the edge of the steep bluffs and offers extensive elevated views out to the Atlantic Ocean and portions of Block Island Sound. This is one of the most popular viewing areas for tourists and residents seeking views of the five WTGs associated with the BIWF, which is located 3.0 miles (4.8 km) offshore from this location. The selected KOP represents the primary view from this location, but secondary views include the lighthouse itself (Inset 3.2-7) and the southerly views of the dramatic bluffs with the BIWF in the background.

Inset 3.2-7 – View of Southeast Light and the nearby homes (Left).

Southerly view of Block Island WTGs (Right)

The existing view to the east-southeast from this location overlooks a well-travelled lawn leading up to a weathered wooden fence, backed by dune grasses and low evergreen vegetation on top of the adjacent bluff. The immediate foreground is backed by an expanse of open ocean and the Block Island Sound which extend to the horizon. Due to the elevated viewer perspective and distance from the ocean, the surface of the water appears smooth and deep blue in color. Large rolling waves closer to shore provide some texture and shadow on the ocean surface. On the right side of the view, a communications antenna interrupts the horizon line and one of the BIWF WTGs can been seen adjacent to the more dominant antenna. A small fishing vessel can also be seen entering the right side of the photograph. The sky in the background transitions from light blue overhead to white at the horizon.

A rating panel member indicated that the view *"is a high[ly] valued viewpoint, with cultural elements and open water views. It has the added value of being in a publicly maintained area and is likely to be visited frequently."* Another panel member noted that the cloudless blue-sky fades to white at the horizon providing a stark contrast between the light sky and dark water. Rating panel scores for the existing conditions photograph(s) ranged from 13 to 16 (average = 14.4), which is consistent with the Retained category and the Maintained Recreation Area LSZ as a whole.

Simulated View

Viewshed analysis indicates potential SRWF visibility on the easternmost grounds of the Southeast Light and the bluff receding down to beach level. However, the lighthouse itself and the surrounding structures generally screen open views of the water from more inland locations. Additionally, given the scrub/shrub vegetation surrounding the lighthouse grounds, visibility is largely restricted to the immediate vicinity of the KOP. Beyond the lighthouse grounds, several homes situated to take advantage of ocean views, will have visibility of the SRWF similar to those illustrated in the visual simulation.

With the proposed SRWF in place, the WTGs can be seen as a series of fine dark lines against the sky at the horizon. Due to the perceived quality and scale of the WTGs at this distance (16.9 miles [27.2 km] from the nearest proposed WTG), the new turbines become a focal point of the view and start to draw attention away from the closer BIWF. Additionally, the presence of the WTGs is considerably more noticeable when the rows align, creating a *"stacking"* phenomenon on the horizon.

Rating panel members had highly variable reactions to the impact presented by the SRWF, with VIA scores ranging from 7 to 15 (average score = 12.1). These scores represent an average reduction of 2.3 points in

comparison to the existing view, with which individual rating panel members indicated reductions that ranged from 0.0 to 6.0. Rating panel members indicated that the WTGs were *"co-dominant with the water, horizon, and sky"* and *"diminished in scale on the left side of the view"*. Panel members indicating the highest degree of visual change noted that the *"existing turbine[s], closer to shore than the proposed turbines, establishes a scale for the towers and accentuates their height almost 17 miles away".* Three panel members agreed that the turbines would detract from the ocean view and that the focus of the viewer's attention would become the SRWF. With the SRWF in place, the KOP is reduced to the Partially Retained category resulting in somewhat significant adverse visual impacts (see Table 3.2-69).

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, rating panel scores indicated that the WTGs result in severe scale contrast with user activity and water resources, moderate scale contrast with land use, and minimal contrast with landform and vegetation. The WTGs were considered somewhat compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-70). Considering spatial dominance, panel members indicated that the WTGs are co-dominant with water resources, land use, and user activity and subordinate to landform and vegetation.

The average rating panel VTL score assigned to this KOP was a 4. This is consistent with rating panel scoring and comments indicating that the Project would become a focus of viewer attention. The SRWF will occupy approximately 0.61° or 1.1% of the viewers vertical field of view and 30° or 15% of the open ocean horizon which extends 208° at this KOP (see Appendix C3).

Table 3.2-69 – Average Visual Impact Ratings – BI04

Southeast Lighthouse						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	13.0	15.0	16.0	15.0	13.0	14.4
Proposed	12.0	15.0	13.7	13.0	7.0	12.1
Change	-1.0	0.0	-2.3	-2.0	-6.0	-2.3

Table 3.2-70 – Average Visual Impact Ratings by Resource – BI04

Southeast Lighthouse			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.2	2.5	1.9
Landform	1.6	1.3	1.1
Vegetation	1.6	1.4	1.4
Land Use	1.9	2.1	1.7
User Activity	2.4	2.5	1.9
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

Photo Rendering - Sunrise

In addition to the daytime simulation of the SRWF as viewed from the Southeast Light, the rating panel also evaluated a photographic rendering of the proposed Project at this KOP during sunrise conditions (see Tables 3.2-71 and 3.2-72). Rating panel members stated, *"The large quantity of backlit turbines dominates*

the view", and *"The proposed turbines and off-shore substations have a strong presence on the horizon at sunrise due to the high contrast between the light color sky, dark turbines and near black fore-ground landform and vegetation"*. The proposed sunrise view received an average rating score of 10.9 (a decrease of minus 3.5) indicating that the SRWF will result significant adverse visual impacts from this KOP during the conditions presented in the photographic rendering. Also, under the high visibility and contrast conditions, the average rating panel VTL score associated with this KOP increased a 6. This also suggests that visual impact will be elevated when viewing the SRWF under clear sunrise conditions from this portion of the Block Island shoreline where views of the ocean horizon are available.

Table 3.2-71 – Average Visual Impact Ratings – BI04 SR

Southeast Lighthouse - Sunrise						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	13.0	15.0	16.0	15.0	13.0	14.4
Proposed	12.0	15.0	9.3	12.3	6.0	10.9
Change	-1.0	0.0	-6.7	-2.7	-7.0	-3.5

Table 3.2-72 – Average Visual Impact Ratings by Resource – BI04 SR

Southeast Lighthouse - Sunrise			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.6	3.0	2.9
Landform	1.6	1.5	1.5
Vegetation	1.6	1.6	1.6
Land Use	2.3	2.5	2.5
User Activity	2.5	2.6	2.6
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

Simulated View - Nighttime

In addition to the daytime and sunrise views of the SRWF from the Southeast Light, the rating panel also evaluated a simulation of the proposed SRWF at this KOP during nighttime conditions (see Tables 3.2-73 and 3.2-74). The existing nighttime view received an average rating score of 11.4 indicating a Partially Retained seascape. With the SRWF in place, the AOWLs and amber USCG warning lights associated with the proposed WTGs are visible on the horizon through the entirety of the view. Rating panel members agreed that AOWL and USCG warning lights were dominant features on the horizon, with comment such as, "*the view is now dominated by the red lights on the horizon versus gazing up towards the stars*" and "*the layered lights along the horizon capture the viewers' attention and will be the focus of this nighttime view*". The proposed nighttime view received an average rating score of 8.0 (a decrease of 3.4 points) which reduces the scenic quality category to Modified and suggests significant adverse visual impacts. The average VTL score was a 4, which indicates potential adverse impacts on viewer activity/enjoyment during clear nighttime viewing conditions when the AOWLs are active. It should be noted that this nighttime view is more likely to be experienced by nearby residences rather than visitors of the lighthouse (which is not visited frequently at night).

Table 3.2-73 – Average Visual Impact Ratings – BI04 NI

Southeast Lighthouse - Nighttime						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	11.3	9.0	13.0	11.8	12.0	11.4
Proposed	8.8	9.0	8.0	9.8	4.3	8.0
Change	-2.5	0.0	-5.0	-2.0	-7.7	-3.4

Table 3.2-74 – Average Visual Impact Ratings by Resource – BI04 NI

Southeast Lighthouse - Nighttime			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.2	2.3	2.3
Landform	1.4	1.4	1.4
Vegetation	1.4	1.4	1.4
Land Use	2.2	2.4	2.4
User Activity	2.4	2.3	2.5
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.27 BI06 New Shoreham Beach

Existing View

This view is from New Shoreham Beach located in the Town of New Shoreham, Rhode Island (Block Island). This site is a popular surf fishing location on the south shore of Block Island in the Coastal Bluffs LSZ. The existing view to the east-southeast from this location includes a rocky shoreline with breaking surf in the immediate foreground, backed by the dark blue Atlantic Ocean. Three WTGs from the BIWF are clearly visible extending above the ocean surface into the sky at the horizon. At this distance, details of the existing WTG components (e.g., legs and yellow color of the turbine foundation) are clearly visible.

Rating panel members indicated that the existing view is dynamic, visually complex, and attractive. The rocky shoreline includes a mix of colors and textures, and the ocean is a mix of crashing white surf and the blue green colors of the calmer open water. Although outside the field of view of the selected photo, steep vegetated bluffs to the north frame the view. The clear sky transitions from dark blue overhead to light blue at the horizon. This accentuates the visibility of the existing WTGs, which appear as well spaced visual focal points in the background. Rating panel scores for the existing conditions photographs ranged from 11.2 to 14.7 (average = 13.4), which indicates a Partially Retained seascape. This is not consistent with the Coastal Bluffs LSZ which was categorized as Retained. The generally lower ratings received by this KOP is likely the result of the position at the base of the bluff rather than at the top, which would offer a higher degree of scenic quality due to the elevated viewing position (as illustrated in the view from Southeast Light [BI04]).

Simulated View

Viewshed analysis results indicate potential visibility of the SRWF along the entire southern and eastern shore of Block Island. Examples of views from these areas are also illustrated in KOPs BI04, BI08, and

BI16. Visibility also occurs from elevated locations on top of the bluffs, large contiguous parcels of open pastureland, and some residential lots inland from this KOP. Views further inland are limited to discrete areas, such as small clearings and prominent topographic high points, due to the presence of significant screening features, including forest vegetation, structures, and topography.

With the proposed SRWF in place, the WTGs appear as a cluster of more distant turbines on the horizon beyond the BWIF turbines. Due to their distance from the viewer (17.8 miles [28.6 km]) they appear significantly smaller and lighter in color in the BIWF WTGs, which remain the dominant focal point on the horizon. Panel members generally felt that the new WTGs were subordinate to the existing turbines, and the presence of the BIWF WTGs limited the contrast presented by the SRWF. However, the number of turbines proposed, and their quantity in this view, *"amplifies the industrial look and visual clutter"* in this view. As one rating panel member pointed out, *"since the existing turbines already act as a focal point, the proposed turbines are very noticeable behind them".* In addition, they are noticeably closer than when viewed from mainland locations, with some details and shadowing on the WTGs being visible. Under overcast or more hazy conditions, these details, and the WTGs themselves, would be more difficult to perceive.

Rating panel members had varied reactions to the SRWF's impact, with VIA scores ranging from 10.5 to 14.0 (average score = 12.2). These scores indicate an average reduction of 1.2 points in comparison to the existing view, with individual rating panel members indicating reductions that ranged from 0 to 2.3. With the SRWF in place, the viewpoint score remains Partially Retained (see Table 3.2-75). The SRWF is anticipated to result in negligible visual impacts under the conditions presented in the visual simulation. However, under higher contrast lighting conditions such as those illustrated from Southeast Light during sunrise, the visual prominence is expected to be greater which could result in significant adverse impacts. It should be noted that, from this KOP, the SRWF will always be viewed with the BIWF in the immediate foreground, which may continue to draw viewer attention regardless of the presence of the SRWF WTGs.

Considering the compatibility, scale, and spatial dominance factors that influenced the visual impact rating at this KOP, panel members noted that the WTGs would result in minimal scale contrast and were compatible with landform, vegetation, and land use (see Table 3.2-76). However, the WTGs would result in moderate scale contrast with water resources and user activity. The SRWF was also considered somewhat compatible with water resources and user activity. Considering spatial dominance, panel members suggest that the WTGs are subordinate to landform, vegetation, and land use. They were considered co-dominant with water resources and user activity. Rating panel members VTL scores ranged from 2 to 5, and the average rating panel VTL score associated with this KOP was a 4. The vertical occupation of the SRWF is equal to about 0.52° or 0.9% of the viewer's vertical field of view, and 28° of 19% of the available ocean horizon (see Appendix C3).

Table 3.2-75 – Average Visual Impact Ratings – BI06

New Shoreham Beach						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	11.2	14.0	13.7	14.7	13.3	13.4
Proposed	10.5	14.0	12.3	12.3	11.7	12.2
Change	-0.7	0.0	-1.3	-2.3	-1.7	-1.2

Table 3.2-76 – Average Visual Impact Ratings by Resource – BI06

New Shoreham Beach			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.5	1.7	1.7
Landform	1.2	1.2	1.0
Vegetation	1.0	1.0	1.0
Land Use	1.3	1.0	1.3
User Activity	1.5	1.5	1.5
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.28 BI08 Fred Benson Beach

Existing View

This view is from Fred Benson Beach in the Town of New Shoreham, Rhode Island (Block Island). This site is a public beach, also known as Crescent Beach, located on the east shore of Block Island. This beach is a popular swimming and sunbathing destination for both tourists and local residents. Ample parking, bathhouses, and a long stretch of east-facing beach provides opportunity for large summer crowds. As the name suggests, Cresent Beach is a crescent of open sand flanked by two land masses that tend to direct views out toward the open water. As such, the selected KOP represents the primary view experienced by beachgoers. This KOP is located near the high tide line and is representative of the Shoreline Beach LSZ. The existing view to the east-southeast looks across the relatively level sand beach to some gently breaking waves in the foreground. Beyond the waves at the shoreline, the dark blue ocean extends unbroken to the horizon line, where it meets the clear blue sky. The only man-made feature is a single green navigation buoy, visible near the horizon on the left side of the view. However, outside the frame of the selected photo, there is abundant human activity on the beach. The WTGs of the BIWF are visible just to the south at a distance of approximately 5.3 miles (8.5 km). One turbine is visible over open water and the remaining four are visible behind the headland extending out into the sound.

Rating panel members indicated that the view is a classic New England beach scene. It is a simple yet picturesque view that features a broad expanse of exposed sand, open ocean, and clear sky. Lack of human activity and man-made features give it a clean, pristine feel. However, rating panel scores for the existing conditions photograph(s) ranged from 10.8 to 15.2 (average = 13.2), which is consistent with a Partially Retained seascape. This is not consistent with the category applied to the Shoreline Beach LSZ, which was classified as Retained. The slightly lower scenic quality of this viewpoint may relate to the lack of focal points and landscape variability in the selected view.

Simulated View

SRWF Visibility within the surrounding area will be generally confined to the beach and shoreline due to the presence of large, vegetated dunes between the beach and the inland areas. Small areas of visibility are also indicated by the viewshed analysis along adjacent residential properties with large lots and minimal vegetative screening. This inland visibility occurs in discrete locations and diminishes significantly in the vicinity of Corn Neck Road.

With the proposed SRWF in place, the WTGs are visible along the horizon line, but under the lighting conditions in the selected photo are not prominent. Rating panel members described them as *"barely visible"* and *"difficult to see with any clarity or crispness".* Panel members noted that the WTG's light color, at the viewing distance of 19 miles (30.6 km) to the nearest turbine, helps them recede into the skyline. However, one panel member indicated the horizon line represents the focal point in this view, and the WTG's location on the horizon will make them potentially prominent. This panel member also noted that "*viewers will notice the turbines, but this impact will rely heavily on atmospheric clarity and lighting conditions*".

With one exception, rating panel members had fairly consistent reactions to the SRWF's impact, with VIA scores ranging from 10.2 to 14.3 (average score = 12.6). These scores represent an average reduction of 0.6 point in comparison to the existing view, which indicates that this KOP remains in the Partially Retained category (see Table 3.2-77) and the SRWF would result in negligible visual impacts under the conditions illustrated in the visual simulation. Individual rating panel members indicated reductions that ranged from 0 to 2.3. With the SRWF in place, adverse impacts to scenic quality and beachgoer enjoyment are not anticipated. However, impacts may be variable during high contrast conditions such as early morning and nighttime. Simulations representative of these conditions are described for nearby KOPs such as New Shoreham Beach (BI06), and Southeast Lighthouse (BI04). In these simulations impacts were characterized as minimal to significant adverse visual impacts. This suggests the potential for similar impacts at this KOP. However, it should be noted that BI04 is substantially elevated and nighttime access to Fred Benson Beach is limited, so significant adverse impacts at night would not likely occur at Fred Benson Beach.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this viewpoint, panel members noted that the WTGs result in minimal scale contrast, and were compatible with, and subordinate to, landform, vegetation, land use and user activity (see Table 3.2-78). In addition, with respect to water resources, the presence of the WTGs was considered somewhat compatible, with moderate scale contrast, and spatially subordinate. The average rating panel VTL score associated with this KOP was a 2, consistent with rating panel VIA scoring and comments. However, the SRWF has a relatively substantial horizon occupation at this KOP. Of the available ocean horizon (117°), the SRWF, occupies approximately 31° or 26%. The vertical occupation is equal to about 0.53° or 1% of the viewers vertical field of view (see Appendix C3). Based on the horizontal and vertical occupation of the SRWF, it is likely that the time of day and lack of color contrast may have influenced the relatively low VTL score. Based on nearby KOPs illustrating higher contrast conditions, including New Shoreham Beach (BI06), and Southeast Lighthouse (BI04) the VTL could increase to 4 or 6, depending on the time of day and atmospheric clarity.

Table 3.2-77 – Average Visual Impact Ratings – BI08

	Fred Benson Beach					
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.8	14.3	15.2	12.8	12.7	13.2
Proposed	10.2	14.3	12.8	12.8	12.7	12.6
Change	-0.7	0.0	-2.3	0.0	0.0	-0.6

Table 3.2-78 – Average Visual Impact Ratings by Resource – BI08

Fred Benson Beach			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.5	1.5	1.3
Landform	1.2	1.1	1.1
Vegetation	1.2	1.2	1.2
Land Use	1.4	1.2	1.0
User Activity	1.2	1.0	1.2
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.29 BI12 Clayhead Trail

Existing View

This view is from Clayhead Trail, located in the Town of New Shoreham on Block Island, Rhode Island. This site is accessible via Corn Neck Road. Clayhead trail passes through the 190-acre Clayhead Nature Preserve, owned and operated by The Nature Conservancy. It consists of low scrub forest vegetation, ponds, fields, bluff and beach. It is bounded on the west by high shoreline bluffs overlooking rocky beach and open ocean. Other than the trail, some modest signage, and simple fencing, the site is undeveloped. Views along the Clayhead Trail are primarily directed to the north and south which is the general direction of the trial (Inset 3.2-8). However, in some areas the trail twists and turns, offering views to the east and west. In these areas, the narrow trail often broadens, providing an indication that users stop to take in the easterly views across the sound and ocean. The selected viewpoint is located at one of these informal trail overlook points, looking toward the open ocean from the edge of the Shoreline Bluffs LSZ. The existing view to the south-southeast looks beyond the bluff, through scrub-shrub vegetation in the foreground to a calm open ocean. A single turbine of the BIWF (6.5 miles [10.5 km] away) is visible on the far right of the frame. To the right (south) of the selected photo, the remaining four WTGs associated with the BIWF can also be seen from this vantage point.

Inset 3.2-8 – Typical Views Along Clayhead Trail

Rating panel members indicated that the view appears vast, natural, and secluded. Some said that the horizon appeared crisp and strong, while others felt it was blurry and hazy. The scenic quality score for the Shoreline Bluffs LSZ was 16.0, which indicates a high scenic quality classification. Rating panel scores for the existing conditions photograph(s) ranged from 12.7 to 17.3 (average = 15.0), which is also consistent with the high scenic quality classification of the LSZ as a whole.

Simulated View

Visibility of the SRWF in this area will be largely restricted to the shoreline at the base, and along the top of the bluffs in this portion of Block Island. However, viewshed analysis suggests that visibility of the SRWF extends inland where there are open fields occurring along the top of the elevated bluffs. As one proceeds inland, these areas of visibility break up into discrete areas with views of less than half of the WTGs due to screening provided by intervening vegetation, structures, and topography.

With the proposed SRWF in place, the WTGs can be seen as clusters of dark linear features set against the light bluish white sky. Although the turbines appear small due to their distance from the viewer (19.5 miles [31.4 km] to the nearest proposed WTG), the volume and positioning of the turbines, along with the relatively clear conditions, make the turbines easily visible on the horizon. Some panel members noted that the WTGs were *"co-dominant"* and that *"the contrast [was] reduced because of atmosphere haze."* Other panel members indicating a higher degree of visual change noted that, *"The distance of the turbines from the shore helps [minimize dominance] compared to the water but the contrast in natural scenery versus man-made commercial structures is great and lowers the quality of the view."* Panel members felt that the spacing of the turbines accentuated the depth of the wind farm, and that *"stacks and lines of overlapping turbines"* created multiple focal points where the horizon was otherwise the single focal point.

Rating panel members had varying reactions to the SRWF's impact, with VIA scores ranging from 9.3 to 13.7 (average score = 11.5). These scores reflect an average reduction of 3.5 points in comparison to the existing view, with individual rating members reductions that ranged from 0.0 to 6.0. With the SRWF in place, the KOP is reduced to the Partially Retained category (see Table 3.2-81) and significant adverse visual effects are anticipated under the clear, high-contrast conditions presented.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, rating panel scores indicated that the WTGs would result in moderate scale contrast and were somewhat compatible with water resources, vegetation, landform, and land use, and not compatible with user activity (see Table 3.2-82). Considering spatial dominance, panel members noted that the WTGs were subordinate to landform, vegetation, and vegetation, and co-dominant to water resources, land use and user activity. The average rating panel VTL score for this KOP was a 4, which is consistent with rating panel scoring and comments. The SRWF will occupy approximately 0.5° or 0.9% of the viewer's vertical field of view. Of the available ocean horizon (141°), the SRWF, occupies approximately 32° or 23% (see Appendix C3).

Table 3.2-81 – Average Visual Impact Ratings – BI12

	Clayhead Trail					
	KAC	RCS	JMG	NHR	SMB	Average
Existing	12.7	13.7	16.3	17.3	15.0	15.0
Proposed	11.0	13.7	12.0	11.3	9.3	11.5
Change	-1.7	0.0	-4.3	-6.0	-5.7	-3.5

Table 3.2-82 – Average Visual Impact Ratings by Resource – BI12

Clayhead Trail			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	2.4	2.4	2.4
Landform	1.6	1.4	1.3
Vegetation	1.6	1.6	1.3
Land Use	2.0	2.0	1.8
User Activity	2.5	2.4	2.2
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.30 BI16 Mohegan Bluffs

Existing View

This view is from Mohegan Bluffs, a public beach and state park located on Block Island, Rhode Island. This site is within the Mohegan Bluffs State Scenic Area and located adjacent to other visually sensitive areas such as the Southeast Light and Southeast Road State Scenic Area. The selected viewpoint is located on a rocky beach at the base of a steep sandy bluff and representative of the Coastal Bluffs and Shoreline Beach LSZs (depending on the viewer's location and/or orientation in this general vicinity). To access this KOP viewers would enter from a roadside parking area and then travel a pathway surrounded by dense vegetation which screens views toward the ocean. This pathway then opens up to bluffs and views of the ocean where a steep staircase leads down to the shoreline where this KOP is located. It is important to note that the integrity of the bluffs has not been consistent, collapse has occurred on occasion, which has the potential to alter or compromise public access to this location. The existing view to the east and southeast from this location affords open views of the Atlantic Ocean and existing offshore wind turbines that are part of the BIWF at a distance of 3.2 miles (5.1 km) from this KOP.

Rating panel members described aspects of the view that contribute to high scenic quality, such as *"The rocky shoreline is dramatic due to the wave action, large rust-colored boulders and pebble strewn sand. This is not the typical soft sand beaches found along the East Coast, which makes it visually unique"*. Rating panel members also commented on the existing BIWF turbines, noting "*There are a couple windmills located just offshore in the selected existing view. They are somewhat prominent as a focus of the view*." Another commented that "*the existing turbines are not offensive in the view, but rather an element of interest and folly*". Rating panel scores for the existing conditions photograph(s) ranged from 11.5 to 15.7 (average = 13.6), which is consistent with the Retained category assigned to the Coastal Bluffs and Shoreline Beach LSZs.

Simulated View

This KOP is representative of the degree of SRWF visibility available along the entire southern and eastern shore of Block Island, including the elevated views from the top of the bluffs, which define the beach limits. Examples of visibility from these areas are also illustrated in KOPs BI04, BI06, and BI08. Visibility also occurs on large contiguous parcels of open pastureland and residential lots inland from this KOP. Beyond these areas including many pathways to these areas, forest vegetation, structures, and topography become significant screening features and limit visibility to discrete areas with small clearings and prominent topographic highpoints.

With the proposed SRWF in place, multiple rows of turbines extend across the view at the horizon. From this location, the nearest proposed turbine is approximately 17.2 miles (27.7 km) away. One rating panel member, stated that "*the addition of the background cluster of infrastructure magnifies the impact of the existing turbines… The proposed turbines shift the focus of the view to a field of turbines both near and far… The contrast of the proposed turbines is large due to the layering of more, not because they are necessarily more visible than the existing ones*". Rating panel members also noted "*the scale and density of the turbines in this view cannot be overlooked, and they dominate the viewer's attention… Despite the size of the existing Block Island turbines, they are visually separate from the new installation and do not absorb the viewer's gaze with the same strength as the smaller, but more numerous turbines."* However, panel members also noted that contrast presented by the proposed turbines was reduced by atmospheric conditions, and that *"The proposed turbines are well spaced, have a regularized pattern, and do not grossly overlap each other, which helps to offset the intensity of the visual impacts of the proposed wind farm.*"

Rating panel members had varying reactions the Facility's impact, with VIA scores ranging from 10.5 to 15.7 (average score = 11.9). These scores indicate an average reduction of 1.7 points in comparison to the existing view which indicates a reduction to a Partially Retained category. Individual rating panel members indicated reductions that ranged from 0 to 3 points. Under the conditions illustrated in the visual simulation, somewhat significant visual impacts are anticipated as a result of the SRWF.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this viewpoint, panel members noted that the WTGs were somewhat compatible and result in moderate scale contrast with water resources, landform, land use and user activity (see Table 3.2-80). When compared to land use WTGs were considered compatible and presented minimal scale contrast. Considering spatial dominance, panel members evaluated that the WTGs are co-dominant with water resources, landform, vegetation, land use, and user activity. The average rating panel VTL score for this KOP was a 4, which is consistent with rating panel scoring and comments. The SRWF will occupy approximately 0.56° or 1.0% of the viewer's vertical field of view. Of the available ocean horizon (164°), the SRWF, occupies approximately 30° or 18% (see Appendix C3). Based on the simulation from Southeast Lighthouse (BI04) which is only 0.3 mile closer to the SRWF, the VTL could increase to 4 or 6, depending on the time of day and atmospheric clarity.

Table 3.2-79 – Average Visual Impact Ratings – BI16

	Mohegan Bluffs					
	KAC	RCS	JMG	NHR	SMB	Average
Existing	13.2	15.7	13.5	14.2	11.5	13.6
Proposed	11.2	15.7	10.5	11.5	10.8	11.9
Change	2.0	0.0	3.0	2.7	0.7	1.7

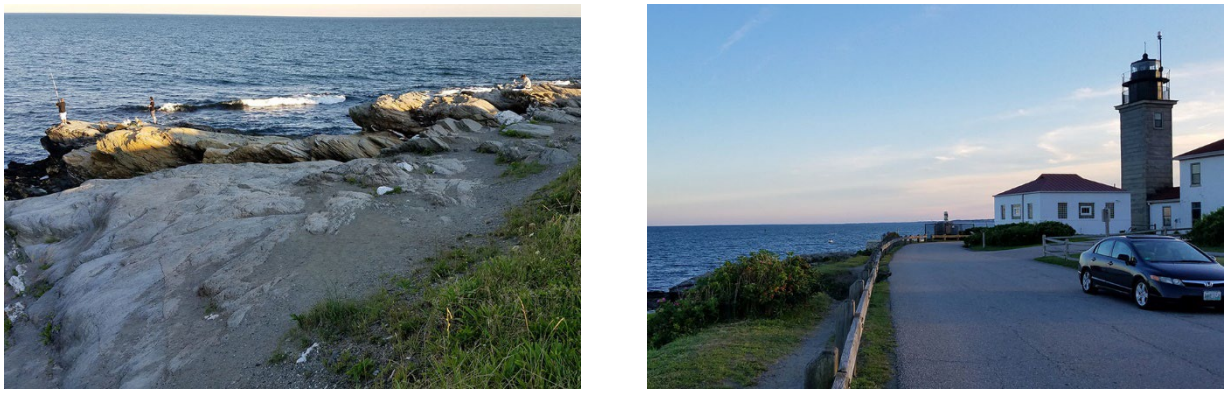
Table 3.2-80 – Average Visual Impact Ratings by Resource – BI16

Mohegan Bluffs			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.9	2.0	2.4
Landform	1.8	1.8	1.8
Vegetation	1.4	1.4	1.5
Land Use	1.6	1.6	1.6
User Activity	1.9	1.7	2.1
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.31 C01 Beavertail Lighthouse

Existing View

This view is from Beavertail Lighthouse, a site listed on the NRHP within Beavertail State Park and a portion of the Beavertail State Scenic Area located in the Town of Jamestown on Conanicut Island, Rhode Island. Beavertail State Park is a 153-acre park at the extreme southern end of Conanicut Island and is surrounded on three sides by the waters of the East and West Passages of Narragansett Bay. The park features the historic Beavertail Lighthouse along with ample opportunities for year-round outdoor recreation including fishing, wildlife viewing, and photography. People were also observed reading, sunbathing, and picnicking (Inset 3.2-9). The area also features unique environmental interpretive programs for marine education due to the presence of large and frequent tidal pools along the elevated rocky shoreline. People that approach these rocky cliffs or the lighthouse observation tower will have a primary view similar to that illustrated from this KOP. However, visitors of this park are also likely to be engaged in other activities that are entirely focused on other parts of Narragansett Bay. In fact, most park amenities are situated to take advantage of the east and west passages of the Bay, views of which are directed away from the SRWF.



Inset 3.2-9 – Beavertail Light and Typical Users Adjacent to the KOP

The selected viewpoint is located immediately south of the lighthouse within the Coastal Bluffs LSZ and immediately adjacent to the Maintained Recreation Area LSZ. The existing view to the southeast from this location overlooks a dark rocky shelf in the immediate foreground backed by an unbroken expanse of open ocean that extends to the horizon. The late afternoon sun casts flat shadows over the foreground rocks, while the slightly choppy water surface is a mix of blue, white, and black colors. The sky in the background transitions from light blue overhead to a pinkish white at the horizon.

Rating panel members indicated that the *"view is dominated by the intensity of the dark rock outcropping with its highly irregular surface and visual movement, the deep blue ocean textured by the wave action, and the clear horizon line and light sky. Despite the adjacent historic resources, this view is dominated by recreational fishing"* and *"This open water view is complimented by some rock formations in the foreground. This would be a highly valued view".* Rating panel scores for the existing conditions photograph(s) ranged from 10.8 to 15.8 (average = 14.5), which is consistent with the Retained category assigned to the Coastal Bluffs and Maintained Recreation Area LSZs.

Simulated View

Viewshed analysis indicates that views of the SRWF in this area will be largely restricted to the bluffs along the southeastern shore and across the southernmost tip of Conanicut Island. However, due to the presence of sloping, south-facing hills, the viewshed analysis also indicates that potential views of the SRWF extends inland across open areas associated with Beavertail State Park and follow Beavertail Road before breaking up into discrete areas with potential views of less than half of the WTGs due to intervening screening provided by vegetation, structures, and topography.

With the proposed SRWF in place, the WTGs can be seen as a series of white, vertical lines against the light pinkish sky at the horizon. Due to their distance (29.5 miles [47.5 km] from the nearest proposed WTG), the WTGs appear small and do not dominate the view, despite the clear weather and strong front-lighting, which enhances their visibility and contrast with the sky. Rating panel members indicated that *"The turbines are barely noticeable from this distance and do not detract from the view"*. Even the panel member indicating the highest degree of visual change noted that *"The impact of the turbines in this view is minimized due to the great distance from which they are seen. Viewers can just make out the turbines in clear conditions. While they can be seen, they do not dominate or create a large level of contrast"*.

Rating panel members had fairly consistent reactions to the SRWF's impact, with VIA scores ranging from 10.5 to 15.7 (average score = 14.1). These scores indicate an average reduction of 0.4 point in comparison to the existing view indicating that the KOP remains in the Retained category. Individual rating panel members indicated reductions that ranged from 0 to 1.7 points. With the SRWF in place, the VIA scores suggest negligible impacts on scenic quality or the range of active and passive viewer activities that occur at this KOP.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this viewpoint, panel members noted that the WTGs result in minimal scale contrast, were compatible with, and subordinate to water resources, landform, vegetation, land use and user activity (see Table 3.2-84). The average rating panel VTL score for this KOP was a 1, which is consistent with VIA scoring and rating panel comments. The SRWF will occupy approximately 0.24° or 0.4% of the viewer's vertical field of view. Of the available ocean horizon (117°), the SRWF, occupies approximately 35° or 30% (see Appendix C3).

Table 3.2-83 – Average Visual Impact Ratings – C01

Beavertail Lighthouse						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.8	15.7	15.8	14.5	15.5	14.5
Proposed	10.5	15.7	14.2	14.5	15.5	14.1
Change	-0.3	0.0	-1.7	0.0	0.0	-0.4

Table 3.2-84 – Average Visual Impact Ratings by Resource – C01

Beavertail Lighthouse			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.1	1.3	1.2
Landform	1.0	1.0	1.0
Vegetation	1.2	1.2	1.2
Land Use	1.0	1.0	1.0
User Activity	1.0	1.1	1.1
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.32 RI01 Watch Hill Lighthouse

Existing View

This view is from the grounds near the Watch Hill Lighthouse, on a mainland peninsula in the Town of Westerly, Rhode Island. This site is within the NRHP-listed Watch Hill Historic District and the Watch Hill State Scenic Area. The selected KOP is located on a maintained grassy lawn in front of a stone seawall adjacent to the shoreline and is representative of the Maintained Recreation Area and Shoreline Residential LSZs. The existing view to the east-southeast from this location overlooks a grassy lawn leading to a stone and concrete seawall that transitions into a narrow area of bituminous paved surface. This is an open ocean view with a small powerboat transiting nearshore and a large freighter visible in the distance. Block Island is faintly visible on the horizon. The blue ocean surface is relatively calm and transitions into a hazy overcast light blue sky with several white clouds.

Rating panel members indicated that *"the nearby Lighthouse and Watch Hill mansions have a prime view to the open ocean from this viewpoint"*. The stone wall and paving in the foreground *"dominates the view and has a municipal sensibility"*, and it is *"a high-quality view that likely receives many visitors"*. Rating panel scores for the existing conditions photograph ranged from 11.7 to 16.0 (average = 13.9), which is consistent with the Retained category applied to the Maintained Recreation Area and Shoreline Residential LSZs.

Simulated View

This KOP is representative of views that are possible from the open area around the Watch Hill Lighthouse and the shoreline east of the lighthouse. Due to the presence of the south-facing sloping hills that back the

shoreline, viewshed analysis suggests that visibility of the SRWF also extends inland across residential and hotel lawns before breaking up into discrete areas of partial visibility due to screening provided by vegetation, structures, and curvature of the earth. With nearly half of WTGs screened by Block Island or curvature of the earth, visible WTG components will be limited to the nacelle and/or blade tips only.

With the proposed SRWF in place, the WTGs will be undetectable to the naked eye. Due to their distance from the viewer (36 miles [57.9 km] from the nearest proposed WTG), the turbines are either blocked from view by Block Island or are below the horizon. Panel members indicated: *"proposed turbine installations are imperceptible at this viewing distance"; "towers not visible at this distance – no impact"; "will likely go undetected to the naked eye. These are barely visible under magnified conditions",* and *"turbines are not visible and do not contrast with the surroundings".*

With the SRWF in place VIA scores remained the same (i.e., no change compared to the existing condition). These scores indicate a negligible visual impact on viewer activities and no change in scenic quality.

Considering the compatibility, scale, and spatial dominance factors that influenced the visual impact rating at this viewpoint, panel members noted that the WTGs would result in minimal scale contrast and were compatible with and subordinate to water resources, landform, vegetation, land use and user activity (see Table 3.2-86). The average rating panel VTL score for this KOP was a 1. This is consistent with rating panel scoring and comments, and reflects the fact that the SRWF will occupy approximately 0.05° or 0.09% of the viewer's vertical field of view and approximately 13° of the horizon, all of which occurs over Block Island (see Appendix C3).

Table 3.2-85– Average Visual Impact Ratings – RI01

Watch Hill Lighthouse						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	11.7	13.3	16.0	15.0	13.7	13.9
Proposed	11.7	13.3	16.0	15.0	13.7	13.9
Change	0.0	0.0	0.0	0.0	0.0	0.0

Table 3.2-86 – Average Visual Impact Ratings by Resource – RI01

Watch Hill Lighthouse			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.0	1.0	1.0
Landform	1.0	1.0	1.0
Vegetation	1.0	1.0	1.0
Land Use	1.0	1.0	1.0
User Activity	1.0	1.0	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.33 RI02 Weekapaug Breachway

Existing View

This view is from the Weekapaug Breechway, located in the Town of Westerly, Rhode Island. This site is the outlet of Winnapaug Pond to the Atlantic Ocean and is a popular boat launch, fishing, and surfing site

for area residents. It is also adjacent to The Dunes trailer park and associated public swimming beach, and for this reason is considered part of the Shoreline Beach LSZ. Visitors to this location are likely to be engaged in activities where ocean views are not the primary focus. Surfers, boaters, and fishermen observed at this location were focused on their activities, often facing the opposite direction of the SRWF. The selected view from this KOP provides a better representation of views available to shoreline residents that have homes with open views of the ocean. It is more likely these viewers will have long duration, focused views of the ocean horizon.

The existing view to the southeast from this location looks across the open water of the breachway toward the eastern breakwall, which angles across the foreground of the view. The breakwall consists of large stones and a concrete stairway and is clearly a man-made addition to the shoreline. Several people can be seen on and behind the breakwall, which is backed by a small beach. Offshore from this beach, a small bay, and point of land enclosing the bay, can be seen in the middle ground. The point is characterized by a rocky shoreline that gives way to nearby buildings. Beyond the point, the ocean stretches to the horizon, with the distant land mass of Block Island visible on the right-hand side. The sky is largely overcast, although there are breaks in the clouds overhead. The late afternoon sunlight and cloud cover give the ocean a light blue color, while the sky is a mix of gray, blue, purple, and pink.

Rating panel members described the view as highly manipulated and indicated that the focus of this view is *"the large stones and their contrast with the water".* The cumulus clouds and the stormy look of the sky also create visual interest in this view. Rating panel scores for the existing conditions photograph(s) ranged from 10 to 16 (average = 13.3), which is consistent with the Partially Retained category. This is not consistent with the Retained category applied to the Shoreline Beach LSZ due to the presence of a heavily manipulated shoreline in the foreground of the view.

Simulated View

Viewshed analysis suggests that visibility along this portion of the southern shore of Rhode Island will generally be limited to the immediate shoreline and adjacent open areas. The multitude of homes lining the shore screen visibility of areas further inland, although the residents of these homes are situated to have views of the ocean. As such, they will likely have views of the SRWF on clear days.

With the proposed SRWF in place, the upper portions of the WTGs can be seen as a series of fine white lines against the sky at the horizon. Due to their distance from the viewer (33 miles [53.1 km] from the nearest proposed WTG), the turbines are largely screened by curvature of the earth and have limited height above the horizon line. As one panel member stated, *"the proposed turbines are barely visible and only stand out more given the time of day this photo was taken".* The panel also noted that WTG visibility is partially obscured by the presence of Block Island and could be somewhat greater or less under different weather/sky conditions. One panel member noted that the WTGs *"bright white color and spinning rotor blades may catch the attention of the breachway users and fishermen".* However, all panel members indicated that, while noticeable, the turbines are distant and not distracting or dominant in this view. According to one panel member, *"the massive and irregularly regularly shaped stones along the coastal edges maintain the visual dominance in the view".*

Rating panel members had fairly consistent reactions to the SRWF's impact, with VIA scores ranging from 10 to 15.3 (average score = 13). These scores represent an average reduction of 0.3 point in comparison to the existing view indicates that the KOP remains with the moderate scenic quality classification. Individual rating panel members indicated reductions that ranged from 0 to 1 point. These scores suggest negligible impacts on scenic quality or viewer activity with the SRWF in place.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this viewpoint, panel members noted that the WTGs result in minimal scale contrast and were compatible

with water resources, landform, vegetation, land use and user activity (see Table 3.2-88). Considering spatial dominance, panel members indicated that the WTGs are subordinate to all components of the landscape. The average rating panel VTL score for this KOP was a 1, which is consistent with VIA scoring and rating panel comments. This negligible impact reflects the fact that the SRWF will occupy approximately 0.16° or 0.3% of the viewers vertical field of view and approximately 17° of the horizon, 6% of which will occur over open ocean and approximately 94% will occur behind Block Island (see Appendix C3).

Table 3.2-87 – Average Visual Impact Ratings – RI02

Weekapaug Breachway						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.0	13.3	16.0	15.3	11.8	13.3
Proposed	10.0	13.3	15.3	14.3	11.8	13.0
Change	0.0	0.0	-0.7	-1.0	0.0	-0.3

Table 3.2-88 – Average Visual Impact Ratings by Resource – RI02

Weekapaug Breachway			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.3	1.2	1.0
Landform	1.2	1.2	1.0
Vegetation	1.2	1.2	1.2
Land Use	1.2	1.2	1.2
User Activity	1.3	1.2	1.2
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.34 RI03 Point Judith Lighthouse

Existing View

This view is from the Point Judith Lighthouse, a NRHP-listed historic property located on the west side of the entrance to Narragansett Bay and north side of the east entrance to Block Island Sound, in the Town of Narragansett, Rhode Island. This site is within the Point Judith State Scenic Area and adjacent to the Point Judith Wildlife Management Area. The site provides year-round outdoor recreational opportunities for the public, including enjoying the scenery/views of the ocean, fishing, surfing, and photography. The lighthouse site is located at the southern tip of a peninsula and includes a parking area and visitor amenities such as benches oriented southeast toward the ocean. The selected viewpoint is within the Maintained Recreation Area LSZ, and representative of a view experienced by tourists, residents, and members of the fishing community. The existing view to the southeast from this location is an elevated, open view which is framed by the lighthouse at the far right-hand side of the view (i.e., to the south-southwest). The immediate foreground includes an open lawn featuring mowed grass, benches, and large boulders, with an abrupt edge that drops to a rocky shoreline. The photograph from this viewpoint depicts clear, pleasant conditions with low waves at the shoreline, a calm ocean that extends to the horizon, and a cloudless light blue sky

fading to a hazy white at the horizon. Activity on the ocean includes large freighters, small watercraft, and sailboats at various distances from shore and on the distant horizon.

Rating panel members indicated that the view is focused on the open ocean, including the activities of watercraft. Rating panel scenic quality scores for the existing conditions photograph(s) ranged from 12.3 to 16.7 (average = 14.4), which is consistent with Retained category applied to the Maintained Recreation Area LSZ.

Simulated View

This KOP is representative of views that are available along the shoreline beach, and adjacent open lawns associated with Point Judith. Viewshed analysis results indicate potential visibility of the SRWF along portions of Ocean Road and the adjacent residential areas along Shore Road, but these pockets of visibility are unlikely to provide expansive, long-duration views similar to those experiences from the shoreline, beach, and open lawn due to views being available primarily from moving vehicles and the screening provided by intervening vegetation, topography, and structures.

With the proposed SRWF in place, wind turbines are visible at the horizon across most of the view, diminishing in height from right to left. The turbines at the right side of the view are closer (the nearest turbine would be 25.7 miles [41.4 km] from this viewpoint) and are in clear view with most of their rotor blades visible above the horizon line. The WTGs appear smaller, closer to the horizon, and their individual forms overlap as they recede into the left side of the view. Under overcast or more hazy conditions, or during midday hours, the WTGs would be more difficult to perceive. Panel member comments indicated that the *"addition of the turbines to this view reinforces the working nature of the ocean in combination with the lighthouse, freighters and small boats on the horizon".* Others noted that the turbines' *"distance from the shore keeps them from overwhelming the view, but the large quantity of the turbines prevents them from being mistaken as a boat and blending in with the view".* The panel member with the highest visual contrast scores noted that the turbines would become a new focal point in the view and that *"the presence of the turbines, while at a distance, are quite noticeable as they span a large portion of the horizon".*

Rating panel members had varied reactions to the impact of the SRWF, with VIA scores ranging from 11.7 to 15.3 (average score = 12.0). These scores reflect an average reduction of 2.2 points in comparison to the existing view, which indicates that the scenic quality category is reduced to Partially Retained. Individual rating panel members indicated reductions that ranged from 0 to 5.3 points. With the SRWF in place, somewhat significant adverse visual impacts are anticipated under the clear, high-contrast conditions illustrated in the visual simulation.

Considering the compatibility, scale, and spatial dominance factors that influenced the visual impact rating at this KOP, panel members noted that the WTGs were somewhat compatible and would result in moderate scale contrast with water resources, landform, land use and user activity (see Table 3.2-90). Considering vegetation, the panel members noted compatibility and moderate scale contrast. Considering spatial dominance, panel members suggested that the WTGs are co-dominant to all rated resources. The average rating panel VTL score for this KOP was a 4, which is generally consistent with rating panel comments and VISA scores. The SRWF will occupy approximately 0.29° or 0.5% of the viewer's vertical field of view. Of the available ocean horizon (175°), the SRWF, occupies approximately 35° or 20% (see Appendix C3).

Table 3.2-89 – Average Visual Impact Ratings – RI03

Point Judith Lighthouse						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	12.7	15.3	16.7	12.3	15.0	14.4
Proposed	11.7	15.3	11.3	11.3	11.3	12.2
Change	-2.2	0.0	-5.3	-1.0	-3.7	-2.2

Table 3.2-90 – Average Visual Impact Ratings by Resource – RI03

Point Judith Lighthouse			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.2	1.9	2.0
Landform	1.7	1.7	1.5
Vegetation	1.4	1.6	1.6
Land Use	1.8	2.0	1.7
User Activity	2.2	2.0	1.9
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.35 RI04 South Shore Beach

Existing View

This view is from South Shore Beach located in the Town of Little Compton, Rhode Island. This site is also Part of the Little Compton Agricultural Lands State Scenic Area. South Shore Beach is owned by the Town of Little Compton and offers a variety of recreational opportunities for residents and visitors. It is a popular destination during the summer season for swimming, sunbathing, and playing in the sand. It is also a popular fishing spot in the spring and fall and is used at some level throughout the year for beachcombing, wildlife observation, and enjoyment of the sunsets. The selected viewpoint is located at the high tide line and is representative of the Shoreline Beach LSZ. Areas of the Shoreline Residential LSZ occur nearby. The existing view to the south-southeast from this location Includes small breaking waves and a couple swimmers in the foreground, backed by an unbroken expanse of calm open water that extends to the horizon. A small point of land interrupts the horizon on the far right. The color of the water transitions from white and light green in the surf zone to dark blue at the horizon. The sky is clear blue overhead, but transitions to white at the horizon, which presents strong contrast with the color of the ocean. Small but noticeable freighters dot the horizon line, interrupting the strong horizontal line between the light sky in the dark ocean. The view illustrated at this KOP represents the primary view experienced by visitors at this location. While recreational activities may shift the focus of the viewer elsewhere, this location will host a number of users that are focused on the view of the horizon and surrounding headlands.

Rating panel members indicated that this viewpoint offers a rather pristine and panoramic view of the open ocean. Rating panel scores for the existing conditions photograph(s) ranged from 11.3 to 16.7 (average = 13.7), which is consistent with the Retained scenic quality category applied to the Shoreline Beach LSZ as a whole.

Simulated View

Visibility of the SRWF in this area will be available along the shoreline beach and from open agricultural fields and wetlands which have minimal vegetative screening and back the shoreline. The viewshed analysis also indicated potential visibility from the surface and shorelines of Quicksand and Tunipus Ponds, located north of South Shore Beach. However, within these areas the viewshed analysis indicates also that WTG visibility will be limited to portions of the blades and nacelle due to the screening effects of curvature of the earth and the lack of elevated vantage points with a clear line of sight to the SRWF.

With the SRWF in place, the WTGs can be seen as a series of fine dark lines against the sky at the horizon. Due to their distance from the viewer (31.6 miles from the nearest proposed WTG), only the upper portions of the turbines can be seen, and they appear relatively small. Panel members indicated that the WTGs were *"barely noticeable at the horizon line"* and *"don't overwhelm the view".* Even the panel member indicating the highest degree of visual change noted that the WTGs are not dominant. However, panel members that assigned higher scores indicated that the number and expanse of turbines *"impacts the otherwise open uncluttered view",* with one panel member stating, *"the beach scene changes from one of recreation and open water to more industrial with an edge".* However, other panel members felt that the effects of distance minimized the Project's impact, with one member indicating that *"the blocky masses of the freighters remain equal or greater in visual density on the horizon in comparison to the wind turbines",* and that *"the viewing distance is far enough away that the foreground view to the rolling surf, children playing, and midground view to the ocean itself remain the most visually dominant elements within the view".*

Rating panel members had varying reactions the Facility's impact, with VIA scores ranging from 10 to 15.3 (average score = 12.1). These scores reflect an average reduction of 1.6 points in comparison to the existing view which indicates a reduction in scenic quality category from Retained to Partially Retained (see Table 3.2-91). Individual rating panel members indicated reductions that ranged from 0 to 4. With the SRWF in place, somewhat significant visual impacts are anticipated.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel members suggest that the WTGs result in minimal scale contrast with vegetation and are compatible with landform and vegetation. The WTGs result in moderate scale contrast with water resources, landform, land use, and user activity and were somewhat compatible with water resources, land use and user activity (see Table 3.2-92). Considering spatial dominance, panel members agree that the WTGs are subordinate to landform, and co-dominant to water resources, vegetation, land use, and user activity. The average rating panel VTL score for this KOP was a 2. This is consistent with the modest level of impact indicated by the majority of the rating panel. The SRWF will occupy approximately 0.18° or 0.3% of the viewer's vertical field of view. Of the available ocean horizon (75°), the SRWF, occupies approximately 39° or 52% (see Appendix C3).

Table 3.2-91 – Average Visual Impact Ratings – RI04

South Shore Beach						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	12.3	15.3	16.7	11.3	13.0	13.7
Proposed	12.3	15.3	12.7	10.3	10.0	12.1
Change	0.0	0.0	-4.0	-1.0	-3.0	-1.6

Table 3.2-92 – Average Visual Impact Ratings by Resource – RI04

South Shore Beach			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.9	1.9	1.9
Landform	1.2	1.6	1.3
Vegetation	1.2	1.4	1.5
Land Use	1.7	1.8	1.5
User Activity	1.9	1.8	1.5
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.36 RI06 Trustom Pond NWR

Existing View

This view is from the northern shore of Trustom Pond, within the Trustom Pond NWR in the Town of South Kingston, Rhode Island. The Trustom Pond NWR includes approximately 785 acres and Trustom Pond is the only undeveloped coastal salt pond in Rhode Island with its southern boundary (which is visible in the view), forming a barrier beach. This site is also near the Trustom Pond/Matunuck State Scenic Area, and the Trustom Pond National Wildlife Refuge Public Beach. The selected KOP is in the Salt Pond/Tidal Marsh LSZ. The existing view to the east-southeast from this location is dominated in the foreground by the frozen pond with its cracked and fissured ice surface. The pond's southern shore/barrier beach landmass dominates the middle ground of the view and draws distinction between the frozen pond and the open ocean on the horizon. The dark colored, backlit landmass contains stalk-like vegetation that is clearly visible. The sun is prominent in the view with strong reflections on both the open ocean water and the frozen pond. The sky in the background transitions from light blue overhead to white at the horizon, with a number of high clouds visible.

Rating panel members indicated that the view is serene and unique, in terms of both the frozen conditions and the barrier beach providing a contrast between the frozen pond surface and the open ocean water. Rating panel scores for the existing conditions photograph ranged from 10.7 to 15.3 (average = 13.2), which is consistent the Partially Retained category. This is inconsistent with the Retained category applied to the Salt Pond/Tidal Marsh LSZ as a whole. The lower baseline scenic quality from this KOP is likely due to the stark winter conditions and lack of visual interest illustrated in the selected photograph.

Simulated View

This KOP is representative of the views that are possible from the northern shore of Trustom Pond and from the agricultural fields to the east of the Trustom Pond NWR. Views from the shoreline south of Trustom Pond will have a similar view, but the foreground will be dominated by shoreline vegetation and topography

and views of the open ocean instead of the pond. Views further inland are limited to discrete areas, such as small clearings, due to significant screening from forest vegetation within the Trustom Pond NWR. Viewshed results indicate that, where views of the SRWF occur, visibility of the WTGs will be limited to the nacelle or above.

With the proposed SRWF in place, the upper portion of the WTGs' nacelles and rotors can be seen just above the horizon but are partly obscured by the landmass cutting through the middle of the view. Additionally, the WTGs rotor blades tend to blend in with the existing vegetation on the barrier beach. Due to their distance from the viewer (29.0 miles [46.7 km] from the nearest proposed WTG), and the interceding land mass in the middle ground, the turbines appear small and do not dominate the view. Panel members indicated that the WTGs were *"barely perceptible at the horizon"*, *"further obscured by the presence of the landform in the mid-ground"* and were *"almost imperceptible at this distance and in this lighting"*. A panel member who indicated the highest degree of visual change noted that the WTGs *"might be more noticeable on a fully clear day"* while also noting that the photo was taken in the winter and *"the turbines may be less visible in spring/summer when vegetation on the landform will likely be higher"*.

Rating panel members had somewhat varying reactions to the SRWF's impact, with VIA scores ranging from 10.3 to 15.0 (average score = 12.8). These scores reflect an average reduction of 0.4 point in comparison to the existing view, with individual rating panel members indicating reductions that ranged from 0.0 to 1.3. With the SRWF in place, the viewpoint remains Partially Retained (see Table 3.2-93), with negligible visual impact to both scenic quality and viewer enjoyment anticipated.

Considering the compatibility, scale, and spatial dominance factors that influenced the visual impact rating at this viewpoint, panel members noted that the WTGs result in minimal scale contrast and were compatible with water resources, landform, vegetation, land use and user activity (see Table 3.2-94). Considering spatial dominance, panel members suggest that the WTGs are subordinate to water resources, landform, vegetation, land use, and user activity. The average rating panel VTL score for this KOP is a 2, which is consistent with VIA scoring and rating panel comments. The SRWF will occupy approximately 0.2° or 0.4% of the viewer's vertical field of view. Of the available ocean horizon (104°), the SRWF, occupies approximately 27° or 26% (see Appendix C3).

Table 3.2-93 – Average Visual Impact Ratings – RI06

Trustom Pond National Wildlife Refuge						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	12.7	12.7	15.3	14.7	10.7	13.2
Proposed	12.7	12.7	15.0	13.3	10.3	12.8
Change	0.0	0.0	-0.3	-1.3	-0.3	-0.4

Table 3.2-94 – Average Visual Impact Ratings by Resource – RI06

Trustom Pond National Wildlife Refuge			
Resource	**Compatibility**	**Scale**	**Spatial Dominance**
Water Resources	1.1	1.1	1.1
Landform	1.0	1.1	1.0
Vegetation	1.0	1.0	1.0
Land Use	1.1	1.0	1.0
User Activity	1.1	1.0	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.37 RI08 Scarborough Beach

Existing View

This view is from the Scarborough State Beach along the mainland shore in Narragansett, Rhode Island. This site is also near the Great Thicket NWR and publicly accessible RI DEM Parks and Recreation Lands. The selected KOP is in the Shoreline Beach LSZ, and existing views to the south-southeast from this location are dominated in the foreground by a flat white sand beach populated by multiple beachgoers, multi-colored beach umbrellas, chairs, and tent shelters. The open ocean beyond the beach is actively being utilized by multiple vessels from sailboats to fishing boats and freighters. The sky in the background transitions from light blue overhead to white at the horizon, with areas of high clouds visible.

Rating panel members indicated that while the view offers a panoramic, open view of the ocean, it also captures a typical New England beach day, with the water as busy as the beach. Rating panel scores for the existing conditions photograph(s) ranged from 9.2 to 15.8 (average = 12.4), which is consistent with a Partially Retained seascape. The Shoreline Beach LSZ was categorized as Retained and the reduced level of scenic quality at this KOP is likely the result of discordant features on the ocean, including the large cargo freighter, fishing boats, and power yachts. This combined with the abundant human activity on the beach alter the typical sense of serenity along the shoreline, to a more heavily used seascape.

Simulated View

Areas of contiguous visibility of the SRWF around Scarborough Beach will be largely restricted to open beach and parking areas along Ocean Road (beach parking) and the south shore of Point Judith Neck. However, several roads that run perpendicular to the beach and align with the SRWF show some limited potential for discrete areas of visibility. Inland from these roads, large contiguous areas of potential visibility are eliminated by the first row of homes that run along portions of Ocean Road.

With the proposed SRWF in place a large number of small, yet visible turbines appear along the horizon. A significant portion of the individual WTGs will be obscured by curvature of the earth. Atmospheric conditions and distance (27.1 miles [43.6 km] from the nearest proposed WTG) also diminish the color contrast and perceived scale of the WTGs. Consequently, the WTGs appear small and do not dominate the view. However, as one panel noted member suggested the WTGs, although *"partially obscured due to curvature"* are *"visible and create a long line along the horizon"* which would *"add an industrial feel to the open beach environment", and "could become a distraction in this viewpoint".* Rating panel members who indicated the lowest degree of visual change noted that the activities in the foreground detracted from the view of the horizon and that one *"can barely discern turbines in haze at horizon. Will not be noticed by beachgoers."*

Rating panel members had varying reactions to the SRWF's impact, with VIA scores ranging from 7.0 to 13.5 (average score = 10.4). These scores reflect an average reduction of 2.0 points in comparison to the existing view, with individual rating panel members indicating reductions that ranged from 0.0 to 5.7 points. With the SRWF in place, the KOP is Modified (see Table 3.2-95). These rating panel scores suggest that somewhat significant visual impacts could result from the SRWF.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this viewpoint, panel members noted that the WTGs result in minimal scale contrast with landform, vegetation, and land use, but moderate to water resources and user activity (see Table 3.2-96). The WTGs were determined to be compatible with landform and vegetation, and somewhat compatible with water resources, land use, and user activity. Considering spatial dominance, panel members indicated that the WTGs are subordinate to the existing landform and vegetation, and co-dominant with water resources, land use, and user activity. The average rating panel VTL score for this KOP was a 2. This is consistent with

rating panel comments and scoring at this KOP. The SRWF will occupy approximately 0.27° or 0.5% of the viewer's vertical field of view and approximately 34° or 29% of the available ocean horizon (see Appendix C3).

Table 3.2-95 – Average Visual Impact Ratings – RI08

Scarborough State Beach						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	9.2	13.0	15.8	11.5	12.7	12.4
Proposed	8.8	13.0	13.5	9.8	7.0	10.4
Change	-0.3	0.0	-2.3	-1.7	-5.7	-2.0

Table 3.2-96 – Average Visual Impact Ratings by Resource – RI08

Scarborough State Beach			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.9	1.6	1.8
Landform	1.1	1.1	1.1
Vegetation	1.2	1.2	1.2
Land Use	1.7	1.4	1.5
User Activity	2.0	1.9	2.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.38 RI09 Narragansett Beach

Existing View

This view is from Narragansett Beach located in the Town of Narragansett, Rhode Island. This site is also near the Great Thicket NWR, and the Pettaquamscutt Cove/Narrow River. The beach is owned and operated by the Town of Narragansett and is nestled into a cove surrounded by developed and natural lands. It is bounded on the northeast by the Pettaquamscutt River and its outlet to the Atlantic Ocean. The northwest boundary is defined by Boston Neck Road, which is separated from the beach by a sidewalk and a variety of landscape treatments. The site's primary feature is a 1 mile-long (1.6 km) sandy beach, but it also includes a large parking area, multiple buildings (comfort stations), and recreation facilities. The selected viewpoint is located at the beach's midway point, south of the privately-owned Dunes Club, within the Shoreline Beach LSZ. The existing view to the south-southeast from this location is an open panorama of a groomed sandy beach extending toward the ocean with gentle waves breaking on the shore. Shipping and fishing boats are visible in the distance. Hazy, overcast conditions lend a grayish monochromatic expression to the sky, water, and land, rendering the horizon almost indistinguishable.

Rating panel members indicated that the view is simple and flat, depicting a typical beach scene on an overcast day. They noted that cargo ships, rather than the horizon itself, mark the location where the sky meets the ocean. Rating panel scores for the existing conditions photographs ranged from 10.5 to 15.5 (average=12.9), which indicates this view is in the Partially Retained category, which is not consistent with the Shoreline Beach LSZ which was categorized as Retained. The scenic quality associated with this KOP compared to the LSZ score is likely attributed to the relative lack of dynamic features in the view and the flat color presented in the photograph.

Simulated View

Visibility of the SRWF in this area will be largely restricted to the shoreline beach but extends inland across the mouth of Pettaquamscutt River where it connects with Narragansett Bay before breaking up into small discrete areas of potential visibility. While these discrete areas may provide glimpses of a portion of the SRWF, the views will be of short duration due to screening provided by intervening vegetation, structures, and topography.

With the proposed SRWF in place, the WTGs are barely visible on the horizon, appearing as thin gray strokes across most of the horizon. Due to their distance (29.7 miles [47.8 km] from the nearest WTG), the turbines appear small and do not dominate the view, though they may become more prominent under clearer conditions. Rating panel members indicated that the WTGs were obstructed by atmospheric conditions and the curvature of the earth; *"The hubs and blades are visible on a few structures, however, the horizon haze makes them nearly invisible… the proposed turbines are almost imperceptible."* Panel members with higher contrast ratings noted, *"The turbines are minimally visible, but may have more impact under clearer conditions."* But even in this instance it was noted that the turbines, *"… do not have significant impact to the viewer due to the great distance."*

Rating panel members had fairly consistent reactions the Facility's impact, with VIA scores ranging from 10.5 to 14.5 (average score = 12.6). These scores result in an average reduction of 0.3 point in comparison to the existing view which indicates that the KOP remains in the Partially Retained Category. Individual rating panel members indicated reductions that ranged from 0 to 1 point. With the SRWF in place negligible visual impacts are anticipated. These results are consistent with other KOPs illustrating higher contrast conditions, including Sachuest Point National Wildlife Refuge (AI05) and Wasque Point (MV11) both of which indicated negligible visual impacts. However, the nighttime view from Brenton Point State Park suggests that visibility of the active AWOLs, when conditions are clear could result in significant adverse visual impacts.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel members suggest that the WTGs would result in minimal scale contrast and were compatible with and subordinate to water resources, landform, vegetation, land use and user activity (see Table 3.2-98). The average rating panel VTL score associated with this KOP was a 1, which is consistent with rating panel scoring and comments. The SRWF will occupy approximately 0.22° or 0.4% of the viewer's vertical field of view and approximately 33° or 34% of the available ocean horizon (see Appendix C3).

Table 3.2-97 – Average Visual Impact Ratings – RI09

Narragansett Beach						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.5	13.7	15.5	12.5	12.3	12.9
Proposed	10.5	13.7	14.5	11.8	12.3	12.6
Change	0.0	0.0	-1.0	-0.7	0.0	-0.3

Table 3.2-98 – Average Visual Impact Ratings by Resource – RI09

Narragansett Beach			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.3	1.0	1.0
Landform	1.1	1.1	1.1
Vegetation	1.3	1.3	1.3
Land Use	1.0	1.0	1.0
User Activity	1.2	1.2	1.2
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.39 RI11 Matunuck Beach

Existing View

This view is from Matunuck Beach, located in the Town of South Kingstown, Rhode Island. This site is also near the Great Thicket National Wildlife Refuge and South Kingstown Town Beach. Matunuck Beach is on the south shore of Rhode Island along a stretch of shore popular amongst tourists and residents during the summer season. The shoreline features bars, restaurants, and rental properties to accommodate the summer tourism industry. The beach is managed by the Town of South Kingstown and includes approximately 1,300 linear feet of sandy beach as well as a seasonal pavilion with concession and comfort stations.

This KOP is located along a portion of the beach that is tightly backed by a low barrier wall with a sidewalk and roadway beyond. It is adjacent to the Ocean Mist Bar and Restaurant on Matunuck Beach Road and occurs within the Developed Waterfront, Shoreline Beach LSZs. A shoreline location for camper parking caps the beach to the west at which point the shoreline opens into a more natural sandy beach. While access to the beach is public there is no designated parking area and limited street parking available. This often limits users to those living or staying in proximity to the beach. The existing view to the southeast from this location overlooks a boulder-armored shoreline in the immediate foreground backed by an unbroken expanse of open ocean that extends to the horizon. Block Island and the BIWF can be seen faintly on the horizon at a distance of approximately 17.3 miles from the viewing location. The boulders and sand in the foreground are strongly front lit by the setting sun and have a warm hue and provides interesting textures and details. The water surface appears blueish grey, interrupted by distant breaking waves in the middle ground. The sky in the background transitions from light blue overhead to a darker blue grey at the horizon.

Rating panel scores for the existing conditions photograph(s) ranged from 10.2 to 15.2 (average = 13.1), which is consistent with the Partially Retained category. This rating is generally consistent with the Retained

category applied to the Shoreline Beach LSZ and Partially Retained category applied to the Developed Waterfront LSZ.

Simulated View

Viewshed analysis suggest that visibility of the SRWF in the vicinity of this KOP will be consistent along the shoreline and this KOP is representative of anticipated views. Narrow swaths of visibility extend up to 1 mile inland between breaks in dense shoreline development, but extent and duration in these views is much more limited. This occurs along portions of Matunuck Beach where visibility extends inland just past Cards Pond Road and into neighboring agricultural fields. In this area housing developments generally have a few small viewing opportunities along roads that are oriented toward the SRWF.

With the SRWF in place, the WTGs can be seen along the horizon spreading west from the headlands on the eastern side of this view. Due to their distance from the viewer (28.0 miles to the nearest proposed WTG), only the blade tips of WTGs on the eastern side of the view are visible above the horizon. Panning west, a cluster of WTGs are visible in which the nacelle and portions of the tower can be seen. Under overcast or more hazy conditions, or during midday hours, the WTGs would be more difficult to perceive. Panel members indicated that the WTGs are, "*not excessive in height… however, the color on the horizon is what captures the viewer's attention"* and that the *"large swells of surf visually compete with the turbines…"* However, another panel member noted *"it is difficult not to focus on the proposed turbines, even though there are other existing features in the view like the boulder, surfers, and waves."* Other panel members identified the WTGs as being at a *"significant distance, but the large quantity combined with the favorable lighting conditions makes their presence a focus,"* but also stating, *"it is likely that these turbines will be less visible much of the time."*

Rating panel members had varying reactions the Project's impact, with VIA scores ranging from 9.5 to 15.0 (average score = 11.8). These scores result in an average reduction of 1.3 points in comparison to the existing view which indicates that the KOP remains within the Partially Retained category. Individual rating panel members indicated reductions ranging from 0.0 to 2.7 points. These scores suggest that the SRWF will result in minimal adverse visual impact on scenic quality and viewer activity at this KOP.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings indicate that the WTGs result in minimal scale contrast with vegetation, but moderate scale contrast compared to water resources, landform, land use, and user activity (see Table 3.2-100). The rating panel indicated that the SRWF would be compatible with landform and vegetation, and somewhat compatible with water resources, land use, and user activity. Considering spatial dominance, panel ratings noted that the WTGs are subordinate to landform, vegetation, and land use, and co-dominant with water resources and user activity. The average rating panel VTL score for this KOP was a 4. This is somewhat consistent with rating panel scoring and comments. The SRWF will occupy approximately 0.27° or 0.5% of the viewer's vertical field of view. Of the available ocean horizon (110°), the SRWF, occupies approximately 28° or 25%. Three degrees of the SRWF occupation would occur over land (see Appendix C3).

Table 3.2-99 – Average Visual Impact Ratings – RI11

Matunuck Beach						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	10.2	15.0	15.2	12.2	13.2	13.1
Proposed	9.5	15.0	12.5	11.2	10.5	11.7
Change	-0.7	0.0	-2.7	-1.0	-2.7	-1.4

Table 3.2-100 – Average Visual Impact Ratings by Resource – RI11

Matunuck Beach			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	2.1	1.8	1.8
Landform	1.4	1.6	1.2
Vegetation	1.4	1.4	1.4
Land Use	1.6	1.6	1.4
User Activity	2.1	1.6	1.7
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.1.40 RI12 Ninigret National Wildlife Refuge

Existing View

This view is from the Ninigret NWR located in the Town of Charlestown, Rhode Island. This site is also in the vicinity of state-owned park and recreation lands, as well as Quonochontaug Pond and Ninigret Pond. The NWR totals approximately 900 acres and is situated on a retired Naval support landing facility and former farmland. It is managed by the USFWS, and provides year-round outdoor recreational opportunities for the public, including fishing, wildlife viewing, environmental education, and photography. The NWR includes comfort and parking facilities and accommodates hiking and kayaking opportunities along a vast network of coastal wetlands and ponds. The selected viewpoint is located on a walking trail that passes through the Coastal Scrub/Shrub LSZ to an overlook of Ninigret Pond. The trail is typically used by tourists and residents for bird watching and access to the pond. The existing view to the southeast from this location overlooks the open water of Ninigret Pond to the opposite shoreline, which appears as an irregular line of low vegetation. In order to obtain a view over open water, the photograph was taken slightly off-trail along the shoreline of Ninigret Pond. While this view is the most open and unobstructed view available within the network of trails, it is not representative of the views experienced by the majority of users (see Inset 3.2-10).

Inset 3.2-10 – Ninigret NWR KOP location context

The band of shoreline vegetation on the opposite shoreline of the pond forms the visible horizon line and blocks views of more distant landscape features, including the ocean. The early morning lighting and largely overcast sky conditions silhouette the dark shoreline against the lighter colored sky behind it. Both the water surface and much of the sky overhead appear dark due to heavy cloud cover. However, breaks in the clouds create bright areas in the sky and a silvery reflection on the water in the foreground.

Rating panel members indicated that the land mass of the far shoreline is the focal point in this view, with one panel member indicating that *"the view of the pond and associated vegetation is flattened by the lack of direct sunlight, therefore, the foreground, mid-ground and background sit lightly on top of each other".* The sensitivity score for the Coastal Scrub/Shrub LSZ was 14, which indicates a Retained seascape. Rating panel scores for the existing conditions photograph(s) ranged from 9.3 to 14.7 (average = 12.6), which is consistent with a Partially Retained categorization. The lower scores received by this viewpoint likely result from the lack of landscape variability and long-distance views, as well as the dark cloudy sky conditions.

Simulated View

Visibility of the SRWF in this area, due to the dense vegetated nature of the NWR, will be largely restricted to discrete areas of the Ninigret Pond shoreline. Similarly, areas with even the most concentrated visibility surrounding this KOP will view the turbines across vegetative screening and makes it difficult to distinguishing the WTGs from intervening vegetation on the horizon. These areas of visibility may extend approximately 200 feet inland before Project visibility dissipates entirely.

With the proposed SRWF in place, the proposed WTGs are almost imperceptible behind the vegetation on the opposite shoreline. In fact, most rating panel members indicated that they could not see the turbines in the simulation when following the viewing instructions. One panel member who saw the turbines described them as *"virtually invisible from this viewpoint due to the land and vegetation masses in the distance".* This suggests that even under clearer conditions, presence of the WTGs would have limited visibility and visual impact.

Rating panel members had a consisted reaction to the SRWF's impact, with VIA scores indicating no change in comparison to the existing view (i.e., all scores indicated a 0-point change). This score suggests negligible visual impacts would result from the SRWF.

Considering the scale, compatibility, and spatial dominance factors that influenced the visual impact rating at this KOP, panel ratings indicated that the WTGs result in minimal scale contrast, are compatible with, and subordinate to, water resources, landform, vegetation, land use and user activity (see Table 3.2-102). The average VTL score suggests that the Project visibility from this KOP is consistent with a VTL of 1. This is consistent with rating panel scoring and comments indicating a lack of WTG visibility. It also correlates with the fact that the SRWF will occupy approximately 0.13° or 0.2% of the viewer's vertical field of view and approximately 21° of the horizon, none of which is over the open ocean (see Appendix C3).

Table 3.2-101 – Average Visual Impact Ratings – RI12

Ninigret National Wildlife Refuge						
	KAC	RCS	JMG	NHR	SMB	Average
Existing	9.3	13.0	14.7	13.0	13.0	12.6
Proposed	9.3	13.0	14.7	13.0	13.0	12.6
Change	0.0	0.0	0.0	0.0	0.0	0.0

Table 3.2-102 – Average Visual Impact Ratings by Resource – RI12

Ninigret National Wildlife Refuge			
Resource	Compatibility	Scale	Spatial Dominance
Water Resources	1.0	1.0	1.0
Landform	1.0	1.0	1.0
Vegetation	1.0	1.0	1.0
Land Use	1.0	1.0	1.0
User Activity	1.0	1.0	1.0
	1 – Compatible 2 – Somewhat Compatible 3 – Not Compatible	1 – Minimal 2 – Moderate 3 – Severe	1 – Subordinate 2 – Co-Dominant 3 – Dominant

3.2.2 Evaluation of Potential Visual Impacts

As described in Section 2.2.5 and Table 2.2-6, the factors influencing visual impact include the baseline scenic quality of the existing view compared to the scenic quality of the view with the Project in place. The degree of change in comparison to the scenic quality category provide a basis to measure the significance of the visual impacts to each KOP. The KOPs selected for evaluation represent the most open views of the SRWF that will be available to the public within the VSA. Such open views are almost exclusively restricted to views from the water and shoreline locations with open, often expansive, views of the ocean. The simulations evaluated by the rating panel include a relatively narrow field of view (consistent with the 50 mm lens setting), and thus represent focused views of the Project from within the ZVI (see simulation viewing parameters in Section 2.2.4). The visual simulations typically represent the Project under very clear conditions and where possible, they also represent high contrast lighting conditions. Where high contrast lighting conditions were not represented, cross references to KOPs from similar distances and high-contrast lighting were provided. A summary of this cross referencing is provided in Appendix H. Considering these

factors, the evaluation of the Project's effect from these viewpoints represents a conservative assessment of potential visibility and visual impact. The simulations are described in detail in Section 3.2.3, along with an analysis of the rating panel results. These results are summarized in Table 3.2-103, below. The visual simulations are presented in Appendix C.

Table 3.2-103 – Visual Impact Assessment Rating Panel Results

ID	Key Observation Point	View Type	Rating Panel Member					Average	Scenic Quality	Visibility Threshold Level (Impact to Viewers)	Delta	Significance of Landscape, Seascape, Ocean Impact
			KAC	RCS	JMG	NHR	SMB					
LI01	Camp Hero State Park Overlook	Existing	10.7	14.7	15.7	14.7	15.7	14.3	Retained	1	-0.6	Negligible
		Proposed	10.3	14.3	14.7	13.7	15.7	13.7	Retained			
LI04	Montauk Point State Park	Existing	12.7	16.3	17.3	15.0	16.7	15.6	Retained	3	-1.3	Minimal
		Proposed	12.7	16.3	14.7	13.0	15.0	14.3	Retained			
LI04 NI	Montauk Point State Park - Nighttime	Existing	9.7	8.8	11.8	11.5	13.7	11.1	Partially Retained	4	-1.4	Somewhat Significant
		Proposed	9.3	8.8	9.0	10.2	11.3	9.7	Modified			
CI01	Cuttyhunk Island	Existing	14	13.7	13.3	16.7	14.7	14.5	Retained	4	-3.1	Significant
		Proposed	10.3	13.7	10.7	13.0	9.3	11.4	Partially Retained			
MM01	Gooseberry Island	Existing	15.0	13.3	12.7	13.3	15.0	13.9	Retained	2	-1.3	Minimal
		Proposed	13.3	13.3	11.7	13.3	11.0	12.5	Partially Retained			
MM04	Nobska Lighthouse	Existing	12.0	16.0	16.3	16.0	16.7	15.4	Retained	1	-0.1	Negligible
		Proposed	12.0	16.0	16.0	16.0	16.7	15.3	Retained			
MM06	Demarest Lloyd State Park	Existing	11.0	15.0	16.7	14.3	12.3	13.9	Retained	2	-0.3	Negligible
		Proposed	11.0	15.0	15.7	13.3	12.7	13.5	Retained			
MM07	Fort Taber District	Existing	10.7	14.7	17.3	13.7	14.3	14.1	Retained	1	-0.1	Negligible
		Proposed	10.7	14.7	17.0	13.7	14.3	14.1	Retained			
MV02	Philbin Beach	Existing	10.5	15.3	15.8	14.8	14.5	14.2	Retained	3	-2	Somewhat Significant
		Proposed	9.8	15.3	12.2	13.5	10.2	12.2	Partially Retained			
MV03	Lucy Vincent Beach	Existing	13.3	15.7	16	17	17	15.8	Retained	4	-2	Minimal
		Proposed	12.7	15.7	11.3	14	15.3	13.8	Retained			
MV03 SS	Lucy Vincent Beach - Sunset	Existing	13.3	15.7	16	17	17	15.8	Retained	5	-3.5	Significant
		Proposed	12.3	15.7	8.3	12.7	12.3	12.3	Partially Retained			

ID	Key Observation Point	View Type	Rating Panel Member					Average	Scenic Quality	Visibility Threshold Level (Impact to Viewers)	Delta	Significance of Landscape, Seascape, Ocean Impact
			KAC	RCS	JMG	NHR	SMB					
MV05	Moshup Beach	Existing	13.3	15.7	15.3	16	16.3	15.3	Retained	5	-3.3	Significant
		Proposed	11.7	15.7	9.3	13	10.3	12	Partially Retained			
MV07	Aquinnah Overlook	Existing	14	15.3	16	16.7	16.7	15.7	Retained	4	-1.9	Minimal
		Proposed	12.7	15.3	13.7	13.3	14.3	13.9	Retained			
MV07 SS	Aquinnah Overlook - Sunset	Existing	14	15.3	16	16.7	16.7	15.7	Retained	5	-3.5	Significant
		Proposed	12.7	15.3	9.3	12.7	11.3	12.3	Partially Retained			
MV07 NI	Aquinnah Overlook - Nighttime	Existing	11.8	10.2	13.8	12.5	10.7	11.8	Partially Retained	4	-3.0	Significant
		Proposed	9.2	10.2	7	10.5	7.3	8.8	Modified			
MV09	Gay Head Lighthouse	Existing	12.7	14.7	17.3	15.7	16	15.3	Retained	2	-1.7	Minimal
		Proposed	12.3	14.7	11.7	13.3	16	13.6	Retained			
MV09 SS	Gay Head Lighthouse - Sunset	Existing	12.7	14.7	17.3	15.7	16	15.3	Retained	5	-4.3	Significant
		Proposed	12.3	14.7	7	12.7	8.3	11	Partially Retained			
MV10	South Beach State Park	Existing	11.2	15.7	15.2	14.2	13.2	13.9	Retained	3	-2.0	Somewhat Significant
		Proposed	9.8	15.7	10.5	12.5	10.8	11.9	Partially Retained			
MV11	Wasque Point	Existing	12.5	13.3	15.2	14.8	13.8	13.9	Retained	3	-1.3	Minimal
		Proposed	11.8	13.3	12.2	13.5	12.2	12.6	Partially Retained			
MV12	Peaked Hill	Existing	11.7	13.0	12.7	15.0	11.7	12.8	Partially Retained	2	-0.8	Negligible
		Proposed	11.7	13.0	12.0	14.0	9.3	12	Partially Retained			
MV12 SS	Peaked Hill - Sunset	Existing	11.7	13.0	12.7	15	11.7	12.8	Partially Retained	5	-2.7	Significant
		Proposed	11.0	13.0	7.0	13.0	6.7	10.1	Modified			
MV13	Edwin D Vanderhoop	Existing	14.3	16.3	17.0	16.7	16.7	16.2	Retained	4	-3.3	Significant
		Proposed	13.3	16.3	11.7	11.7	11.3	12.9	Partially Retained			

ID	Key Observation Point	View Type	Rating Panel Member					Average	Scenic Quality	Visibility Threshold Level (Impact to Viewers)	Delta	Significance of Landscape, Seascape, Ocean Impact
			KAC	RCS	JMG	NHR	SMB					
NI10	Madaket Beach	Existing	10.8	14.7	15.8	14.5	13.0	13.8	Retained	1	-0.4	Negligible
		Proposed	10.8	14.7	14.8	13.5	13.0	13.4	Partially Retained			
NI10 CL	Madaket Beach – Clear Conditions	Existing	10.8	14.7	15.8	14.5	13.0	13.8	Retained	1	-0.5	Minimal
		Proposed	10.8	14.7	14.5	13.5	13.0	13.3	Partially Retained			
NL01	Nomans Land Island	Existing	11.3	13.3	16.7	16.0	16.7	14.8	Retained	4	-4.2	Significant
		Proposed	11.0	13.3	8.7	11.0	9.0	10.6	Partially Retained			
AI01	Brenton Point State Park	Existing	10.7	14.7	16.3	13.3	14.0	13.8	Retained	1	-0.4	Negligible
		Proposed	10.3	14.0	15.3	13.3	14.0	13.5	Retained			
AI01 NI	Brenton Point State Park - Nighttime	Existing	11.2	9.5	14.3	10.8	13	11.8	Partially Retained	3	-2.8	Significant
		Proposed	8.5	9.5	10.3	10.3	6.0	8.9	Modified			
AI03	Newport Cliff Walk	Existing	11.8	15.7	16.5	13.8	11.3	13.8	Retained	2	-1.1	Minimal
		Proposed	10.2	15.7	14.5	12.2	11.2	12.7	Partially Retained			
AI05	Sachuest Point National Wildlife Refuge	Existing	11.7	13	14.3	15	12.3	13.3	Partially Retained	3	-1.1	Negligible
		Proposed	10.7	13	12.7	12.7	11.7	12.1	Partially Retained			
AI06	Sachuest Beach (Second)	Existing	9.8	14.3	16.7	13.0	12.7	13.3	Partially Retained	1	-0.1	Negligible
		Proposed	9.8	14.3	16	13.0	12.7	13.2	Partially Retained			
AI07	Hanging Rock	Existing	12.3	12.7	11.7	12.0	12	12.1	Partially Retained	2	-0.5	Negligible
		Proposed	11.0	12.7	11.3	12.0	11.3	11.7	Partially Retained			
AI09	Easton's Beach	Existing	10.5	16.0	15.5	14.7	11.7	13.7	Retained	1	-0.2	Negligible
		Proposed	10.5	16.0	15.2	14.0	11.7	13.5	Retained			

ID	Key Observation Point	View Type	Rating Panel Member					Average	Scenic Quality	Visibility Threshold Level (Impact to Viewers)	Delta	Significance of Landscape, Seascape, Ocean Impact
			KAC	RCS	JMG	NHR	SMB					
BI02	Great Salt Pond	Existing	10.7	13.3	14.0	11.7	11.2	12.2	Partially Retained	1	0	Negligible
		Proposed	10.7	13.3	14.0	11.7	11.2	12.2	Partially Retained			
BI04	Southeast Lighthouse	Existing	13.0	15.0	16.0	15.0	13.0	14.4	Retained	4	-2.3	Somewhat Significant
		Proposed	12.0	15	13.7	13.0	7.0	12.1	Partially Retained			
BI04 SR	Southeast Lighthouse - Sunrise	Existing	13.0	15.0	16.0	15.0	13.0	14.4	Retained	6	-3.5	Significant
		Proposed	12.0	15.0	9.3	12.3	6.0	10.9	Partially Retained			
BI04 NI	Southeast Lighthouse - Nighttime	Existing	11.3	9.0	13.0	11.8	12.0	11.4	Partially Retained	4	-3.4	Significant
		Proposed	8.8	9.0	8.0	9.8	4.3	8.0	Modified			
BI06	New Shoreham Beach	Existing	11.2	14.0	13.7	14.7	13.3	13.4	Partially Retained	4	-1.2	Negligible
		Proposed	10.5	14.0	12.3	12.3	11.7	12.2	Partially Retained			
BI08	Fred Benson Beach	Existing	10.8	14.3	15.2	12.8	12.7	13.2	Partially Retained	2	-0.6	Negligible
		Proposed	10.2	14.3	12.8	12.8	12.7	12.6	Partially Retained			
BI12	Clayhead Trail	Existing	12.7	13.7	16.3	17.3	15.0	15.0	Retained	4	-3.5	Significant
		Proposed	11.0	13.7	12.0	11.3	9.3	11.5	Partially Retained			
BI16	Mohegan Bluffs	Existing	13.2	15.7	13.5	14.2	11.5	13.6	Retained	4	-1.7	Somewhat Significant
		Proposed	11.2	15.7	10.5	11.5	10.8	11.9	Partially Retained			
C01	Beavertail Lighthouse	Existing	10.8	15.7	15.8	14.5	15.5	14.5	Retained	1	-0.4	Negligible
		Proposed	10.5	15.7	14.2	14.5	15.5	14.1	Retained			
RI01	Watch Hill Lighthouse	Existing	11.7	13.3	16.0	15.0	13.7	13.9	Retained	1	0	Negligible
		Proposed	11.7	13.3	16.0	15.0	13.7	13.9	Retained			
RI02	Weekapaug Breechway	Existing	10	13.3	16	15.3	11.8	13.3	Partially Retained	1	-0.3	Negligible

ID	Key Observation Point	View Type	Rating Panel Member					Average	Scenic Quality	Visibility Threshold Level (Impact to Viewers)	Delta	Significance of Landscape, Seascape, Ocean Impact
			KAC	RCS	JMG	NHR	SMB					
		Proposed	10	13.3	15.3	14.3	11.8	13	Partially Retained			
RI03	Point Judith Lighthouse	Existing	12.7	15.3	16.7	12.3	15	14.4	Retained	4	-2.2	Somewhat Significant
		Proposed	11.7	15.3	11.3	11.3	11.3	12.2	Partially Retained			
RI04	South Shore Beach	Existing	12.3	15.3	16.7	11.3	13	13.7	Retained	2	-1.6	Somewhat Significant
		Proposed	12.3	15.3	12.7	10.3	10	12.1	Partially Retained			
RI06	Trustom Pond NWR	Existing	12.7	12.7	15.3	14.7	10.7	13.2	Partially Retained	2	-0.4	Negligible
		Proposed	12.7	12.7	15	13.3	10.3	12.8	Partially Retained			
RI08	Scarborough Beach	Existing	9.2	13	15.8	11.5	12.7	12.4	Partially Retained	2	-2.0	Somewhat Significant
		Proposed	8.8	13	13.5	9.8	7	10.4	Modified			
RI09	Narragansett Beach	Existing	10.5	13.7	15.5	12.5	12.3	12.9	Partially Retained	1	-0.3	Negligible
		Proposed	10.5	13.7	14.5	11.8	12.3	12.6	Partially Retained			
RI11	Matunuck Beach	Existing	10.2	15	15.2	12.2	13.2	13.1	Partially Retained	4	-1.4	Minimal
		Proposed	9.5	15	12.5	11.2	10.5	11.7	Partially Retained			
RI12	Ninigret National Wildlife Refuge	Existing	9.3	13	14.7	13	13	12.6	Partially Retained	1	0	Negligible
		Proposed	9.3	13	14.7	13	13	12.6	Partially Retained			

As shown in Table 3.2-103, The SRWF could result in significant adverse visual impacts at 11 KOPs. These KOPs range in distance from 15.6 mi (25.1km) from the SRWF at Nomans Land Island (NL01) to 28.9 mi (46.6 km) at Brenton Point State Park (AI01) and averaged approximately 21.2 mi (34 km) from the SRWF. The KOPs that received ratings resulting in significant adverse visual impacts include six locations on Martha's Vineyard, two locations on Block Island, one KOP on Cuttyhunk Island, one KOP on Nomans Land Island, and one KOP on Aquidneck Island. Five of these KOPs specifically represent a worst case lighting conditions at either sunset or sunrise, and three of these KOPs represent nighttime conditions.

At 25.8 mi (41.6 km), Cuttyhunk Island (CI01) represents the most distant daytime KOP from the SRWF to receive significant adverse visual impacts. This south facing view represents an early afternoon winter condition, in which atmospheric conditions are strikingly clear, and the sun is low in the sky due to the time of year. Under these conditions the WTGs present a strong color contrast with the light blue horizon. Due to the elevated viewer position the full extent of the SRWF is visible as are the majority of the individual turbines. From this location, the conditions illustrated in the visual simulation represent worst-case visibility of the SRWF. During the summer, it is anticipated that the color contrast will be substantially reduced due to the higher position of the sun in the sky and increased atmospheric perspective.

Six of the 11 KOPs that could experience significant adverse visual impacts are located on Martha's Vineyard including Peaked Hill (MV12) during sunset, Lucy Vincent Beach (MV03) during sunset, Moshup Beach (MV05), Aquinnah Overlook (MV07) during nighttime and sunset, Gayhead Lighthouse (MV09) during sunset, and Edwin D. Vanderhoop House (Aquinnah Cultural Center [MV13]). All six of these KOPs are located between 21.0 miles (33.8 km) and 22.9 miles (36.9 km) from the SRWF. Each of these KOPs have a simulation or rendering presenting high contrast lighting conditions that would only occur when the turbines are strongly front lit or backlit. Generally, this condition occurs during the early morning, and late afternoon, given the southwesterly views of the SRWF from Martha's Vineyard. During typical summer conditions present between 10 am and 2 pm, when the majority of users will be present at these locations, contrast of the turbines with the sky in the background will likely be substantially reduced due to the lack of hard shadows and direct lighting. This is supported by two simulations presenting low contrast lighting conditions from Aquinnah Overlook (MV07), and Gay Head Lighthouse (MV09) taken during typical, clear daytime conditions. During these more typical conditions with the SRWF in place, the rating panel scores resulted in minimal visual impacts. However, during the summer months, sunsets are an important tourism draw and during clear conditions, dozens of people can be found at Aquinnah Overlook (MV07) waiting for the sun to disappear behind the horizon. During the summer months, the SRWF will not be coincident with the setting sun, but for casual viewers the SRWF is likely to draw their attention, at least momentarily. In addition to the lighting conditions, it is important to note that the level of visual contrast will be significantly influenced by atmospheric and weather conditions. Further discussion on the influence of atmospheric conditions is presented in Section 3.2.5.

Nighttime views of the SRWF from Aquinnah Overlook (MV07), Brenton Point State Park (AI01), and Southeast Light (BI04) resulted in significant adverse visual impacts. These views range in distance from 16.9 mi (27.2 km) and 28.9 mi (46.6 km) suggesting that significant nighttime visual impacts may occur over a greater distance than under daytime conditions. Each of these views depict particularly dark skies over the water and the flashing AWOLs affect the sense of a pristine, undeveloped seascape. Nighttime conditions were only depicted during very clear nights so any degree of atmospheric moisture (fog, precipitation) will likely serve to reduce the potential visibility and visual impact. In addition to the mitigating factors associated with atmospheric perspective, the SRWF is also considering mitigation technology that would essentially eliminate visibility of the AWOLs except when aircraft are nearby, which totals about one hour and 21 minutes of a given year. This mitigation would nearly eliminate the potential for nighttime impacts for all but the most elevated positions, from which the lower intensity USCG navigation lighting could still be somewhat visible on clear nights.

The SRWF resulted in somewhat significant visual impacts at seven daytime KOPs and one nighttime KOP. These KOPs range in distance from 16.9 mi (27 km) at Southeast Lighthouse (BI04) to 37.1 mi (44 km) at Scarborough Beach (RI08) and averaged approximately 25.9 mi (42 km). This is 4.7 mi (8 km) more than the average distance of the KOPs with significant adverse visual impacts. One of these KOPs, Southeast Light (BI04) also received significant adverse visual impacts during sunrise conditions (described above). This further demonstrates the range and variability of potential visual impacts depending on the position of the sun relative to the WTGs. However, the KOP from Mohegan Bluffs (BI16) represents a clear, midday condition with high white clouds that extend to the horizon. At a distance of 17.2 mi (28 km) the nearly backlit WTGs present significant color contrast with the white horizon. A nearby view from New Shoreham Beach (BI06) illustrates clear, blue skies extending to the horizon. Taken just 50 minutes later in the day (on different days), the WTG present negligible visual impacts. This demonstrates that visibility of the SRWF will be influenced by a number of factors that can change throughout the day.

Three of the KOPs that could experience somewhat significant visual impacts are located on the Rhode Island mainland. Scarborough Beach (37.1 mi [60 km] from the nearest WTG) illustrates a view in which soft white clouds extend to the ocean horizon. In this view, due to the southern exposure, the WTGs are heavily backlit, making them appear dark on the horizon. This condition is typically accompanied by a relatively heavy summer haze which was not fully applied to the Project in the simulated view. The presence of this haze can be confirmed by observing a large freighter on the horizon at a distance of 9.9 miles from the viewer (confirmed using the Automatic Identification System). This 200 foot-long vessel appears as a large grey blot in the image due to the effects of atmospheric haze. While minimal haze was applied to the WTGs in the visual simulations (see Section 2.2.4), it is likely that visibility of the WTGs would be significantly reduced under the conditions illustrated in this view. However, high contrast conditions could occur at this location, as demonstrated in the KOP from South Shore Beach in Little Compton (RI04). In this view, substantial portions of the WTG are screened by curvature of the earth due to their distance from the viewer (31.6 mi [51 km] from the nearest WTG), but the strong backlighting of the WTGs against a light blue sky increases their visibility and visual contrast. It should be noted for both of these KOPs that visibility of small portions of the WTGs at such distances would be substantially diminished by any degree of atmospheric perspective. The frequency of long distance visibility is discussed in Section 3.2.4. The closest Rhode Island mainland view that received a somewhat significant impact determination, Point Judith Lighthouse (RI03) is located 25.7 mi (41.4 km) from the SRWF and represents another high contrast backlit condition. Although a substantial portion of the most distant turbines is screened by curvature of the earth, the nacelles and towers of the closest turbines appear prominent on the horizon. It is anticipated that common, reoccurring atmospheric conditions would substantially diminish visibility from this KOP, but on more rare, pristine days such as the one illustrated in the visual simulation, viewers will notice the WTGs forming the backdrop to the Lighthouse, which appears just out of frame in the simulation. The lighthouse is still expected to remain the focal point, but the turbines could attract attention due to their contrast and movement.

On Martha's Vineyard, the view from South Beach State Park (MV10) illustrates the SRWF in front-lit conditions at a distance of 27.1 mi (44 km) on a very clear day in which the dark blue sky extends to the horizon. This condition results in increased color contrast that would only be experienced looking west during early morning hours. Increased contrast could also be experienced during sunset when the turbines are backlit. However, given the distance of this KOP from the SRWF, any degree of atmospheric haze, neutral lighting, or even significant wave action could completely obscure the turbines from view. Of note at this KOP, greater than half of the WTG nacelles are screened by curvature of the earth and an additional 11 turbines are screened by curvature of the earth. As such, the theoretical horizon occupation of 27° would be substantially reduced if the most distant turbine blades are obscured by atmospheric perspective.

Philbin Beach, also located on Martha's Vineyard and situated approximately 21.0 mi (34 km) from the SRWF, illustrates the WTGs in a strongly side lit condition. This condition results in the WTGs having

relatively low contrast in comparison to the blue background sky. This KOP was photographed during a summer afternoon and illustrates a relatively low contrast lighting condition. Moshup Beach (MV05), located just 0.3 miles to the north was photographed during morning winter conditions and illustrates the WTGs in a morning backlit condition which results in higher color contrast with the background sky. As such, the SRWF resulted in significant adverse visual impacts from Moshup Beach. It is also reasonable to conclude that these conditions could occur at Philbin Beach during clear winter mornings.

One nighttime view received rating panel scores that indicated a somewhat significant visual impact. Montauk Point State Park (LI04) features a view of the WTGs at night from a distance of 30.6 mi (49 km). This view is nearing the limit of AWOL visibility due to the effects of curvature of the earth and less that half of the lights are actually visible from this KOP. The remaining lights occupy a portion of sky that lacks any existing light, resulting in the infill of a relatively narrow ocean view framed by the lighthouse and lights from Block Island and the BIWF. It is anticipated that at this distance, atmospheric diminishment would substantially decrease the contrast presented by the AWOLs. In addition to the mitigating factors associated with atmospheric perspective, the SRWF is also considering mitigation technology that would essentially eliminate visibility of the AWOLs during all but one hour and 21 minutes of a given year. This mitigation would nearly eliminate the potential for nighttime impacts for all but the most elevated positions, from which the lower intensity USCG navigation lighting could still be somewhat visible on clear nights.

KOPs that received impact ratings indicating minimal visual impacts ranged in distance from 21.5 mi (34.7 km) to 37 mi (59 km) from the nearest SRWF turbine (average 28.0 mi [32 km]). These include three KOPs on Martha's Vineyard all of which included accompanying sunset and nighttime views that resulted in significant adverse visual impacts. These include Aquinnah Overlook (MV07), Gay Head Lighthouse (MV09), and Lucy Vincent Beach (MV03). As discussed previously, these KOPs demonstrate that variability in lighting and atmospheric conditions throughout the day will likely result in highly variable impacts. However, Madaket Beach (NI10), Gooseberry Island (MM01), Montauk Point State Park (LI04) and East Matunuck State Beach (RI11) are all greater than 30 mi (35 km) from the SRWF and close to the distance at which impacts are expected to diminish completely. For these KOPs it is anticipated that any atmospheric perspective would be effective at reducing the visibility and the visual contrast almost completely.

As shown in Table 3.2-103, The SRWF could result in negligible visual impacts at 20 KOPs. These KOPs ranged in distance from 17.8 mi (28.7 km) from the SRWF at New Shoreham Beach (BI06) to 37.8 mi (60.8 km) at Fort Taber (MM07) and averaged approximately 29.5 mi (47 km) from the SRWF. Three views on Block Island received rating scores that resulted in a negligible visual impacts. The view from New Shoreham Beach (BI06) represents a beach level view at the base of the Mohegan Bluffs. Fred Benson Beach (BI08) is located on the eastern shore of Block Island and Great Salt Pond (BI02) is located inland from the western shore of the island. The SRWF is primarily screened from view at BI02 and therefore variable impacts throughout the day are not anticipated. However, considering BI06 and BI08, it is anticipated that variable lighting could result in a greater degree of visual impacts. Five additional simulations from three KOPs on Block Island which illustrate variable lighting conditions, including nighttime. These KOPs could experience somewhat significant to significant adverse visual impacts depending on the degree of visibility and visual contrast. Additionally, elevated views received ratings that resulted in greater significance of impacts. Considering these factors, it is reasonable to conclude that KOPs with full visibility of the SRWF from Block Island would experience a broad range of impacts throughout the day and night based on sun position, atmospheric perspective, and viewer position. For most locations on Block Island with coastal views, sunrise will present the highest contrast conditions due to the back lighting of the turbines against the light horizon. Other than Nomans Land Island, Block Island represents the closest available land-based views of the SRWF. As such, the visual impacts will range from negligible (during low contrast conditions such as late morning through early afternoon) to significant during nighttime and sunrise.

The SRWF resulted in negligible visual impacts at Peaked Hill (MV12) on Martha's Vineyard. In this view, the turbines are somewhat obscured by atmospheric perspective, resulting in low color contrast conditions. A sunset view from this same location received impact ratings indicating significant adverse visual impacts. MV12 is 22.9 mi (36.9 km) from the SRWF and provides a significantly elevated view of the ocean which minimizes the effects of curvature of the earth. At times, when the full array of WTGs is visible, it could occupy up to 39° of the ocean horizon. Therefore, it is anticipated that visibility and visual impact from this location will be highly variable, but the greatest potential impacts will occur during clear sunsets.

More distant views such as Fort Taber District (MM07), Watch Hill Lighthouse (RI01), Madaket Beach (NI01), and Weekapaug Breechway (RI02) range in distance from 33.0 mi (53.1 km) to 37.8 mi (60.8 km) from the SRWF. These KOPs are nearing the limit of potential visual impact due to the screening effects of curvature of the earth as well as the limits of human visual acuity. However, exceptions occurred at Scarborough Beach (RI08), and Madaket Beach during extremely clear conditions (NI01) which received ratings indicating somewhat significant and minimal impacts, respectively. While certain, rare atmospheric events may increase the visibility of the WTGs, generally, negligible impacts are expected for KOPs occurring greater than 32 miles from the Project during typical conditions during the day.

Several KOPs,, including Nobska Lighthouse (MM04), Demarest Lloyd State Park (MM06), and Ninigret National Wildlife Refuge (RI12), which are located between 28.0 mi (45 km) and 34.7 mi (55.9 km) from the SRWF, received rating scores indicating negligible visual impacts due primarily to physical screening of the WTGs by topography, structures, and/or vegetation resulted in minimal visibility of the SRWF. Great Salt Pond (BI02) on Block Island and located just 20.1 mi (32.4 km) from the Project, is also included in this category of KOPs. These views begin to demonstrate the character of inland views, just beyond the more open coastal views represented by the majority of KOPs included in the VIA. In these instances, given the viewing distance, even partial screening by vegetation or topography can substantially limit the visibility of the WTGs and result in negligible visual impacts.

3.2.3 Visibility Threshold Level

VTL scores assist in defining the potential impacts experienced by viewers in at the KOPs. The VTL results suggest a similar pattern to the visual impact results. However, it is important to note that visibility threshold levels do not directly correspond or relate to magnitude of visual change levels in every instance. Generally, lower visual impact rating scores (i.e., greater magnitude of change as determined by the rating panel evaluation) will corelate with increased VTL. However, instances do arise in which a highly visible feature can have a minimal impact if the resource has a relatively low scenic quality baseline or substantially low accessibility. Conversely, a view with high scenic quality and minimal VTL, may experience elevated visual impacts due to the sensitivity of that resource.

One KOP at the Southeast Light (BI04) received a VTL of 6 during sunrise conditions as a result of proximity to the SRWF (16.9 miles [27.2 km] from the nearest proposed WTG) and high contrast lighting conditions. VTL 6 suggests, "*An object/phenomenon with strong visual contrasts that is so large that it occupies most of the visual field, and views of it cannot be avoided except by turning one's head more than 45 degrees from a direct view of the object. The object/phenomenon is the major focus of visual attention, and its large apparent size is a major factor in its view dominance. In addition to size, contrasts in form, line, color, and texture, bright light sources and moving objects associated with the study subject may contribute substantially to drawing viewer attention. The visual prominence of the study subject detracts noticeably from views of other landscape/seascape elements* (Sullivan et al., 2013).

Five of the KOPs were assigned a VTL of 5 which suggests that *An object/phenomenon that is not large but contrasts with the surrounding landscape elements so strongly that it is a major focus of visual attention, drawing viewer attention immediately and tending to hold that attention. In addition to strong contrasts in*

form, line, color, and texture, bright light sources such as lighting and reflections and moving objects associated with the study subject may contribute substantially to drawing viewer attention. The visual prominence of the study subject interferes noticeably with views of nearby landscape/seascape elements" (Sullivan et al., 2013). These KOPs range in distance from 22.0 miles (35.4 km) to 22.9 miles (36.9 km) from the SRWF, and averaged 21.8 miles (35.1 km) from the nearest SRWF WTG. These KOPs generally illustrated high contrast conditions, including one backlit KOP at Moshup Beach and four sunset conditions from Martha's Vineyard (See Inset 3.2-1).

Fourteen of the KOPs were assigned a VTL of 4 which suggests that "*An object/phenomenon that is obvious and with sufficient size or contrast to compete with other landscape/seascape elements, but with insufficient visual contrast to strongly attract visual attention and insufficient size to occupy most of an observer's visual field"* (Sullivan et al., 2013). These KOPs range in distance from 15.6 miles (25.1 km) to 30.6 miles (49.2 km) and averaged 21.5 miles (34.6 km) from the nearest SRWF WTG. Three of these KOPs illustrate nighttime conditions (from Aquinnah Overlook, Southeast Lighthouse, and Montauk Point State Park). The remaining KOPs occur on Block Island, Martha's Vineyard, Cuttyhunk Island, and mainland Rhode Island and generally illustrate the SRWF under high-contrast conditions (See Inset 3.2-1).

The SRWF resulted in a VTL of 3 at six KOPs, ranging in distance from 21.0 miles (33.8 km) to 30.6 miles (49.2 km) and averaging approximately 27.8 miles (44.7 km) from the nearest SRWF WTG. Views with a VTL 3 include "*An object/phenomenon that can be easily detected after a brief look and would be visible to most casual observers, but without sufficient size or contrast to compete with major landscape/seascape elements"* (Sullivan et al., 2013). The KOPs that received a VTL of 3 occur primarily on Martha's Vineyard, and more distant locations on Aquidneck Island and Long Island (See Inset 3.2-1 above).

The 10 KOPs that were assigned a VTL of 2 range in distance from 19.0 miles (30.6 km) to 33.1 miles (53.3 km) from the SRWF. The average distance of these KOPs from the SRWF was 27.5 miles (44.3 km), and included KOPs on Aquidneck Island, Block Island, Martha's Vineyard, mainland Massachusetts, and mainland Rhode Island (See Inset 3.2-1). Views with a VTL of 2 include "*An object/phenomenon that is very small and/or faint, but when the observer is scanning the horizon or looking more closely at an area, can be detected without extended viewing. It could sometimes be noticed by casual observers; however, most people would not notice it without some active looking"* (Sullivan et al., 2013).

The 14 KOPs that received a VTL of 1 range in distance from 20.1 (32.3 km) to 37.8 (60.8 km) and averaged 31.9 miles (51.3 km) from the nearest SRWF WTG. The closest of these KOPs is Great Salt Pond which is 20.1 miles (32.3 km) from the nearest SRWF WTG. Views with a VTL of 1 include "*An object/phenomenon that is near the extreme limit of visibility. It could not be seen by a person who was unaware of it in advance and looking for it. Even under those circumstances, the object can be seen only after looking at it closely for an extended period regardless of high contrast visibility"* (Sullivan et al., 2013). These KOPs occur on Block Island, Aquidneck Island, Conanicut Island, Nantucket Island, long Island, mainland Massachusetts, and mainland Rhode Island.

3.2.4 Other Factors Affecting Project Visibility and Visual Impact

As discussed in Section 3.2.3, the SRWF could result in adverse visual impact to several onshore visual resources as a result of scale contrast, spatial dominance, and incompatibility with existing element of the landscape/seascape, which remain largely undeveloped and free of visual clutter. However, it is important to note that the majority of the visual simulations that received high magnitude of change scores were photographed during exceptionally clear conditions and were also backlit by the sun, making the WTGs appear dark against a light, cloudless horizon. While the simulations generally illustrate minimal atmospheric haze and screening, actual SRWF visibility will be limited by several other factors not

specifically addressed in the visibility analyses conducted as part of this VIA. As mentioned previously, these include weather conditions, waves on the ocean surface, humidity, and air pollution.

A study completed by BOEM in 2014 (Wood et. al., 2014) evaluated atmospheric limitations to visibility at distances of 10, 20 and 30 nautical miles (nm) using the observed visibility out to 10 miles and a relational algorithm based on relative humidity. Considering daytime visibility, this study calculated the number of days per season/year during which visibility exceeded 10, 20 and 30 nm at least 50 percent and 75 percent of the daylight hours. Considering the 50 percent threshold (50 percent of the observations confirmed visibility at a given distance), data from Newport, Rhode Island suggest that daytime visibility to 20 nm (23.0 miles, 37.0 km) would occur over approximately 112 days per year (31 percent of the year). Using the same 50 percent threshold, visibility to 30 nm (34.5 miles, 55.6 km) would occur during daylight hours over approximately 29 days of a given year (7.9 percent of the year). The average summertime visibility associated with this meteorological station was reported to be 11 nm (12.7 miles, 20.4 km) and the average annual visibility extends to 15 nm (17.3 miles, 27.8 km). Given the typical atmospheric conditions associated with KOPs at Brenton Point State Park, Newport Cliff Walk, Sachuest Point National Wildlife Refuge, Sachuest Beach (Second), Hanging Rock, and Easton's Beach, which all average approximately 30 miles (26.1 nm, 48.3 km) from the nearest SRWF WTG, these locations would only experience visual effects during approximately between 7.9 percent and 31 percent of a given year based on VIA, typical atmospheric conditions. The onshore resources and KOPs in the vicinity of Newport, Rhode Island are likely to experience visual effects resulting from the SRWF during less than 31 percent of a given year. During the peak of the summer tourism season, the average hourly visibility does not extend beyond 11 nm (12.7 miles, 20.4 km), suggesting that the SRWF would be completely obscured from view, and therefore would not result in any visual impacts during typical summertime conditions.

The same study was completed from Martha's Vineyard and, assuming the 50 percent threshold, suggests that daytime visibility to 20 nm (23.0 miles, 37.0 km) occurred over 113 days (31 percent of the year) and visibility to 30 nm (34.5 miles, 55.6 km) occurred during 32 days of a given year (8.8 percent of the year). From Martha's Vineyard, summertime visibility averaged 10 nm (11.5 miles, 18.5 km) and annual visibility averaged 14 nm (16.1 miles, 26.0 km). The average distance to the SRWF from the nine KOPs on Martha's Vineyard is 23.2 miles (37.3 km) and ranges from 21 miles (33.8 km) to 29 miles (46.7 km). This suggests that during average conditions, including during the peak of the summer tourism season, the SRWF would be completely obscured from view and would not result in any visual impacts. Considering the clear conditions presented in the majority of the visual simulations from Martha's Vineyard, the level of impact reported in the VIA is likely to occur during approximately 31 percent of a typical year for the closest WTGs in the array.

Visibility observations from Nantucket suggest a slight reduction in average visibility. From this weather station, visibility extended to 20 nm (23.0 miles, 37.0 km) during 80 days of the year (22 percent) and visibility to 30 nm (23.0 miles, 55.6 km) occurred during 14 days of the year (4 percent) (both calculations consider the 50 percent threshold). During the summertime, daytime visibility from Nantucket averages approximately 10 nm and the average annual daytime visibility extends to 12 nm (13.8 miles, 22.2 km) (Wood et. al., 2014). The visual simulation from Madaket Beach, Nantucket (NI10) is 37 miles (59.5 km) from the nearest SRWF WTG. Based on typical weather conditions, it is likely that the WTGs would be visible from this location during only approximately 4 percent of a given year.

Regional analysis of each of the meteorological stations used in the BOEM study suggested that cloudy conditions reduce the average visibility to 12 miles (19.3 km), ranging from 10 nm (11.5 miles, 21.3 km) in summer to 16 nm (18.4 miles, 29.6 km) in winter. Under rainy, hazy, and foggy conditions average visibility is 8, 4, and 3 nm respectfully. These visibilities were consistent throughout the year. In addition, sky conditions will also affect a viewer's ability to detect the WTGs on the horizon. For example, overcast days will eliminate hard shadows on the WTGs created by direct sunlight, which will reduce contrast and minimize the ability to perceive the blades or recognize movement. Additionally, on overcast days the white or gray

sky color on the horizon will further reduce WTG visibility due to their lack of contrast against the background. Conversely, on clear days, when the WTGs are fully front lit or back lit, visibility will generally be higher. To predict the frequency of each of these conditions, National Climatic Data Center (NCDC) data were analyzed and broken down by cloud cover. The results of this analysis suggest that during daylight hours, clear sky conditions occurred approximately 42 percent of the time, partly cloudy conditions occurred during approximately 4 percent of daylight hours and overcast sky conditions occurred about 52 percent of the time during a given year (see Table 3.2-79). The conditions presented in the visual simulations illustrate above average visibility/viewing conditions. Based on the atmospheric conditions model, these visibility/viewing conditions would occur during only 31 percent of the year from Newport, 31 percent of the year from Martha's Vineyard, and 4 percent of the year from Nantucket. The regional average visibility during the peak summer tourism season averages between 10 and 12 miles, suggesting that the SRWF will not be visible during typical and average summer viewing conditions. Results of the VIA also support the conclusion that visual impacts resulting from the SRWF are likely be reduced during less than ideal viewing conditions. This is evidenced by the rating panel results from Aquinnah Overlook (MV07) in which a light haze partially obscured the turbines as compared to a nearby view from Edwin D. Vanderhoop Homestead (MV13) which illustrated, clear viewing conditions. The rating panel scores indicated a low magnitude of change at Aquinnah Overlook with the SRWF in place and remained within the high sensitivity class. By comparison, the Edwin D. Vanderhoop Homestead received rating panel scores that indicated a medium magnitude of visual change and dropped from the high sensitivity classification to medium sensitivity. Considering both views had a similar baseline sensitivity and visibility of the SRWF, the change in score is largely attributable to atmospheric conditions and the associated diminishment of visibility.

While conducting field work in support of the VIA, actual observation of the operational Block Island Wind Farm (BIWF) by EDR visual experts suggests that even when visibility is predicted to be greater than 10 miles, and conditions appeared clearer than average, viewers had to be told where to look to find the BIWF WTGs at distances of 17 miles (27.4 km) and 23.8 miles (38.3 km) (see Inset 3.2-2). Individuals could not see the BIWF WTGs at distances beyond 28 miles (45 km).

Table 3.2-110 Cloud Cover Analysis (Six-Year Average)

Cloud Cover	Percentage of Daylight Hours		
	Newport	Block Island	Average
Clear	43.9	40.1	42.0
Partly Cloudy	4.2	4.6	4.4
Overcast	49.1	55.2	52.2
Obstructed	2.8	0.01	1.4

The NCDC defines cloud coverage as clear (CLR, 00), few clouds (FEW, 01 to 02), scattered clouds (SCT, 03 to 04), broken clouds (BKN, 05 to 07), and overcast (OVC, 08). EDR refined these to include the following:
Clear = CLR and FEW, Partly Cloudy = SCT, Overcast = BKN and OVC.

50 mm Photograph of the BIWF

500 mm Photograph of the BIWF

Inset 3.2-2 – Photographs of the BIWF at a Distance 23.8 miles (38.3 km)

4.0 AVOIDANCE, MINIMIZATION AND MITIGATION

The proposed SRWF introduces a large scale, power generating development to a largely undeveloped seascape, which according to the evaluation may result in periodic adverse impacts to onshore visual resources. However, the Project has incorporated several mitigation measures which effectively reduce the potential visual impacts to the greatest extent practicable given the nature of the technology and the geographic areas deemed suitable for offshore wind energy development. The mitigation measures incorporated into the SRWF design include the following:

- The SRWF is located in a BOEM-designated offshore wind lease area that has been identified by BOEM as suitable for development.

- The SRWF WTGs are, at their closest point, approximately 16.7 miles (27 km) from Block Island, 18.9 miles (30 km) from Martha's Vineyard, and 30.5 miles (49.1 km) from Montauk Point. Siting the SRWF at these distances from the shore restricts available views from visually sensitive public resources and population centers to the Extended Background distance zone.

- The SRWF WTGs will have uniform design, height, and rotor diameter.

- The white color of the WTGs generally blends well with the sky at the horizon, even under clear sky conditions, and eliminates the need for daytime warning lights or red paint marking of the blade tips.

- Sunrise Wind will use Aircraft Detection Lighting System (ADLS) or related means (e.g., dimming or shielding) to limit visual impact pursuant to approval by the FAA and BOEM, commercial and technical feasibility at the time of Facility Design Report (FDR) and Fabrication and Installation Report (FIR) approval, and dialogue with stakeholders.

In regard to lighting impacts, an analysis was completed by Capitol Airspace to determine the likely activation time of the FAA light if ADLS is implemented (Capitol Airspace, 2020). This study reviewed information included in the FAA National Offload Program (NOP), which indicates the location of aircraft based on existing radar systems throughout the country. The NOP data were collected and analyzed to determine when and for how long aircraft traverse the SRWF airspace during a given year, requiring the aviation obstruction lights to be activated. The results of this analysis are presented in Table 4.0-1, below.

As illustrated in Table 4.0-1, based on past flight data, the AOWLs associated with the SRWF, would be activated for a total of approximately 1.4 hours over a one-year period. The maximum monthly activation time would occur in August when past flight data suggests activation times would increase to approximately 26 minutes over the entire month. March, April, and December had the lowest activation frequency with zero minutes of activation time. Considering the low frequency of light activation, nighttime visual impacts associated with the aviation obstruction lights would become intermittent and minor.

Table 4.0-1 Typical Monthly Duration of AOWL Activation

Month	Nighttime Observed (HHH:MM:SS)	Light System Activated Duration (HH:MM:SS)
	Newport	Block Island
January	484:09:04	00:00:48 (0.00%)
February	408:08:22	00:00:24 (0.00%)
March	410:55:21	00:00:00 (0.00%)
April	356:12:44	00:00:00 (0.00%)
May	331:37:33	00:00:55 (0.00%)
June	302:56:40	00:03:18 (0.02%)
July	322:20:26	00:10:07 (0.05%)
August	354:16:29	00:26:12 (0.12%)
September	382:30:05	00:14:37 (0.06%)
October	437:47:26	00:21:52 (0.08%)
November	459:51:01	00:03:16 (0.01%)
December	494:36:09	00:00:00 (0.00%)
TOTAL	**4745:21:20**	**01:21:29 (0.03%)**

Table Source: Capitol Airspace, 2020

Additional mitigation measures would likely have limited or no effect on SRWF visibility and visual impact, and therefore are not under consideration by Sunrise Wind. The feasibility and possible benefits of such measures are described below:

- Relocation: SRWF site and/or individual turbine relocation is not under consideration. The SRWF is already located far offshore from all island and mainland viewpoints, reflecting the substantial effort that has been expended in identifying suitable wind energy areas on the OCS. It is unlikely that changes to the orientation or arrangement of the turbines would substantially reduce visual impact given the distance of the SRWF site from most viewers. It is possible that a reduction in the total number of WTGs could result in a reduction of visual impacts from some of the closest KOPs, but not without adversely affecting the generating capacity of the Project.

- Camouflage: Alternate color selection or attempts at camouflaging the WTGs are not effective or feasible in mitigating visual impacts of offshore wind turbines. Under most conditions, the white color of the WTGs generally minimizes contrast with the sky and the yellow foundation is barely perceivable or not visible due to screening provided by atmospheric perspective and/or curvature of the earth. This is demonstrated by simulations prepared under a variety of sky conditions and distances from the SRWF. Additionally, the white color of the WTGs is necessary to comply with FAA guidance and avoid daytime lighting.

- Scale: At the distances under consideration, a reduction in turbine size would have a minimal effect on visual impact. While a reduction in turbine height could lessen scale contrast, this reduction

would have to be considerable before it would be perceived from shoreline viewpoints. Sunrise Wind is currently considering both a reduction the size of the WTG and the total number of WTGs. It is anticipated that this reduction may result in incremental decreases in visual magnitude and may also affect the significance of potential visual impacts, but generally is unlikely to change the results of the visual impact assessment significantly.

5.0 CONCLUSIONS REGARDING THE SUNRISE WIND FARM

An important consideration in visual impact assessment is to avoid the assumption that project visibility automatically equates to an adverse visual impact. The degree of SRWF visibility will vary greatly depending on the distance of the viewer from the SRWF; meteorological conditions; degree of screening from structures, vegetation, and curvature of the earth; and visual acuity. Projects that are located great distances from the viewing public often go completely unrecognized, due to the fact that they are perceived as secondary to the larger visual landscape. People, water, lighthouses, and other natural and built features often remain the focus of attention. Under certain conditions (i.e., when backlit or strongly front lit against a dark sky) the turbines are likely to be readily noticeable at distances over 30.6 miles (49.2 km). However, at such distances, the scale and contrast presented by the WTGs will often not result in adverse visual impacts. With a few exceptions, the magnitude of change at distances beyond 30 miles (48.3) would result in no adverse visual impacts from the SRWF.

The following additional conclusions can be drawn from the SRWF VIA:

1. Visibility analyses indicate that the SRWF has the potential to be visible from a relatively small portion of the land area within the VSA. The lidar viewshed analysis suggests that views of the SRWF will be available from approximately 5 percent of the land area within the VSA. One and a half percent of the landward VSA (44 % of the total area of onshore visibility) will only include views of the turbine blades which would be difficult to see from distances beyond 20 miles. The visible areas are concentrated along the immediate shoreline and rarely extend greater than 1,000 feet inland, except where open, elevated land areas exist. Areas with inland visibility include small areas of agricultural land on mainland Rhode Island and Massachusetts and maintained recreational areas on Block Island and Martha's Vineyard. When considering on-water visibility, approximately 96.2% of the Atlantic Ocean and associated bays and sounds within the VSA could have some level of SRWF visibility. Lack of visibility on the open water typically occurs only when views are blocked by intervening islands such as Block Island, Martha's Vineyard, and the Elizabeth Islands. Additionally, mainland headlands and peninsulas can screen on-water views.

2. The lidar viewshed suggests that views of the FAA warning lights on the WTGs will be available from approximately 3.4% of the land area within the VSA. This reduction in visibility is largely the result of the lower height of the lights (as compared to the blade tips), combined with the screening effects of curvature of the earth. Several areas at beach level showed substantially reduced areas of nighttime visibility of the SRWF, but visibility from elevated locations showed relatively little reduction in visibility.

3. Weather conditions will also serve to reduce actual SRWF visibility. The NCDC data indicate that visibility will not extend beyond 10 miles (16.1 km) during approximately 19% of daylight hours in a given year and approximately 22% of nighttime hours in a given year. Additionally, only 42% of the days are characterized as clear, and up to 52% of daylight hours in a given year are characterized by overcast conditions. These conditions will substantially reduce turbine color contrast with the background sky, and thus visibility. Given the distance of the SRWF from most viewers, along with

the white color of the WTGs, visibility will be difficult under overcast conditions. Although data on the frequency of ocean fog and summer haze are not available, these weather conditions occur frequently in coastal settings, and will serve to further reduce actual visibility of the SRWF, particularly from the mainland and more distant island viewpoints.

4. The BOEM meteorological report completed in 2017 for the MA/RI Lease Areas, suggests that visibility of the SRWF will likely be limited under certain atmospheric conditions. For example, from Martha's Vineyard, daytime visibility reaching 20 nm (23.0 miles, 37.0 km) typically occurs over 113 days (31 percent of the year) and visibility to 30 nm (34.5 miles, 55.6 km) occurs during 32 days of a given year (8.8 percent of the year). For viewing location in which the SRWF is 20 nm (23.0 miles, 37.0 km) or greater from shore, the WTGs would not be visible for the majority of a given year. Additionally, this same phenomenon could serve to obscure significant portions of the SRWF from viewing locations within 20 nm (23.0 miles, 37.0 km) of the nearest proposed WTG, thus reducing the perceived scale and horizontal occupation of the WTGs (Wood et. al., 2014).

5. As mentioned previously, at the distances proposed, screening provided by curvature of the earth can be substantial. As demonstrated in the simulations, the WTGs would have substantial screening from beach level views greater than 37 miles (60 km) from the SRWF. In the majority of viewing situations, this distance would eliminate visibility of the AWOLs and during the daytime, only the narrowest portion of the WTG blades would be theoretically visible above the horizon. At this distance, human visual acuity and atmospheric perspective would essentially eliminate potential visibility most of the time.

6. Potential visual impacts resulting from the SRWF are largely based on the following criteria in order of impact producing factors:

    - Aviation obstruction lights are visible at distances greater than 24 miles (38.6 km) based on nighttime observations of operational offshore wind farms in Europe (Sullivan et. al. 2013). The simulations and rating panel result suggest elevated nighttime visual impacts will occur to KOPs ranging in distance from 16.9 to 30.6 miles from the SRWF. However, three nighttime visual simulations received a VTL of 4, and one a VTL of 3, which suggests the AOWLs may have a visual effect over greater distances than suggested by the aforementioned study. It is important to note that simulations presented to the rating panel consider ideal viewing conditions, which according to the meteorological study may only occur during 33 days of a given year. In addition, the successful implementation of ADLS would significantly reduce or eliminate the potential for nighttime visual impacts resulting from the AOWLs.
    - According to the rating panel evaluation results, the SRWF will result in significant adverse visual impacts to 11 KOPs. Significant adverse visual impacts during nighttime conditions were limited to within a distance of 28.9 miles (47 km) and during daytime conditions, 25.8 mi (41.6 km). Considering daytime views that received significant adverse visual impacts, the average KOP distance from the SRWF was 21.4 mi (34 km). The majority of significant adverse visual impacts were concentrated in the Mohegan Bluffs region of Block Island and the Gay Head Cliffs of Martha's Vineyard. This is likely due to the proximity of these islands to the SRWF, but viewer elevation also has a considerable influence on perceived impacts.
    - Eight KOPs received rating panel scores indicating somewhat significant adverse visual impacts. Somewhat significant impacts were limited to within a 37.1 mi (60 km) radius of the SRWF, but KOPs with this rating averaged 25.9 mi (30 km) from the SRWF.
    - Nine KOPs received rating panel scores indicating minimal adverse visual impacts. Minimal visual impacts were limited to within 37.0 (59.5 km) and averaged 28.0 mi (32 km).

- The SRWF could result in negligible visual impacts at 20 KOPs. Negligible impacts occurred within a radius of 37.8 mi (60.8 km) and averaged approximately 29.5 mi (47 km) from the SRWF.
- Three of the four nighttime views, ranging from 16.9 mi (27 km) to 28.9 (47 km) received impact ratings indicating a significant adverse visual impact. These views were located on Block Island, mainland Rhode Island, and Martha's Vineyard. One view, located in Montauk, New York (30.6 (49 km) received rating scores indicating a somewhat significant visual impact. Nighttime impacts are expected to be significantly reduced with the inclusion of the ADLS system. However, when visible the USCG navigation lights may still result in impacts to nighttime views from proximate and elevated positions on Martha's Vineyard, Cuttyhunk Island, and Block Island.
- The KOPs that experienced the most significant visual impact have several factors in common that contributed to this impact. Each of the views that resulted in significant adverse visual impacts has a relatively high scenic quality. In addition, most of the KOPs presented what appeared to be a relatively pristine view with very little evidence of human activity, occurred at a prominent location with a commanding view of the ocean, and/or simulations from these KOPs illustrated the turbines under clear conditions with the WTGs strongly backlit against a relative light sky.
- Based on the results of the VIA, potential visual impacts are significantly mitigated by the effects of distance and the resulting reduction in the perceived scale of the SRWF. The rating panel results suggest that beyond 29 miles (47 km), scale, spatial dominance is significantly reduced and compatibility with existing landscape and seascape features increases.
- Typical weather and sky conditions will minimize the potential visibility and visual contrast presented by the WTGs at most times, from the majority of shoreline locations given their distance from shore.

Under ideal viewing conditions for locations within 29 miles (47 km) of the SRWF, significant adverse visual impacts are likely to occur as a result of the visual prominence presented by up to 122 large WTGs on an otherwise undeveloped seascape. However, given the relative infrequency of ideal viewing conditions as indicated by past meteorological records, and the relative infrequency of clear/high contrast viewing conditions illustrated in the simulations, it is anticipated that Project visibility and visual impact will generally be limited, and less significant than indicated in the evaluations conducted as part of this VIA.

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APPENDIX A

VISIBILITY FROM VISUALLY SENSITIVE RESOURCES

Visually Sensitive Resource[1]	Location	KOP Number[2]	Distance to Nearest Turbine (Miles)[3]	Viewshed Results			Figure 1.2-3 Reference	
				Number of Turbines Potentially Visible[4]	Number of FAA Warning Lights Potentially Visible[4]	Percent Visibility[5] ○ <1% ◔ 2-25% ◑ 26-50% ◕ 51-75% ● 76-100%	VSR Number	Sheet Number
National Historic Landmarks								
Block Island South East Light	Town of New Shoreham, Washington County, RI	BI04	16.8	123	123	◕	394	4
Newport Historic District	Town of Newport, Newport County, RI	AI03, AI08	28.6	123	115	◔	179	2
Ocean Drive Historic District	Town of Newport, Newport County, RI	AI01	28.7	123	123	◔	185	2
Marbel House	Town of Newport, Newport County, RI		29.3	123	112	◔	186	2
Bellevue Avenue Historic District	Town of Newport, Newport County, RI	AI09	29.6	123	113	◔	181	2
The Breakers	Town of Newport, Newport County, RI		29.7	123	112	◑	188	2
William Watts Sherman House	Town of Newport, Newport County, RI		29.8	4	3	○	189	2
Montauk Point Lighthouse	Town of East Hampton, Suffolk County, NY	LI04	30.5	119	58	◕	399	4, 7
Nantucket Historic District	Town of Nantucket, Nantucket County, MA	NI09, NI10	34.4	90	25	◑	444	6
Battle Of Rhode Island Historic District	Town of Portsmouth, Newport County, RI		38.1	55	27	○	80	2
New Bedford Historic District	Town of New Bedford, Bristol County, MA		40.5	2	0	◔	213	3
Properties Listed on the National or State Registers of Historic Places								
Old Harbor Hist Dist.	Town of New Shoreham, Washington County, RI		17.5	123	123	◔	368	4
Us Weather Bureau Station	Town of New Shoreham, Washington County, RI		18.7	3	0	◔	359	4
Hygeia House	Town of New Shoreham, Washington County, RI		18.7	5	3	◔	356	4
Peleg Champlin House	Town of New Shoreham, Washington County, RI		19.9	19	15	○	351	4
Block Island North Light	Town of New Shoreham, Washington County, RI	BI13	21.0	26	15	◕	337	4
Vanderhoop, Edwin DeVries Homestead	Town of Aquinnah, Dukes County, MA	MV07, MV09, MV13	21.4	123	123	●	409	5
Gay Head - Aquinnah Town Center Historic District	Town of Aquinnah, Dukes County, MA	MV04	21.4	106	105	◔	419	5
Gay Head Light	Town of Aquinnah, Dukes County, MA	MV07, MV09, MV13	21.6	123	123	●	411	5
Point Judith Lighthouse	Town of Narragansett, Washington County, RI	RI03	25.6	123	96	●	68	1
Dunmere	Town of Narragansett, Washington County, RI		27.7	123	82	◑	21	1
Ocean Rd. Hist. Dist.	Town of Narragansett, Washington County, RI		27.8	123	104	◑	22	1
Brownings Beach Historic Distric	Town of South Kingstown, Washington County, RI		28.3	123	58	◑	53	1
Sakonnet Light Station	Town of Little Compton, Newport County, RI		28.4	123	102	●	201	2
The Towers Historic District	Town of Narragansett, Washington County, RI		29.2	123	69	◑	20	1
Life Saving Station At Narragansett Pier	Town of Narragansett, Washington County, RI		29.2	123	63	◑	18	1
The Towers	Town of Narragansett, Washington County, RI		29.2	123	63	◕	19	1
David Sisson/ "The Stone" House	Little Compton, Newport County, RI		29.3	87	63	◔	482	2
Beavertail Light	Town of Jamestown, Newport County, RI	C01	29.4	123	93	●	200	2
Rosecliff	Town of Newport, Newport County, RI		29.5	123	108	◔	190	2
Castle Hill Lighthouse	Town of Newport, Newport County, RI		29.8	0	0	○	183	2
Edgartown Harbor Lighthouse	Town of Edgartown, Dukes County, MA		30.2	0	0	○	299	3, 6
Clambake Club Of Newport	Town of Middletown, Newport County, RI		30.3	123	105	◕	170	2
Tarpaulin Cove Light	Town of Gosnold, Dukes County, MA		30.4	21	4	◕	281	3
Ida Lewis Rock Lighthouse	Town of Newport, Newport County, RI		30.5	0	0	○	178	2
Kay St.-Catherine St.-Old Beach Rd. Hist. Dist. / The Hill	Town of Newport, Newport County, RI	AI09	30.7	123	75	◔	158	2
St. Georges School	Town of Middletown, Newport County, RI		30.9	96	90	◑	480	2
Smith-Gardiner-Norman Farm Historic District	Town of Middletown, Newport County, RI	AI06, AI07	31.0	123	118	◔	504	2
Sheffield House	Town of Charlestown, Washington County, RI		31.1	17	11	◔	307	4
Stonybrook Historic District (Indian Avenue Historic District)	Town of Middletown, Newport County, RI		31.3	123	122	◑	481	2
Newport Harbor Lighthouse	Town of Newport, Newport County, RI		31.6	0	0	○	157	2
Rose Island Lighthouse	Town of Newport, Newport County, RI		31.8	0	0	○	156	2
Paradise School	Town of Middletown, Newport County, RI		31.8	2	2	◔	139	2
Little Compton Common Hist. Dist.	Town of Little Compton, Newport County, RI		32.2	8	2	◔	132	2

Visually Sensitive Resource[1]	Location	KOP Number[2]	Distance to Nearest Turbine (Miles)[3]	Viewshed Results			Figure 1.2-3 Reference	
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Weekapaug Inn	Town of Westerly, Washington County, RI		32.5	36	5	◔	324	4
Dutch Island Lighthouse	Town of Jamestown, Newport County, RI		32.7	0	0	○	137	2
Montauk Association Historic District	Town of East Hampton, Suffolk County, NY		32.7	111	49	◔	462	7
Windmill Hill Hist. Dist.	Town of Jamestown, Newport County, RI		33.0	13	6	○	115	2
Westport Point Historic District	Town of Westport, Bristol County, MA		33.0	95	66	◔	122	2
Bailey Farm	Town of Middletown, Newport County, RI		33.1	50	25	◑	118	2
Cape Poge Light	Town of Edgartown, Dukes County, MA	MV14	33.2	0	0	○	294	3, 6
West Chop Light Station	Town of Tisbury, Dukes County, MA		33.3	0	0	○	278	3
East Chop Light	Town of Oak Bluffs, Dukes County, MA		33.3	0	0	○	283	3
Saunderstown Hist. Dist.	Town of North Kingstown, Washington County, RI		33.3	17	14	◔	128	2
Silas Casey Farm	Town of North Kingstown, Washington County, RI		33.8	7	4	◔	5	1, 2
Nobska Point Lighthouse	Town of Falmouth, Barnstable County, MA	MM04	34.7	26	0	◑	272	3
Plum Beach Lighthouse	Town of North Kingstown, Washington County, RI		34.9	6	0	●	108	2
Montauk Manor	Town of East Hampton, Suffolk County, NY		35.1	34	10	◔	458	7
Cook-Bateman Farm	Town of Tiverton, Newport County, RI		35.3	7	5	◔	98	2
Watch Hill Hist. Dist.	Town of Westerly, Washington County, RI	RI01	35.4	59	13	◔	326	4
Union Church & Southernmost Schoolhouse	Town of Portsmouth, Newport County, RI		35.7	2	1	◔	94	2
Padanaram Village Historic District	Town of Dartmouth, Bristol County, MA		36.8	10	2	◔	84	2
Conanicut Island Lighthouse	Town of Jamestown, Newport County, RI		37.4	0	0	○	87	2
Fort Taber District	Town of New Bedford, Bristol County, MA	MM07	37.7	79	4	◕	244	3
Clark's Point Light	Town of New Bedford, Bristol County, MA	MM07	37.7	78	4	◕	243	3
Popl Ar Point Lighthouse	Town of North Kingstown, Washington County, RI		38.2	1	0	◔	86	2
Butler Flats Light Station	Town of New Bedford, Bristol County, MA		38.5	36	0	●	234	3
Hazelwood Park	Town of New Bedford, Bristol County, MA		38.6	45	0	◑	233	3
Stonington Borough Historic District	Town of Stonington, New London County, CT		38.9	16	0	◔	304	4
Stonington Harbor Lighthouse	Town of Stonington, New London County, CT		38.9	5	0	◔	310	4
Stonington High School	Town of Stonington, New London County, CT		39.0	1	0	◔	305	4
Prudence Island Lighthouse	Town of Portsmouth, Newport County, RI		39.1	0	0	○	79	2
Latimer Reef Light Station	Town of Southold, Suffolk County, NY		39.4	18	0	●	329	4
County Street Historic District	Town of New Bedford, Bristol County, MA		40.1	10	6	◔	77	2, 3
Palmer's Island Light Station	Town of New Bedford, Bristol County, MA		40.1	0	0	○	216	3
Central New Bedford Historic District	Town of New Bedford, Bristol County, MA		40.5	3	0	◔	212	3
Hog Island Shoal Lighthouse	Town of Portsmouth, Newport County, RI		40.8	0	0	○	75	2
Properties Determined Eligible for the National or State Registers of Historic Places								
Spring Street	Town of New Shoreham, Washington County, RI		16.9	123	123	◑	380	4
WWII Lookout Tower – Spring Street	Town of New Shoreham, Washington County, RI		17.0	123	123	◔	376	4
Pilot Hill Road and Seaweed Lane	Town of New Shoreham, Washington County, RI	BI15, BI16	17.2	123	123	◔	391	4
Caleb W. Dodge Jr. House	Town of New Shoreham, Washington County, RI		17.2	118	116	◔	377	4
Capt. Welcome Dodge Sr.	Town of New Shoreham, Washington County, RI		17.4	112	99	◔	378	4
WWII Lookout Tower at Sands Pond	Town of New Shoreham, Washington County, RI		17.4	118	117	◔	390	4
Spring Cottage	Town of New Shoreham, Washington County, RI		17.5	87	73	●	379	4
Spring House Hotel	Town of New Shoreham, Washington County, RI		17.5	123	123	◑	372	4
Vaill Cottage	Town of New Shoreham, Washington County, RI	BI06	17.7	123	123	◑	388	4

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Capt. Noah Dodge	Town of New Shoreham, Washington County, RI	BI15	17.8	3	0	◔	374	4
Hon. Julius Deming Perkins/"Bayberry Lodge"	Town of New Shoreham, Washington County, RI	BI06	17.8	123	123	◕	387	4
Lakeside Drive and Mitchell Lane	Town of New Shoreham, Washington County, RI	BI06	17.9	104	101	◔	386	4
Mohegan Cottage	Town of New Shoreham, Washington County, RI	BI06	18.0	123	123	◕	396	4
Lewis Farm and Dickens Farm Road	Town of New Shoreham, Washington County, RI		18.2	123	123	◔	383	4
Old Town and Center Roads	Town of New Shoreham, Washington County, RI	BI01	18.2	31	14	◔	367	4
Beach Avenue	Town of New Shoreham, Washington County, RI		18.5	102	85	◔	357	4
Indian Head Neck Road	Town of New Shoreham, Washington County, RI	BI08	18.7	123	123	◑	358	4
Beacon Hill Road	Town of New Shoreham, Washington County, RI		18.8	123	123	◔	365	4
Nathan Mott Park	Town of New Shoreham, Washington County, RI		18.9	89	35	◔	364	4
African American Settlement	Town of New Shoreham, Washington County, RI		19.0	83	36	◔	366	4
West Side Road	Town of New Shoreham, Washington County, RI		19.1	116	73	○	363	4
Mitchell Farm	Town of New Shoreham, Washington County, RI	BI14	19.2	123	123	◔	349	4
Corn Neck Road	Town of New Shoreham, Washington County, RI	BI03, BI13, BI14	19.2	123	123	◔	340	4
West Side and Grace Cove Roads	Town of New Shoreham, Washington County, RI		19.4	123	118	◔	355	4
Champlin Farm	Town of New Shoreham, Washington County, RI		19.6	110	93	◔	350	4
Hippocampus/Boy's camp/Beane Family	Town of New Shoreham, Washington County, RI	BI02	20.1	80	55	◔	348	4
US Lifesaving Station	Town of New Shoreham, Washington County, RI	BI02	20.1	108	53	◕	346	4
Captain Samuel Hancock - Captain Mitchell West House	Chilmark,Dukes County,MA		23.8	117	98	◔	503	5
Cuttyhunk Cemetery	Gosnold,Dukes County,MA		25.5	123	123	◔	501	2, 5
U.S.Coast Guard Brick House	Town of New Shoreham, Washington County, RI	BI02	20.1	96	47	●	347	4
Fort Nathanel Greene	Town of Narragansett, Washington County, RI		26.6	123	123	◔	48	1
Christian Brothers Novitiate	Town of Narragansett, Washington County, RI		27.7	3	1	◔	26	1
Point Judith Country Club	Narragansett,Washington County,RI		28.0	1	0	○	487	1
Henry Palmer House	Town of South Kingstown, Washington County, RI		28.3	8	2	◑	31	1
John P. Sherman House House	South Kingstown,Washington County,RI		28.5	38	21	◔	488	1
Green Farm/Windy Meadows	Town of South Kingstown, Washington County, RI		29.1	27	23	◔	36	1
Hazard House/Nancook Farm	Narragansett,Washington County,RI		30.1	37	22	◔	489	1, 2
Gov. Sprague Bridge	Narragansett,Washington County,RI		30.3	14	1	◔	486	1
J.B. Lippincott House/Beavertail Farm	Jamestown,Newport County,RI		30.3	123	69	◔	496	2
Ocean Highlands Historic District	Jamestown,Newport County,RI	C02	30.8	121	110	◑	497	2
Jacob Cram - Mary Sturtevant House	Middletown,Newport County,RI		30.9	10	8	◔	495	2
Land Trust Cottages	Middletown,Newport County,RI		31.0	108	73	◕	494	2
Shadblow Farm	South Kingstown,Washington County,RI		31.0	7	3	◔	485	1
Turipus Farm	Little Compton,Newport County,RI	RI04	31.5	123	108	◕	500	2
Fox Hill Historic District	Jamestown,Newport County,RI		31.7	23	11	◔	493	2
Pettaquamscutt Rock	South Kingstown,Washington County,RI		31.8	64	60	○	484	1
U.S. Post Office	Town of Narragansett, Washington County, RI		29.3	89	21	◕	15	1
First Baptist Church of Charlestown	Town of Charlestown, Washington County, RI		32.0	4	0	◔	57	1
Stone Barn Farm	Dartmouth,Bristol County,MA		32.7	111	53	◔	490	2
Dutch Island	Jamestown,Newport County,RI		32.8	4	1	○	492	2
Westport Point Historic District (Local)	Westport,Bristol County,MA		33.0	95	67	◔	491	2
Weekapaug Historic District	Town of Westerly, Washington County, RI		32.4	86	19	◔	323	4
Weekapaug Bridge	Town of Westerly, Washington County, RI	RI02	33.1	5	2	◔	321	4
Hannah Robinson Rock/Observation Tower	South Kingstown,Washington County,RI		33.3	120	117	◔	483	1

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S.E. Portsmouth Rural Estates H.D.	Portsmouth,Newport County,RI		33.9	68	31	◔	499	2
Ditch Plains Artillery Fire Control Stations	Town of East Hampton, Suffolk County, NY	LI06	34.0	108	47	◑	465	7
Sullivan Granite Company Quarries	Towns of Charlestown and Westerly, Washington County, RI		34.1	83	61	○	27	1
Second House, 1797	Town of East Hampton, Suffolk County, NY		35.3	58	19	◔	472	7
Fort Rodman	New Bedford,Bristol County,MA		37.7	82	23	◑	502	3
Hither Hills State Park	Town of East Hampton, Suffolk County, NY		38.0	91	32	◔	476	7
Stone Bridge Inn	Tiverton,Newport County,RI		40.3	5	0	○	498	2
National Natural Landmarks								
Gay Head Cliffs NNL	Town of Aquinnah, Dukes County, MA	MV07, MV09, MV13	21.3	123	123	◑	410	5
Muskeget Island NNL	Town of Nantucket, Nantucket County, MA		34.4	72	11	●	440	6
State Scenic Areas								
Mohegan Bluffs	Town of New Shoreham, Washington County, RI	BI04, BI16	16.8	123	123	◕	389	4
Southeast Rd	Town of New Shoreham, Washington County, RI	BI04, BI16	16.9	123	123	◔	375	4
Old Harbor	Town of New Shoreham, Washington County, RI		17.4	123	123	◕	370	4
Rodmans Hollow	Town of New Shoreham, Washington County, RI		18.1	123	123	◔	385	4
Peckham/Fresh Ponds	Town of New Shoreham, Washington County, RI		18.2	46	17	◔	373	4
Black Road Rd. and Point	Town of New Shoreham, Washington County, RI		18.3	123	123	◑	384	4
Crescent Beach	Town of New Shoreham, Washington County, RI	BI08	18.5	123	123	◕	353	4
Great Salt Pond	Town of New Shoreham, Washington County, RI	BI01, BI02, BI08	18.6	123	123	◑	352	4
West Side Rd	Town of New Shoreham, Washington County, RI		18.7	44	23	○	362	4
Lewis/Dickens Farm	Town of New Shoreham, Washington County, RI		18.7	123	123	◑	382	4
Gay Head West Tisbury Unit, 94	Towns of Aquinnah and Chilmark, West Tisbury and Dukes Counties, MA	MV02, MV05, MV07, MV09, MV13, MV01, MV03	18.8	123	123	◑	303	3, 5
Clayhead Trail	Town of New Shoreham, Washington County, RI	BI14, BI12	19.2	123	123	◕	341	4
Corn Neck Rd.	Town of New Shoreham, Washington County, RI	BI14	19.3	123	123	◔	342	4
Gay Head West Tisbury Unit, 98	Town of Chilmark, Dukes County, MA	MV01	20.1	123	123	◑	426	5
Sachem Pond	Town of New Shoreham, Washington County, RI		20.1	122	76	◔	338	4
Gay Head West Tisbury Unit, 100	Town of Aquinnah, Dukes County, MA	MV02, MV05, MV07, MV09, MV13	20.2	123	123	◔	420	5
Beach Plum Neck/North Light	Town of New Shoreham, Washington County, RI	BI13	20.5	117	64	◑	336	4
Gay Head West Tisbury Unit, 97	Town of Chilmark, Dukes County, MA		20.9	120	119	◔	422	5
Gay Head West Tisbury Unit, 103	Towns of Chilmark and West Tisbury, Dukes County, MA		22.6	123	122	◔	301	3, 5
Gay Head West Tisbury Unit, 99	Towns of Chilmark, Tisbury, and West Tisbury, Dukes County, MA		23.5	54	33	◔	292	3, 5
Gay Head West Tisbury Unit, 101	Towns of Edgartown and West Tisbury, Dukes County, MA	MV15	24.0	123	109	◑	302	3, 5, 6
The Elizabeth Islands, 88	Town of Gosnold, Dukes County, MA	CI01	25.0	123	123	◑	209	2, 3, 5
Gay Head West Tisbury Unit, 102	Town of West Tisbury, Dukes County, MA		25.1	1	0	○	300	3, 5
Point Judith	Town of Narragansett, Washington County, RI	RI03	25.4	123	107	◑	64	1
The Elizabeth Islands, 89	Town of Gosnold, Dukes County, MA		26.0	123	123	◑	290	3, 5
Galilee	Town of Narragansett, Washington County, RI	RI10	26.7	121	82	◔	45	1
Ocean Rd.	Town of Narragansett, Washington County, RI		27.1	123	105	●	25	1
Snug Harbor/Jerusalem	Towns of Narragansett and South Kingstown, Washington County, RI	RI10	27.2	123	76	◔	41	1
The Elizabeth Islands, 87	Town of Gosnold, Dukes County, MA		27.6	79	27	●	204	2, 3, 5
The Elizabeth Islands, 90	Town of Gosnold, Dukes County, MA		27.9	123	123	◑	289	3, 5
Trustom Pond/Matunuck	Town of South Kingstown, Washington County, RI	RI06	28.3	123	57	◔	37	1
Little Compton Agricultural Lands	Town of Little Compton, Newport County, RI	RI04	28.4	123	123	◑	174	2

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Newport/Ocean Drive	Town of Newport, Newport County, RI	AI01, AI03, AI08	28.4	123	123	◑	184	2
The Elizabeth Islands, 93	Town of Gosnold, Dukes County, MA		28.6	122	94	◔	277	3, 5
The Elizabeth Islands, 91	Town of Gosnold, Dukes County, MA		28.8	122	83	◔	276	3, 5
Beavertail Point	Town of Jamestown, Newport County, RI	C01	29.3	123	110	◕	195	2
Pettaquamscutt Cove/Narrow Rive	Towns of Narragansett and South Kingstown, Washington County, RI	RI09	29.5	123	86	◔	11	1, 2
Quonochontaug And Ninigret Ponds	Towns of Charlestown, South Kingstown, and Westerly, Washington County, RI		29.5	121	49	◔	69	1, 4
Sachuest Point	Town of Middletown, Newport County, RI	AI05	29.6	123	119	◕	172	2
Perryville	Town of South Kingstown, Washington County, RI		29.9	23	13	○	23	1
Westport South Dartmouth Unit, 226	Town of Westport, Bristol County, MA	MM01	30.4	123	112	◕	176	2
Montauk Point	Town of East Hampton, Suffolk County, NY	LI01, LI03, LI04, LI06, LI07	30.5	123	79	◔	402	4, 7
Montauk Point SASS	Town of East Hampton, Suffolk County, NY	LI01, LI03, LI04, LI06, LI07	30.5	123	79	◔	403	4, 7
Norman Bird Sanctuary/Greg Craig	Town of Middletown, Newport County, RI	AI06, AI07	31.0	123	123	◔	162	2
Tiverton Main Rd	Towns of Little Compton and Tiverton, Newport County, RI		31.6	67	46	◔	99	2
Westport South Dartmouth Unit, 107	Towns of Dartmouth and Westport, Bristol County, MA	MM06	31.7	123	121	◔	105	2
Fox Hill Pond	Town of Jamestown, Newport County, RI		31.8	8	5	○	154	2
Westport South Dartmouth Unit, 173	Town of Westport, Bristol County, MA		31.8	123	114	◔	133	2
Westport South Dartmouth Unit, 170	Town of Westport, Bristol County, MA		32.0	123	121	◔	121	2
Little Compton Historic Center	Town of Little Compton, Newport County, RI		32.1	15	13	◔	131	2
Westport South Dartmouth Unit, 120	Town of Westport, Bristol County, MA		32.3	100	79	◑	143	2
Westport South Dartmouth Unit, 177	Town of Dartmouth, Bristol County, MA		32.3	118	92	◑	126	2
Mitchell Lane	Towns of Middletown and Portsmouth, Newport County, RI		32.4	45	33	◔	116	2
Winnipaug Pond	Town of Westerly, Washington County, RI	RI02	32.4	77	17	◔	318	4
Westport South Dartmouth Unit, 174	Town of Westport, Bristol County, MA		32.5	123	109	◑	146	2
Sandy Point Rd.	Towns of Middletown and Portsmouth, Newport County, RI		32.6	123	117	◔	101	2
Lake Montauk	Town of East Hampton, Suffolk County, NY		32.7	2	0	○	400	4, 7
Lake Montauk SASS	Town of East Hampton, Suffolk County, NY		32.7	2	0	○	401	4, 7
Jamestown Brook/Windmill Hill	Town of Jamestown, Newport County, RI		32.7	13	6	◔	114	2
The Elizabeth Islands, 92	Town of Gosnold, Dukes County, MA		33.5	59	13	◑	271	3
Westport South Dartmouth Unit, 171	Town of Westport, Bristol County, MA		33.6	65	62	◔	104	2
Casey Farm	Town of North Kingstown, Washington County, RI		33.7	12	4	◔	127	2
Westport South Dartmouth Unit, 176	Town of Dartmouth, Bristol County, MA		33.8	15	2	○	90	2
Tower Hill Rd.	Town of North Kingstown, Washington County, RI		33.8	28	16	○	4	1
Nantucket Unit, 81	Town of Nantucket, Nantucket County, MA		33.9	72	11	●	441	6
Eldridge Ave.	Town of Jamestown, Newport County, RI		34.0	6	0	◔	109	2
Shannock	Towns of Charlestown and Richmond, Washington County, RI		34.5	1	0	○	9	1
Nantucket Unit, 82	Town of Nantucket, Nantucket County, MA		34.6	90	25	◕	443	6
Westport South Dartmouth Unit, 112	Town of Westport, Bristol County, MA		34.9	23	8	○	103	2
Watch Hill	Town of Westerly, Washington County, RI	RI01	34.9	59	13	◑	327	4
Westport South Dartmouth Unit, 172	Town of Westport, Bristol County, MA		35.2	4	1	○	102	2
Bissel Cove/Rome Point	Town of North Kingstown, Washington County, RI		35.3	2	0	◔	2	1, 2
Hither Hills SASS	Town of East Hampton, Suffolk County, NY		35.3	99	42	◔	468	7
Hither Hills	Town of East Hampton, Suffolk County, NY		35.3	99	42	◔	467	7
Nantucket Unit, 83	Town of Nantucket, Nantucket County, MA		35.4	63	8	●	448	6
Westport South Dartmouth Unit, 111	Town of Westport, Bristol County, MA		35.8	15	3	○	92	2
Westport South Dartmouth Unit, 106	Town of Westport, Bristol County, MA		36.2	97	77	◔	91	2
Napatree Beach	Town of Westerly, Washington County, RI		36.4	39	3	◔	325	4

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Westport South Dartmouth Unit, 110	Town of Westport, Bristol County, MA		36.8	4	0	○	83	2
Nantucket Unit, 84	Town of Nantucket, Nantucket County, MA	NI09	36.9	60	7	◔	449	6
Napeague SASS	Town of East Hampton, Suffolk County, NY		39.0	74	29	○	478	7
New London Turnpike Farm	Town of Hopkinton, Washington County, RI		39.8	5	0	◔	6	1
North Prudence	Town of Portsmouth, Newport County, RI		41.1	2	0	○	74	2
National Wildlife Refuges								
Nomans Land Island National Wildlife Refuge	Town of Chilmark, Dukes County, MA	NL01	15.1	123	123	●	428	5
Block Island National Wildlife Refuge	Town of New Shoreham, Washington County, RI	BI02, BI13	19.6	92	83	◔	339	4
Great Thicket NWR	RI, CT, NY, MA	AI10, RI08, RI09, RI02	27.3	123	123	◔	1	1, 2, 3, 4
John H. Chafee National Wildlife Refuge	Towns of Narragansett and South Kingstown, Washington County, RI		27.6	123	86	◔	13	1, 2
Trustom Pond National Wildlife Refuge	Town of South Kingstown, Washington County, RI	RI06	28.3	123	59	◔	28	1
Sachuest Point National Wildlife Refuge	Town of Middletown, Newport County, RI	AI05	29.8	123	119	◑	173	2
Ninigret National Wildlife Refuge	Town of Charlestown, Washington County, RI	AI10	29.9	105	49	◔	33	1
Nantucket National Wildlife Refuge	Town of Nantucket, Nantucket County, MA		34.5	72	11	●	442	6
State Wildlife Management Areas								
Gosnold WMA	Town of Gosnold, Dukes County, MA		25.3	110	109	◕	208	2, 5
Point Judith	Town of Narragansett, Washington County, RI	RI03	25.6	123	107	◑	65	1
Galilee	Town of Narragansett, Washington County, RI	RI10	26.7	66	55	◔	46	1
Katama Plains WMA	Town of Edgartown, Dukes County, MA		27.3	97	60	◑	430	6
Succotash Marsh Management Area	Towns of Narragansett and South Kingstown, Washington County, RI	RI11	27.5	122	63	◔	43	1
Penikese Island Sanctuary	Town of Gosnold, Dukes County, MA		27.6	81	28	●	203	2, 3, 5
South Shore Management Area	Towns of Charlestown and South Kingstown, Washington County, RI		27.7	123	64	◔	49	1, 4
Green Hill Pond	Town of South Kingstown, Washington County, RI		29.1	117	44	◑	50	1
East Beach	Town of Charlestown, Washington County, RI		29.7	112	44	◔	60	1
Wasque Point WMA	Town of Edgartown, Dukes County, MA		29.8	106	36	◔	429	6
Tarpaulin Cove Sanctuary	Town of Gosnold, Dukes County, MA		30.4	28	4	◔	280	3
Seapowet Marsh Management Area	Town of Tiverton, Newport County, RI		36.8	8	0	◔	82	2
Head Of The Plains WMA	Town of Nantucket, Nantucket County, MA		38.1	31	3	◕	452	6
Miacomet Heath WMA	Town of Nantucket, Nantucket County, MA		39.4	45	2	●	454	6
Ram Island Sanctuary (South)	Town of Mattapoisett, Plymouth County, MA		40.1	10	0	●	227	3
National Parks								
New Bedford Whaling National Historical Park	Town of New Bedford, Bristol County, MA		40.5	2	0	◔	211	3
State Parks								
Fishermans Memorial Campground	Town of Narragansett, Washington County, RI		26.8	115	108	◔	47	1
South Beach State Park	Town of Edgartown, Dukes County, MA	MV10	27.1	123	80	◕	432	6
Brenton Point State Park	Town of Newport, Newport County, RI	AI01	28.8	123	100	◑	197	2
Beavertail	Town of Jamestown, Newport County, RI	C01	29.4	123	110	◔	193	2
Montauk Point State Park	Town of East Hampton, Suffolk County, NY	LI04	29.5	119	60	◕	398	4, 7
Horseneck Beach State Reservation	Town of Westport, Bristol County, MA	MM01, MM05	30.3	123	121	◑	150	2
Camp Hero State Park	Town of East Hampton, Suffolk County, NY	LI01, LI07	30.6	123	79	◔	404	4, 7
Fort Wetherill	Town of Jamestown, Newport County, RI	C02	30.8	121	110	◔	167	2
Amsterdam Beach State Park	Town of East Hampton, Suffolk County, NY		32.3	113	49	◔	461	7
Demarest Lloyd State Park	Town of Dartmouth, Bristol County, MA	MM06	32.9	71	25	◔	123	2
Shadmoor State Park	Town of East Hampton, Suffolk County, NY	LI06	33.7	108	47	◔	464	7
Montauk Downs State Park	Town of East Hampton, Suffolk County, NY		34.3	30	5	◔	459	7

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Montauk Downs State Park Golf Course	Town of East Hampton, Suffolk County, NY		34.3	30	5	◔	460	7
Hither Hills State Park	Town of East Hampton, Suffolk County, NY		37.6	91	32	◔	474	7
West Island State Reservation	Town of Fairhaven, Bristol County, MA		37.6	38	0	◔	246	3
Fort Phoenix State Reservation	Town of Fairhaven, Bristol County, MA		39.9	26	0	◕	218	3
Nasketucket Bay State Reservation	Towns of Fairhaven and Mattapoisett, Bristol and Plymouth Counties, MA		40.3	13	0	◔	220	3
State Nature and Historic Preserve Areas								
John H. Chafee Rome Point Preserve, Rome Point	Town of North Kingstown, Washington County, RI		35.6	1	0	○	100	2
State Forests								
Manuel F. Correllus State Forest	Towns of Edgartown, Oak Bluffs, Tisbury, and West Tisbury, Dukes County, MA		26.0	31	0	○	295	3, 5, 6
State Beaches								
Point Judith State Park	Town of Narragansett, Washington County, RI		25.8	123	88	●	67	1
Roger Wheeler State Beach	Town of Narragansett, Washington County, RI		26.6	83	58	◑	56	1
Scarborough State Beach	Town of Narragansett, Washington County, RI	RI08	27.0	123	76	●	32	1
South Beach State Park - right fork, 2	Town of Edgartown, Dukes County, MA	MV10	27.1	123	80	●	431	6
Salty Brine State Beach	Town of Narragansett, Washington County, RI	RI10	27.2	118	62	◕	44	1
South Beach State Park - middle, 2	Town of Edgartown, Dukes County, MA		27.4	123	75	◕	433	6
East Matunuck State Beach	Towns of Narragansett and South Kingstown, Washington County, RI	RI11	27.5	123	70	◑	40	1
Misquamicut State Beach	Town of Westerly, Washington County, RI		34.1	53	9	◑	328	4
Hither Hills State Park	Town of East Hampton, Suffolk County, NY		37.6	91	32	◔	475	7
Highways Designated or Eligible as Scenic								
Paradise Ave	Town of Middletown, Newport County, RI		30.9	123	85	◑	138	2
Hanging Rock Rd	Town of Middletown, Newport County, RI	AI06, AI07	31.0	123	118	◑	163	2
Post Rd	Towns of Charlestown, South Kingstown, and Westerly, Washington County, RI		31.0	119	58	◔	34	1
Indian Ave	Town of Middletown, Newport County, RI		31.4	67	63	◔	140	2
Berkeley Ave	Town of Middletown, Newport County, RI		32.4	50	25	◔	129	2
Wapping Rd	Town of Middletown, Newport County, RI		32.6	19	16	◔	130	2
Mitchell Ln	Town of Middletown, Newport County, RI		32.6	14	10	◔	119	2
Peckham Ave	Town of Middletown, Newport County, RI		32.7	34	23	◔	120	2
Wyatt Rd	Town of Middletown, Newport County, RI		33.1	47	25	◑	117	2
Montauk State Pkwy State Scenic Byway	Town of East Hampton, Suffolk County, NY		37.8	42	13	◔	477	7
National Historic Trails								
Washington-Rochambeau Revolutionary Route	Bristol, Newport, and Providence Counties, RI		32.2	3	1	○	73	2
National Recreation Trails								
Cliff Walk	Town of Newport, Newport County, RI	AI03, AI08, AI09	28.6	123	115	◕	187	2
State Fishing and Boating Access								
South East Light Stairway	Town of New Shoreham, Washington County, RI	BI04, BI16	16.9	123	123	◑	393	4
Lakeside Drive	Town of New Shoreham, Washington County, RI	BI06	17.8	123	123	●	395	4
Old Harbor Breakwater	Washington County, RI		17.8	123	115	◕	371	4
East Beach (New Shoreham)	Town of New Shoreham, Washington County, RI		18.4	123	122	◕	361	4
Coast Guard Road	Town of New Shoreham, Washington County, RI	BI02	20.1	57	7	●	344	4
Tisbury Great Pond	Town of West Tisbury, Dukes County, MA		24.6	10	1	●	408	5
Camp Cronin	Town of Narragansett, Washington County, RI		25.8	123	88	●	66	1
Black Point	Town of Narragansett, Washington County, RI		27.2	123	101	◔	24	1
State Pier # 4	Town of Narragansett, Washington County, RI	RI10	27.3	123	64	◔	42	1

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Deep Hole	Town of South Kingstown, Washington County, RI		27.7	123	64	●	55	1
Gooseberry Road Town Ramp	Town of South Kingstown, Washington County, RI		28.0	2	0	◔	29	1
Kenport Marina	Town of South Kingstown, Washington County, RI		28.1	15	11	◔	30	1
Katama Bay	Town of Edgartown, Dukes County, MA		28.2	77	38	◑	434	6
State Pier #5 (Tucker'S Dock)	Town of Narragansett, Washington County, RI		28.7	123	68	◕	17	1
Monahan'S Dock	Town of Narragansett, Washington County, RI		28.7	111	56	◑	16	1
Brenton Point	Town of Newport, Newport County, RI	AI01	28.8	123	82	●	196	2
Kings Beach	Town of Newport, Newport County, RI		29.0	123	90	◕	199	2
Sakonnet Point	Town of Little Compton, Newport County, RI		29.1	23	15	●	192	2
Sakonnet Harbor Fishing Access	Town of Little Compton, Newport County, RI		29.1	21	12	◕	191	2
Beavertail	Town of Jamestown, Newport County, RI	C01	29.6	88	64	◔	194	2
Perry Creek Accessway	Town of Charlestown, Washington County, RI		29.6	87	35	◔	62	1
Charlestown Breachway	Town of Charlestown, Washington County, RI		29.8	59	22	◔	58	1
Cliff Walk	Town of Newport, Newport County, RI		30.2	123	113	●	180	2
Old Sprague Bridge	Town of Narragansett, Washington County, RI		30.3	14	1	◔	12	1
Fort Wetherill	Town of Jamestown, Newport County, RI	C02	30.8	121	110	◔	168	2
East Beach (Charlestown)	Town of Charlestown, Washington County, RI		30.9	13	2	◔	335	4
Quonochontaug Breachway	Town of Charlestown, Washington County, RI		31.4	4	1	◔	306	4
South Shore	Town of Little Compton, Newport County, RI		31.4	110	81	●	164	2
Westport River	Town of Westport, Bristol County, MA		32.9	1	0	○	135	2
Weekapaug Breachway	Town of Westerly, Washington County, RI	RI02	33.0	5	2	◔	320	4
Sandy Point	Town of Portsmouth, Newport County, RI		35.3	31	3	◔	95	2
Mccorey Lane	Town of Portsmouth, Newport County, RI		36.9	31	0	●	88	2
Clarks Cove	Town of New Bedford, Bristol County, MA		38.4	39	0	●	235	3
Lighthouses (not S/NRHP-Listed)								
Menamsha Creek Entrance Jetty Lighthouse	Town of Aquinnah, Dukes County, MA		22.5	2	0	◔	406	5
Buzzards Bay Entrance Lighthouse	Town of Gosnold, Dukes County, MA		24.6	123	121	●	210	2, 5
Cuttyhunk Lighthouse	Town of Gosnold, Dukes County, MA		25.4	110	109	●	207	2, 5
Cuttyhunk Harbor North Jetty Lighthouse	Town of Gosnold, Dukes County, MA		26.1	102	40	●	291	3, 5
Edgartown Lighthouse	Town of Edgartown, Dukes County, MA		30.2	0	0	○	298	3, 6
Tarpaulin Cove Lighthouse	Town of Gosnold, Dukes County, MA		30.4	21	4	◕	279	3
Vineyard Haven Ferry Slip Lighthouse	Town of Tisbury, Dukes County, MA		31.7	0	0	○	285	3, 6
Lake Tashmoo East Jetty Lighthouse	Town of Tisbury, Dukes County, MA		31.9	0	0	○	282	3
Vineyard Haven Breakwater Lighthouse	Town of Tisbury, Dukes County, MA		31.9	0	0	○	286	3, 6
Westport Harbor Entrance Lighthouse	Town of Westport, Bristol County, MA		32.6	123	97	●	147	2
Oak Bluffs Ferry Slip Lighthouse	Town of Oak Bluffs, Dukes County, MA		32.9	0	0	○	288	3, 6
Oak Bluffs North Breakwater Lighthouse	Town of Oak Bluffs, Dukes County, MA		33.0	0	0	○	287	3
Cape Poge Lighthouse	Town of Edgartown, Dukes County, MA	MV14	33.4	0	0	○	293	3, 6
Dumpling Rock Lighthouse	Town of Dartmouth, Bristol County, MA		33.9	92	4	●	251	3
Woods Hole Passage Lighthouse	Towns of Falmouth and Gosnold, Barnstable and Dukes Counties, MA		34.5	0	0	○	266	3
Juniper Point Lighthouse	Town of Falmouth, Barnstable County, MA		34.6	33	0	●	268	3
Grassy Island Ledge Lighthouse	Town of Falmouth, Barnstable County, MA		34.8	0	0	○	263	3
Great Harbor Ferry Slip Lighthouse	Town of Falmouth, Barnstable County, MA		34.9	0	0	○	267	3
Great Harbor Range Lighthouse	Town of Falmouth, Barnstable County, MA		35.0	0	0	○	264	3
Oceanographic Pier Lighthouse	Barnstable County, MA		35.0	0	0	○	265	3
Watch Hill Lighthouse	Town of Westerly, Washington County, RI	RI01	36.0	43	2	◕	333	4

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Padanaram Breakwater Lighthouse	Town of Dartmouth, Bristol County, MA		36.4	0	0	○	93	2
Falmouth Harbor Lighthouse	Town of Falmouth, Barnstable County, MA		37.1	1	0	●	257	3
Clark's Point Lighthouse	Town of New Bedford, Bristol County, MA	MM07	37.8	0	0	○	245	3
New Bedford West Barrier Lighthouse	Town of New Bedford, Bristol County, MA		39.9	0	0	○	215	3
New Bedford East Barrier Lighthouse	Town of Fairhaven, Bristol County, MA		39.9	0	0	○	214	3
Public Beaches								
Mohegan Bluffs	Town of New Shoreham, Washington County, RI	BI04, BI16	16.9	123	123	◑	392	4
Ballard's Beach	Town of New Shoreham, Washington County, RI		17.8	123	119	◑	369	4
Frederick Benson Town Beach	Town of New Shoreham, Washington County, RI		18.4	123	122	◕	360	4
Scotch Beach Road	Town of New Shoreham, Washington County, RI	BI08	19.0	123	123	●	354	4
Squibnocket Beach	Town of Chilmark, Dukes County, MA	MV01	19.7	59	15	◑	427	5
Coast Guard Station/ Coast Guard Road	Town of New Shoreham, Washington County, RI	BI02	20.1	108	53	◕	345	4
Charleston Beach	Town of New Shoreham, Washington County, RI	BI02	20.2	87	36	●	343	4
Moshup Beach	Town of Aquinnah, Dukes County, MA	MV02, MV05, MV07, MV09, MV13	21.0	123	123	●	417	5
Philbin Beach	Town of Aquinnah, Dukes County, MA	MV02, MV05	21.1	123	123	●	418	5
Red Beach	Town of Aquinnah, Dukes County, MA		21.7	13	4	◑	421	5
Ocean @ Lucy Vincent Beach	Town of Chilmark, Dukes County, MA	MV03	21.8	104	102	●	423	5
Lobsterville	Town of Aquinnah, Dukes County, MA		22.0	9	0	◔	412	5
Pond @ Lucy Vincent Beach	Town of Chilmark, Dukes County, MA	MV03	22.1	99	98	●	424	5
Ocean @ Chilmark Pond Preserve	Town of Chilmark, Dukes County, MA		22.2	123	118	●	425	5
Menemsha	Town of Chilmark, Dukes County, MA		22.5	14	0	◑	407	5
Ocean @ Long Point	Towns of Chilmark and West Tisbury, Dukes County, MA		23.8	123	109	●	414	5
Great Pond @ Long Point	Town of West Tisbury, Dukes County, MA		23.8	123	103	●	413	5
Sepiessa Point	Town of West Tisbury, Dukes County, MA		24.1	123	104	●	415	5
Ocean @ Edgartown Great Pond	Town of Edgartown, Dukes County, MA		25.1	123	83	●	416	5
Norton Point Beach - west ocean	Town of Edgartown, Dukes County, MA		27.6	121	66	●	436	6
Ocean Avenue	Town of South Kingstown, Washington County, RI		27.7	123	65	●	39	1
Norton Point Beach - east katama bay	Town of Edgartown, Dukes County, MA		27.8	118	58	●	437	6
South Kingstown Town Beach	Town of South Kingstown, Washington County, RI		28.0	123	65	●	54	1
Roy Carpenter's Beach	Town of South Kingstown, Washington County, RI		28.2	123	64	◑	38	1
Norton Point Beach - west bay (boat lau*	Town of Edgartown, Dukes County, MA		28.2	86	38	●	435	6
Moonstone Beach	Town of South Kingstown, Washington County, RI		28.5	123	56	●	52	1
Norton Point Beach - east ocean	Town of Edgartown, Dukes County, MA		28.6	106	31	●	438	6
Trustom Pond National Wildlife Refuge	Town of South Kingstown, Washington County, RI	RI06	28.7	123	54	◔	35	1
Green Hill Beach	Town of South Kingstown, Washington County, RI		28.9	123	54	◕	51	1
King's Beach and Fishing Access	Town of Newport, Newport County, RI		29.0	123	90	◕	198	2
Wasque Swim Beach	Town of Edgartown, Dukes County, MA	MV11	29.1	101	30	◕	439	6
Narragansett Town Beach	Town of Narragansett, Washington County, RI	RI09	29.6	123	66	◑	14	1
Charlestown Town Beach	Town of Charlestown, Washington County, RI		29.6	87	35	◔	61	1
Charlestown Breachway & Boat Ramp	Town of Charlestown, Washington County, RI		29.6	113	44	◑	59	1
Ninigret Conservation Area	Town of Charlestown, Washington County, RI		30.1	112	44	◑	70	1, 4
Gooseberry	Town of Westport, Bristol County, MA	MM01	30.4	123	111	●	175	2
East Beach (Chappy)	Town of Edgartown, Dukes County, MA	MV14	30.4	2	0	○	296	3, 6
Second Beach	Town of Middletown, Newport County, RI	AI06, AI07	30.6	123	85	◕	171	2

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Easton's Beach (First Beach)	Towns of Middletown and Newport, Newport County, RI	AI09	30.8	123	71	●	169	2
Blue Shutters Town Beach	Town of Charlestown, Washington County, RI		30.9	97	37	◕	308	4
Hanging Rock Road Parking Area	Town of Middletown, Newport County, RI		30.9	123	81	●	161	2
NW end of Esplanade Drive	Town of Middletown, Newport County, RI		31.0	98	68	●	160	2
Atlantic Beach	Town of Middletown, Newport County, RI		31.0	123	75	●	159	2
South Shore Beach	Town of Little Compton, Newport County, RI	RI04	31.4	123	90	●	165	2
Campground	Town of Westport, Bristol County, MA		31.4	123	84	●	166	2
Mackerel Cove Beach	Town of Jamestown, Newport County, RI		31.7	63	29	●	155	2
East Beach	Towns of Dartmouth and Westport, Bristol County, MA		31.8	123	91	●	151	2
Barney's Joy	Town of Dartmouth, Bristol County, MA		31.9	123	96	●	152	2
Quonochontaug Conservation Area	Town of Westerly, Washington County, RI		32.0	81	16	●	322	4
C & K Club	Town of Westport, Bristol County, MA		32.0	123	96	●	141	2
Horseneck (DCR - DSPR)	Town of Westport, Bristol County, MA	MM05	32.1	123	106	●	149	2
Howland	Town of Westport, Bristol County, MA		32.2	123	96	●	142	2
Montauk Point County Park	Town of East Hampton, Suffolk County, NY	LI07	32.2	97	40	◔	397	4, 7
Elephant	Town of Westport, Bristol County, MA		32.3	123	99	●	145	2
South Ferry Road	Town of Narragansett, Washington County, RI		32.5	31	25	◔	153	2
Beach Avenue	Town of Westport, Bristol County, MA		32.5	123	111	●	144	2
Baker's Beach	Town of Westport, Bristol County, MA		32.5	123	106	●	148	2
Cherry & Webb	Town of Westport, Bristol County, MA		32.6	123	106	●	134	2
Demarest Lloyd (DCR - DSPR)	Town of Dartmouth, Bristol County, MA	MM06	32.8	71	25	●	124	2
The Dunes Trailer Park	Town of Westerly, Washington County, RI	RI02	32.9	77	17	◕	319	4
Salter's Point South	Town of Dartmouth, Bristol County, MA		33.2	74	22	●	125	2
Ditch Plains Beach	Town of East Hampton, Suffolk County, NY	LI03	33.5	84	34	●	466	7
Atlantic Avenue #2	Town of Westerly, Washington County, RI		33.6	60	8	◑	316	4
Salter's Point East	Town of Dartmouth, Bristol County, MA		33.6	54	8	●	113	2
Atlantic Avenue #1	Town of Westerly, Washington County, RI		33.6	56	8	◑	315	4
Little River	Town of Dartmouth, Bristol County, MA		33.7	122	37	●	110	2
Atlantic Avenue #7	Town of Westerly, Washington County, RI		33.8	54	9	◑	317	4
Moses Smith Creek	Town of Dartmouth, Bristol County, MA		33.9	56	8	●	111	2
Westerly Town Beach	Town of Westerly, Washington County, RI		33.9	54	8	◑	314	4
Round Hill	Town of Dartmouth, Bristol County, MA		33.9	94	26	●	112	2
Atlantic Avenue #5	Town of Westerly, Washington County, RI		34.0	51	7	◕	311	4
Nonquitt	Town of Dartmouth, Bristol County, MA		34.0	105	66	◔	107	2
Atlantic Avenue #9	Town of Westerly, Washington County, RI		34.1	46	7	◔	312	4
Round Hill Condos	Town of Dartmouth, Bristol County, MA		34.1	101	26	●	106	2
Atlantic Beach Park	Town of Westerly, Washington County, RI		34.1	56	8	◔	313	4
Nobska Beach Association	Town of Falmouth, Barnstable County, MA	MM04	34.7	24	1	●	270	3
South Edison Beach	Town of East Hampton, Suffolk County, NY		34.7	54	19	●	473	7
Kirk Park Beach (Main Town Beach)	Town of East Hampton, Suffolk County, NY		35.0	61	22	◕	471	7
Kirk Beach	Town of East Hampton, Suffolk County, NY		35.1	56	19	●	470	7
Sandy Point Beach	Town of Portsmouth, Newport County, RI		35.3	31	3	◔	96	2
Fogland Beach Conservation Area	Town of Tiverton, Newport County, RI		35.4	39	9	◑	97	2
Manatuck Avenue	Town of Westerly, Washington County, RI		35.5	45	6	●	332	4
Overlook Park	Town of East Hampton, Suffolk County, NY		35.8	83	33	●	469	7
Bikepath Beach	Town of Falmouth, Barnstable County, MA		35.9	6	0	◑	262	3

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Bluff Avenue	Town of Westerly, Washington County, RI		35.9	54	6	◕	331	4
Falmouth Associates - 564 Suf Drive	Town of Falmouth, Barnstable County, MA		36.4	7	0	●	253	3
Edward V. Ecker Sr. County Park	Town of East Hampton, Suffolk County, NY		36.4	4	0	○	457	7
FBBC	Town of Falmouth, Barnstable County, MA		36.5	5	0	◑	254	3
McCorrie Lane Fishing Area	Town of Portsmouth, Newport County, RI		36.8	32	2	◑	89	2
Mill Road	Town of Falmouth, Barnstable County, MA		36.8	5	0	●	255	3
Madaket	Town of Nantucket, Nantucket County, MA	NI10	36.8	32	0	●	451	6
Napatree Point Conservation Area	Town of Westerly, Washington County, RI		36.8	38	3	◑	330	4
Surf Drive	Town of Falmouth, Barnstable County, MA		36.9	4	0	●	256	3
Tides Hotel	Town of Falmouth, Barnstable County, MA		37.2	2	0	●	259	3
No Name	Town of Falmouth, Barnstable County, MA		37.2	3	0	◑	258	3
Yacht Club	Town of Falmouth, Barnstable County, MA		37.2	1	0	●	177	3
NERR: South Parcel	Town of Portsmouth, Newport County, RI		37.3	2	0	○	81	2
Falmouth Heights	Town of Falmouth, Barnstable County, MA		37.5	1	0	◔	250	3
West Island Town Beach	Town of Fairhaven, Bristol County, MA		37.5	41	0	●	247	3
Anthony's	Town of Dartmouth, Bristol County, MA		37.6	21	0	●	85	2, 3
Bristol 2	Town of Falmouth, Barnstable County, MA		37.7	1	0	○	249	3
Tabor South Extension	Town of New Bedford, Bristol County, MA	MM07	37.9	59	4	◔	240	3
Warren's Landing	Town of Nantucket, Nantucket County, MA		37.9	39	0	●	450	6
Tabor South	Town of New Bedford, Bristol County, MA	MM07	37.9	7	0	◔	239	3
Tower 4	Town of New Bedford, Bristol County, MA		38.2	2	0	◔	241	3
O'Tools	Town of New Bedford, Bristol County, MA		38.3	2	0	◔	238	3
O'Tools Extension	Town of New Bedford, Bristol County, MA		38.3	3	0	◔	236	3
Squid	Town of New Bedford, Bristol County, MA		38.3	39	0	●	237	3
West Island Causeway	Town of Fairhaven, Bristol County, MA		38.4	38	0	●	242	3
40th Pole 2	Town of Nantucket, Nantucket County, MA	NI09	38.5	1	0	○	446	6
40th Pole 1	Town of Nantucket, Nantucket County, MA	NI09	38.6	4	0	◔	445	6
J. Beach	Town of New Bedford, Bristol County, MA		38.6	36	0	●	230	3
400 South	Town of New Bedford, Bristol County, MA		38.6	34	0	●	229	3
400 North	Town of New Bedford, Bristol County, MA		38.6	34	0	●	228	3
South Pier	Town of New Bedford, Bristol County, MA		38.7	30	0	◕	232	3
Cisco	Town of Nantucket, Nantucket County, MA		38.7	28	0	●	453	6
Kids Beach	Town of New Bedford, Bristol County, MA		38.7	30	0	◕	231	3
Dubois Beach	Town of Stontington, New London County, CT		39.0	6	0	◔	309	4
Fort Phoenix (DCR - DSPR)	Town of Fairhaven, Bristol County, MA		39.9	23	0	●	217	3
Dionis	Town of Nantucket, Nantucket County, MA		39.9	1	0	○	447	6
Miacomet	Town of Nantucket, Nantucket County, MA		40.1	34	0	●	455	6
Grinnell's Beach	Town of Tiverton, Newport County, RI		40.1	7	0	●	78	2
Napeague Beach	Town of East Hampton, Suffolk County, NY		40.2	39	5	◔	479	7
Sewerbeds	Town of Nantucket, Nantucket County, MA		40.2	38	0	●	456	6
Teddy's Beach	Town of Portsmouth, Newport County, RI		40.2	5	0	◔	76	2
Manhattan Avenue	Town of Fairhaven, Bristol County, MA		40.3	41	0	●	219	3

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Wildlife Park	Towns of Fairhaven and Mattapoisett, Bristol and Plymouth Counties, MA		40.3	11	0	●	221	3
Brant Beach	Town of Mattapoisett, Plymouth County, MA		40.3	9	0	◑	222	3
Howard	Town of Mattapoisett, Plymouth County, MA		40.5	6	0	◔	223	3
Antasawomak	Town of Mattapoisett, Plymouth County, MA		40.5	13	0	●	226	3
Mattapoisett Land Trust	Town of Mattapoisett, Plymouth County, MA		40.6	4	0	●	225	3
Liesure Shores	Town of Mattapoisett, Plymouth County, MA		40.7	3	0	◔	224	3
Ferry Routes								
Newport - Block Island	RI		17.8	123	117	●	71	1, 2, 4
New London - Block Island	RI, CT, NY		17.8	123	117	●	334	4
Point Judith - Block Island	RI	RI10	17.8	123	117	●	72	1, 4
Montauk - Block Island	RI, NY	BI02	19.4	84	37	●	381	4, 7
Quonset - Martha's Vineyard	RI, MA		21.4	123	123	●	202	2, 3, 5
Quonset Point-Marthas Vineyard	RI, MA		23.8	123	123	◕	182	2, 3, 5, 6
New Bedford-Cuttyhunk	MA		26.1	111	80	●	261	3, 5
Falmouth Edgartown	MA		29.9	2	0	◔	284	3, 6
Woods Hole-Vineyard Haven	MA		31.7	16	0	◑	274	3, 6
New Bedford-Marthas Vineyard	MA		31.7	50	0	◑	252	3, 6
Hyannis-Marthas Vineyard	MA		32.7	1	0	◔	260	3, 6
Falmouth-Oak Bluffs	MA		32.7	2	0	◔	273	3, 6
Inter-Island	MA		32.7	15	0	◑	297	3, 6
Woods Hole-Oak Bluffs	MA		32.9	15	0	◔	275	3, 6
Seaports								
Gosnold Ferry Terminal	Town of Gosnold, Dukes County, MA		26.0	1	0	○	206	2, 5
Woods Hole Ferry Terminal	Town of Falmouth, Barnstable County, MA		34.9	6	0	◔	269	3
Falmouth Harbor	Town of Falmouth, Barnstable County, MA		37.4	2	0	◔	248	3
Other State Owned Environmental Land with Public Access								
Parks & Recreation	Newport and Washington Counties, RI	RI08, RI10, BI04, BI16, RI11	16.9	123	123	◑	63	1, 2, 4
ALPC	Newport and Washington Counties, RI		19.3	33	27	◔	205	2, 4
Fish & Wildlife	Newport and Washington Counties, RI	RI10	26.1	123	66	○	3	1, 2, 4
Boat Ramps & Fishing Access	Newport and Washington Counties, RI	RI02	28.7	123	68	◔	8	1, 2, 4
Forest Legacy	Washington County, RI		30.3	23	9	○	7	1
State of New York Lands	Town of East Hampton, Suffolk County, NY	LI04	30.5	117	54	◕	405	4, 7
Westport River Public Access Facility	Town of Westport, Bristol County, MA		32.9	1	0	○	136	2
Forest Environment	Newport and Washington Counties, RI		33.0	2	0	○	10	1, 2
Hither Woods State Park	Town of East Hampton, Suffolk County, NY		36.2	73	36	○	463	7
EJ Areas								
250072004005	Town of Aquinnah, Dukes County, MA	MV02, MV05, MV07, MV09, MV13, MV04	19.2	123	123	◑	480	5
440090515041	Town of Narragansett, Washington County, RI	RI03, RI08	25.6	123	123	◔	481	1
250072003002	Town of Edgartown, Dukes County, MA	MV10	26.7	123	79	◔	482	3, 6
440050412009	Town of Newport, Newport County, RI		32	1	0	○	483	2
361032010044	Town of East Hampton, Suffolk County, NY		34.8	117	54	○	484	7
250010149003	Town of Falmouth, Bamstable County, MA		36.8	5	0	◔	485	3
250059855001	Town of Dartmouth, Bristol County, MA		37	1	0	○	486	2
250010148001	Town of Falmouth, Bamstable County, MA		37	4	0	◔	487	3
250056528001	Town of New Bedford, Bristol County, MA	MM07	37.6	82	23	◑	488	3
250056533013	Town of Dartmouth, Bristol County, MA		37.7	20	0	◔	489	3, 2
090117051023	Town of Stonington, New London County, CT		38.2	14	0	○	491	1
250199502004	Town of Nantucket, Nantucket County, MA		38.2	49	3	◑	490	6
090117071003	Town of North Stonington, New London County, CT		38.4	9	0	○	492	1
440090501032	Town of North Kingstown, Washington County, RI		38.7	8	0	◔	494	1, 2
250056527003	Town of New Bedford, Bristol County, MA		38.7	31	0	◔	493	3

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250056524002	Town of New Bedford, Bristol County, MA		38.8	23	0	◔	496	3, 2
250056527004	Town of New Bedford, Bristol County, MA		38.8	38	0	◑	495	3
250056526001	Town of New Bedford, Bristol County, MA		39.1	35	0	◔	498	3
250056525002	Town of New Bedford, Bristol County, MA		39.1	25	0	◔	497	3
250056526002	Town of New Bedford, Bristol County, MA		39.3	7	0	○	499	3
250056524001	Town of New Bedford, Bristol County, MA		39.5	3	0	◔	500	3, 2
250056520003	Town of New Bedford, Bristol County, MA		39.7	2	0	○	501	3
250056520002	Town of New Bedford, Bristol County, MA		39.9	8	4	◔	502	3, 2
250056520001	Town of New Bedford, Bristol County, MA		40.1	10	6	◔	503	3, 2
250056521001	Town of New Bedford, Bristol County, MA		40.2	8	3	◔	504	2
250056518002	Town of New Bedford, Bristol County, MA		40.4	5	0	○	505	3
250056517002	Town of New Bedford, Bristol County, MA		40.4	6	3	◔	506	2
250056517001	Town of New Bedford, Bristol County, MA		40.5	3	0	○	507	2
250056518001	Town of New Bedford, Bristol County, MA		40.5	3	0	◔	508	3, 2

[1] This table includes all inventoried visually sensitive resources with potential visibility of the Sunrise Wind Farm turbines and/or offshore substation(s) (resources that overlap the SFWF ZVI).

[2] Key Observation Points are listed if they occur within 1,000 feet of a given VSR.

[3] For large areas and linear sites, approximate distance to the nearest turbine was measured from the respective area's closest point.

[4] Please note that while a maximum of 122 turbines are proposed to be built, 123 turbine locations are under consideration. Therefore, all 123 potential locations were conservatively included in this analysis. Turbine visibility is based on the

[5] The percentage of the mapped resource that overlaps the Zone of Visual Influence. For resources that extend beyond the Visual Study Area (VSA) boundary, this reflects the percentage of the area within the VSA.

APPENDIX A2

MUNICIPAL DOCUMENT REVIEW

State	Municipality	Total Municipal Land Area (SqMi)	Municipal Land Area within Viewshed (SqMi)	Percent of Municipal Land Area within Viewshed	Comprehensive Plan	Conservation Plan	Open Space and Recreation Plan	Coastline Management Plan	Notes
Massachusetts	CAPE COD				Cape Cod Ocean Management Plan			Cape Cod Ocean Management Plan	Within the Cape Cod Ocean Management Plan section 1B.3 Visual Resources and Characteristics establishes Seascape Units, identifies visual resources, and landscape similarity zones.
	MARTHA'S VINEYARD				The Island Plan, Charting the Future of the Vineyard				The Island Plan focuses on effort needed to manage growth in a way that preserves the qualities that make people want to live and visit the islands. Within this document a series of actions are provided to help navigate future development and conservation. The section discussiong natural environment notes that more than 40% of the open space on the Vineyard could be developed and citing a need to protect remaining open spaces, vistas, farms, and habitat. It is identified that 73% of conserved open space and 32% of the 211-mile shoreline of ocean and great ponds has public access. The section providing discussion on built environment identifies that Historic Resourcesinclude some 2,000 buildings more than 100 years old and another 1,500 built before the end of World War II. Strategies are provided to identify, protect and promote historic areas and scenic roadways.
	WEST TISBURY	26.3	1.4	5.35	West Tisbury Community Development Plan		West Tisbury Open Space Map		The preservation of West Tisbury's rural character is the preeminent value that is an undercurrent in all community decisions. Protection of Hilltops and other scenic vistas is one of the towns highest priorities The town identifies 20 points totaling 1,788 acres as having primary vistas/viewsheds and 4 locations totally 1,372 areas as having secondary vistas/viewsheds.
	EDGARTOWN	26.7	2.3	8.46	The Edgartwon master Plan, 1990				The Edgartown Master Plan adopted in 1990 provides a set of topics to explore including Edgartown's natural resources, townscape and scenic backcloth. Objectives are identified for preservation of Open Space and include an objective to identify and preserve scenic vistas. In addition objectives were also identified for the preservation of Historical and Cultural Resources which included objectives to maintain buildings and places in a manner consistent with their architectural and functional setting, to maintain the scenic quality of Edgartown harbor by managing its restricted area to provide space for all legitimate water-dependent uses, and to identify and preserve the historic and archeological resources of Edgartown.
	CHILMARK	20.2	3.5	17.15	Master Plan Supplement, 2000				The Chilmark Master Plan is a study of the town that includes information on the community and resources and outlines goals and objectives to guide future growth and development in the Town. Included in the Master Plan is the Open Space Plan, which summarizes conservation and natural resource needs, existing protections, goals and objectives, open space acquisitions, and a five-year plan of action. The Chilmark Master Plan Supplement from 2000 provides updated goals and objectives based on a more recent assessment of the community and resources within the town.
	AQUINNAH	5.8	1	18.03	Aquinnah Community Development Plan, 2004		Open Space Plan for the Town of Aquinnah, 2020		the Open Space Plan for the Town of Aquinnah provides a map of Criteria for Open Space Suitability Scenic/Cultural in Aquinnah with the following categories: primary vista/viewshed (shoreline), secondary vista/viewshed, cultural landscape, and 1000' from coast/great pond. Another map of Open Space Preservation Suitability ranging from neutral to most suitable based on seven criteria measured is also provided. The lands that have the highest suitability for open space preservation are thin ribbons of beach, for scenic values, recreation, and flood protection, as well as thin ribbons of road, for scenic vistas afforded by the rural nature of the island. The Aquinnah Community Development Plan recognizes the Open Space Plan as the planning document closest to a Master Plan for the community. The primary focus of the Development Plan is to evaluate the best or most appripriate uses for the town's remaining land not currenlty developed or protected as open space. WHile this plan primarily provides a suitability analysis identifying areas to appropriatly locate open space and natural resource protection, housing, and economic development. However, the plan does note Aquinnah as "... a place with powerful visual identity drawn from the famous cliffs and less famous but equally important moorlands, hills, and ponds."

State	Municipality	Total Municipal Land Area (SqMi)	Municipal Land Area within Viewshed (SqMi)	Percent of Municipal Land Area within Viewshed	Comprehensive Plan	Conservation Plan	Open Space and Recreation Plan	Coastline Management Plan	Notes
	GOSNOLD	13.2	2.7	20.31		Buzzard's Bay Comprehensive Conservation and Management Plan, 2013 Updated	Draft Open Space and Recreation Plan for the Town of Gosnold (July 10, 2018)		The Draft Open Space and Recreation Plan for the Town of Gosnold identifies 96% of the land on Cuttyhunk is classified as "Distinctive Scenic Landscape". Lookout Hill (elevation 154 feet) provides an unobstructed, 360 degree view that can stretch for 28 miles on a clear day. There is public access to almost 10 miles of pristine shoreline, including the shores of Cuttyhunk Pond, Western Pond, and Fresh Water Pond. An Inventory of Lands of Conservation and Recreation Interest, which includes Open Space conservation land, forested land, recreation land, agricultural land, parks, or any open area that is owned by an agency or organization (public, private, non-profit) dedicated to preservationis maped as well as Potential Conservation Lands based on lands that are conserved in perpetuity. the Buzzard's Bay Comprehensive Conservation and Management Plan 2013 updated primarily addresses water quality and conservation, but does reference regional open space plans and notes open space preservation as contributing to water quality goals.
	NANTUCKET	48.9	3.3	6.71	Nantucket Master Plan, 2009		Town of nantucket 2007 Open Space and Recreation Plan	Nantucket, MA Coastal Management Plan, 2014	Nantucket Master Plan's overall Mission Statement is: “To create and sustain a healthy community, one whose residents have stability and security, with resources protected for future generations.” It then identifies community values including protect open spaces and natural resources and protect the historical integrity of the landscape and buildings. In addition the document identifies that Massachusetts Department of Conservation and Recreation has designated at least five areas of Nantucket County as scenic landscapes: Coatue and parts of Great Point, The Middle Moors and eastward to the ocean, including Sesachacha Pond and Sankaty Golf Club, Eel Point and Eastward to Dionis, Smith's Point and Esthers Island, Tuckernuch and Muskeget Islands. It also makes mention of the historic resources included in th Island-wide designation as a Historic District and a Historic Landmark. Within the Town of Nantucket Open Space and Recreation Plan Section F. Scenic Resources and Unique Environments identifies historic resources, historic buildings, historic association properties, historical cemeteries, National Register of Historic Places (NRHP), State Register of Historic Places (SRHP). Items identified under the SRHP section also note scenic views, scenic streets/roads, DEM Scenic Landscapes, and Archaeological Resources. In addition an Open Space and Conservation Lands Inventory is also provided which discusses conservation land under private ownership and those under public and nonprofit ownership. While the Nantucket Coastal Management Plan provides a document primarily used for consistency in shoreline management, conservation, and development the plan also provides recommendations for public access and beach access.
	NARRAGANSETT	13.8	0.8	5.74	Town of Narragansett Comprehensive Plan: Baseline Report, Roadmap, Action Plan			Town of Narragansett Harbor Management Plan	The Town of Narraganset Comprehensive Plan identifies that Narragansett’s historic and cultural resources, along with its scenic views and vistas, are important attributes that give the town its sense of place. Distinguishing landmarks and notable views can easily be identified as being in Narragansett, like The Towers, the Harbor of Refuge, or the Point Judith Lighthouse, and these features contribute greatly to Narragansett’s character as a seaside community. Scenic Views are identified in the plan as such scenic resources that have been both formally and informally inventoried. Notable scenic areas, also depicted in document mapping, are along Narrow River and The Narrows, the area around the Galilee Escape Road, Jerusalem, Point Judith, Scarborough Beach and the area around Sunset Farms, to name a few. Other views are to and from Wesquage Pond, Narragansett Town Beach, Hazard Rock, and Black Point, among others. The Narragansett Harbor Management Plan provides discussion on public access with the purpose of idenifying issues related to coastal right-of-ways and documenting potential and existing access points and providing recommendations to ensure individuals are able to reach the shore.
	MIDDLETOWN	13.2	1.2	9.1	Middletown, Rhode Island Comprehensive Plan				Within the Middletown Comprehensive Plan Section II. Cultural & Historic Resources identifies that "Agriculture has always been one of Middletown's most important activities. Any further reduction in the number of farms in Middletown would alter the essential character of the town as farms themselves are part of the scenic beauty of the area." This section also identifies the importance of the Paradise Loop Scenic Highway. In addition Goal C-II Preserve Historic Landscapes presents as an action item "Develop zoning and subdivision standards and incentives for the preservation of open space, greenways, agricultural land, and scenic vistas as part of the development process " Within Section IV Recreation, Conservation, and Open Space passive recreation is identified including "a variety of preserved and undeveloped open spaces that offer protection of environmental resources, scenic vistas, trail networks, and passive recreational opportunities."

State	Municipality	Total Municipal Land Area (SqMi)	Municipal Land Area within Viewshed (SqMi)	Percent of Municipal Land Area within Viewshed	Comprehensive Plan	Conservation Plan	Open Space and Recreation Plan	Coastline Management Plan	Notes
Rhode Island	LITTLE COMPTON	22.6	2.1	9.28	Town of Little Compton Rhode Island Comprehensive Plan				The Little Compton Comprehensive Plan identifies the need to protect scenic resources and encourages architectural renovations, conservation land easements/acquisitions, and investigation into the nomination of scenic byways within the town (none existed during development of the plan). The plan notes the major risks to scenic resources within the town include, new developement pressure, renovation/demolition, lack of local regulation, and natural hazards resulting from sea-level rise. The golas outlined in the plan do not specifically address shoreline/ocean vistas, but do discuss the need for more sustainable beach access.
	NEWPORT	7.8	0.8	9.84	City of Newport Comprehensive Land Use Plan, Updated 2021			City of Newport Comprehensive Harbor management Plan	The Newport Comprehensive Land Use Plan within the land use section identifies the floating zone overlay which provides as an objective the preservation of scenic vistas. Policy NR-2.5 states the City shall protect scenic vistas. In addition Section 4 provides three chapters reviewing Open Space & Recreation, Natural Resources, and Historical & Cultural Resources. This section identifies a variety of resources by type including, but not limited to historic open spaces and recreational areas, beaches, as well as federal, state, and local historic preservation practices. Goals are provided for each chapter in Section 4. the Newport Comprehensive Harbor Management Plan Section Harbor Management Elements provides a section relating to public access elements identifying adequate access to the shore and contiguous water as necessary to meet the commercial and recreation needs of the state and tourism industry. An inventory of public access points is provided.
	NEW SHOREHAM	10	1	10.02	New Shoreham Comprehensive Plan			Town of New Shoreham Harbor Management Plan, Draft, 2020	The New Shoreham Comprehensive Plan was adopted in 2016. The comprehensive plan lists historical and cultural resources, natural resources, and recreation and conservation areas within the Town. The comprehensive plan lists goals, policies, and action items to protect historic resources, scenic landscapes, natural resources, and water resources. One location, the Great Sale Pond, which occurs in the ZVI, was listed as serving a central role in Block Island life, as one of the island's most significant natural features, recreational resources, and economic assets. One of the goals outlined in the plan (Goal NR3) is to protect Block Island's natural scenic coastline features. This goal is mostly centered around beach access and the encouragement of dune protection structures along with discouragement of private beach access structures. the Draft New Shoreham Harbor Management Plan under Section 3.0 Regulations discusses public access with an inventory of access locations provided in Appendix A to the document.

APPENDIX B

PHOTO LOG OF REPRESENTATIVE KEY OBSERVATION POINTS

KOP	LOCATION	State	KOP Selected for Visual Simulation	Distance to Nearest Turbine
LI01	Camp Hero State Park Overlook	New York	Selected	31.2
LI03	Ditch Plains Beach	New York	Candidate KOP	33.5
LI04	Montauk Point State Park	New York	Selected	30.6
LI09	Montauk Point East Overlook	New York	Candidate KOP	32.4
CI01	Cuttyhunk Island	Massachusetts	Selected	25.8
MM01	Gooseberry Island	Massachusetts	Selected	30.7
MM04	Nobska Lighthouse	Massachusetts	Selected	34.7
MM05	Horseneck Beach	Massachusetts	Candidate KOP	32.2
MM06	Demarest Lloyd State Park	Massachusetts	Selected	33.1
MM07	Fort Taber District	Massachusetts	Selected	37.8
MV01	Squibnocket Farm	Massachusetts	Candidate KOP	20.1
MV02	Philbin Beach	Massachusetts	Selected	21.0
MV03	Lucy Vincent Beach	Massachusetts	Selected	22.0
MV04	Gay Head Community Baptist Church	Massachusetts	Candidate KOP	21.4
MV05	Moshup Beach	Massachusetts	Selected	21.2
MV07	Aquinnah Overlook	Massachusetts	Selected	21.5
MV09	Gay Head Lighthouse	Massachusetts	Selected	21.6
MV10	South Beach State Park	Massachusetts	Selected	27.1
MV11	Wasque Point	Massachusetts	Selected	29.4
MV12	Peaked Hill	Massachusetts	Selected	22.9
MV13	Edwin D Vanderhoop	Massachusetts	Selected	21.5
NI09	Eel Point	Massachusetts	Candidate KOP	38.7
NI10	Madaket Beach	Massachusetts	Selected	37.0
NL01	Nomans Land Island	Massachusetts	Selected	15.6
AI01	Brenton Point State Park	Rhode Island	Selected	28.9
AI03	Newport Cliff Walk	Rhode Island	Selected	28.6
AI05	Sachuest Point National Wildlife Refuge	Rhode Island	Selected	29.8
AI06	Sachuest Beach (Second)	Rhode Island	Selected	30.9
AI07	Hanging Rock	Rhode Island	Selected	31.1
AI08	Rough Point Mansion	Rhode Island	Candidate KOP	28.8
AI09	Easton's Beach	Rhode Island	Selected	30.9
BI01	Island Cemetery	Rhode Island	Candidate KOP	19.2
BI02	Great Salt Pond	Rhode Island	Selected	20.1
BI04	Southeast Lighthouse	Rhode Island	Selected	16.9
BI06	New Shoreham Beach	Rhode Island	Selected	17.8
BI08	Fred Benson Beach	Rhode Island	Selected	19.0
BI12	Clayhead Trail	Rhode Island	Selected	19.5
BI13	North Light	Rhode Island	Candidate KOP	21.0
BI16	Mohegian Bluffs	Rhode Island	Selected	17.2
C01	Beavertail Lighthouse	Rhode Island	Selected	29.5
C02	Fort Wetherill State Park	Rhode Island	Candidate KOP	30.8
RI01	Watch Hill Lighthouse	Rhode Island	Selected	36.0
RI02	Weekapaug Breechway	Rhode Island	Selected	33.0

KOP	LOCATION	State	KOP Selected for Visual Simulation	Distance to Nearest Turbine
RI03	Point Judith Lighthouse	Rhode Island	Selected	25.7
RI04	South Shore Beach	Rhode Island	Selected	31.6
RI06	Trustom Pond NWR	Rhode Island	Selected	29.0
RI08	Scarborough Beach	Rhode Island	Selected	27.1
RI09	Narragansett Beach	Rhode Island	Selected	29.7
RI11	East Matanuck State Beach	Rhode Island	Selected	28.0
RI12	Ninigret National Wildlife Refuge	Rhode Island	Selected	30.5

KOP	KOP Name	Location	Identification Method
New York			
LI01	Camp Hero State Park Overlook	Town of East Hampton, Suffolk County, New York	Field Identified/Viewshed Analysis
LI04	Montauk Point State Park	Town of East Hampton, Suffolk County, New York	Evaluation of Visual Impact on Cultural Resources/Historic Properties: North Atlantic, Mid-Atlantic, South Atlantic, and Florida Straits (BOEM, 2012)
Massachusetts			
CI01	Cuttyhunk Island	Town of Gosnold, Dukes County, Massachusetts	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
MM01	Gooseberry Island	Town of Westport, Bristol County, Massachusetts	Field Identified/Viewshed Analysis
MM04	Nobska Lighthouse	Town of Falmouth, Barnstable County, Massachusetts	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
MM06	Demarest Lloyd State Park	Town of Dartmouth, Bristol County, Massachusetts	Field Identified/Viewshed Analysis
MM07	Fort Taber District	Town of New Bedford, Bristol County, Massachusetts	Field Identified/Viewshed Analysis

KOP	KOP Name	Location	Identification Method
MV02	Philbin Beach	Town of Aquinnah, Dukes County, Massachusetts	Wampanoag of Gay Head Aquinnah Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
MV03	Lucy Vincent Beach	Town of Chilmark, Dukes County, Massachusetts	Wampanoag of Gay Head Aquinnah Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
MV05	Moshup Beach	Town of Aquinnah, Dukes County, Massachusetts	Wampanoag of Gay Head Aquinnah Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
MV07	Aquinnah Overlook	Town of Aquinnah, Dukes County, Massachusetts	Wampanoag of Gay Head Aquinnah Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)

KOP	KOP Name	Location	Identification Method
MV09	Gay Head Lighthouse	Town of Aquinnah, Dukes County, Massachusetts	Wampanoag of Gay Head Aquinnah Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
MV10	South Beach State Park	Town of Edgartown, Dukes County, Massachusetts	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
MV13	Edwin D Vanderhoop	Town of Aquinnah, Dukes County, Massachusetts	Wampanoag of Gay Head Aquinnah Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
NI10	Madaket Beach	Town of Nantucket, Nantucket County, Massachusetts	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)

KOP	KOP Name	Location	Identification Method
NL01	Nomans Land Island	Town of Chilmark, Dukes County, Massachusetts	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
Rhode Island			
AI01	Brenton Point State Park	Town of Newport, Newport County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
AI03	Newport Cliff Walk	Town of Newport, Newport County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
AI05	Sachuest Point National Wildlife Refuge	Town of Middletown, Newport County, Rhode Island	Field Idenitified/Viewshed Analysis
AI06	Sachuest Beach (Second)	Town of Middletown, Newport County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
AI07	Hanging Rock	Town of Middletown, Newport County, Rhode Island	Field Idenitified/Viewshed Analysis

KOP	KOP Name	Location	Identification Method
AI09	Easton's Beach	Town of Newport, Newport County, Rhode Island	Field Idenitified/Viewshed Analysis
BI02	Great Salt Pond	Town of New Shoreham, Washington County, Rhode Island	Field Idenitified/Viewshed Analysis
BI04	Southeast Lighthouse	Town of New Shoreham, Washington County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
BI06	New Shoreham Beach	Town of New Shoreham, Washington County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
BI08	Fred Benson Beach	Town of New Shoreham, Washington County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
BI12	Clayhead Trail	Town of New Shoreham, Washington County, Rhode Island	Field Idenitified/Viewshed Analysis

KOP	KOP Name	Location	Identification Method
BI16	Mohegan Bluffs	Town of New Shoreham, Washington County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
C01	Beavertail Lighthouse	Town of Jamestown, Newport County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
RI01	Watch Hill Lighthouse	Town of Westerly, Washington County, Rhode Island	Evaluation of Visual Impact on Cultural Resources/Historic Properties: North Atlantic, Mid-Atlantic, South Atlantic,and Florida Straits (BOEM, 2012)
RI02	Weekapaug Breachway	Town of Westerly, Washington County, Rhode Island	Field Idenitified/Viewshed Analysis
RI03	Point Judith Lighthouse	Town of Narragansett, Washington County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
RI04	South Shore Beach	Town of Little Compton, Newport County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)

KOP	KOP Name	Location	Identification Method
RI06	Trustom Pond NWR	Town of South Kingstown, Washington County, Rhode Island	Field Idenitified/Viewshed Analysis
RI08	Scarborough Beach	Town of Narragansett, Washington County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
RI09	Narragansett Beach	Town of Narragansett, Washington County, Rhode Island	Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts Environmental Assessment (BOEM, 2012). Visualization Simulations for Offshore Massachusetts and Rhode Island Wind Energy Area (BOEM, 2017)
RI11	Matunuck Beach	Town of South Kingstown, Washington County, Rhode Island	Field Identified/Viewshed Analysis
RI12	Ninigret National Wildlife Refuge	Town of Charlestown, Washington County, Rhode Island	Field Identified/Viewshed Analysis

KOP Selection Criteria								
KOP ID	**KOP Name**	Identified by federal, state, local, or tribal officials/agencies.	KOPs that provide clear, unobstructed views toward the SRWF site.	Representative of the most open views available from historic sites, designated scenic areas, and other visually sensitive resources.	Representative of a larger group of candidate KOPs of the same type or in the same geographic area.	Represents typical views from LSZs where views of the Project are most likely to be available.[7]	Representative of viewer/user groups within the ZVI.	Typical views from a variety of geographic locations and under different lighting conditions.
LI01	Camp Hero State Park Overlook		•	•	•	•	•	
LI04	Montauk Point State Park	•	•	•	•		•	•
CI01	Cuttyhunk Island	•	•	•			•	•
MM01	Gooseberry Island			•	•		•	•
MM04	Nobska Lighthouse	•	•	•			•	
MM06	Demarest Lloyd State Park			•	•		•	
MM07	Fort Taber District			•	•		•	
MV02	Philbin Beach	•	•	•	•		•	
MV03	Lucy Vincent Beach	•		•	•		•	•
MV05	Moshup Beach	•	•	•	•	•	•	
MV07	Aquinnah Overlook	•	•	•			•	•
MV09	Gay Head Lighthouse	•	•	•			•	•
MV10	South Beach State Park	•	•	•	•		•	
MV11	Wasque Point	•	•	•	•		•	
MV12	Peaked Hill	•				•	•	•
MV13	Edwin D Vanderhoop	•		•			•	

KOP Selection Criteria								
KOP ID	KOP Name	Identified by federal, state, local, or tribal officials/agencies.	KOPs that provide clear, unobstructed views toward the SRWF site.	Representative of the most open views available from historic sites, designated scenic areas, and other visually sensitive resources.	Representative of a larger group of candidate KOPs of the same type or in the same geographic area.	Represents typical views from LSZs where views of the Project are most likely to be available.[7]	Representative of viewer/user groups within the ZVI.	Typical views from a variety of geographic locations and under different lighting conditions.
NI10	Madaket Beach	•	•	•	•		•	•
NL01	Nomans Land Island	•	•	•			•	•
AI01	Brenton Point State Park	•	•	•	•		•	•
AI03	Newport Cliff Walk	•	•	•	•	•	•	
AI05	Sachuest Point National Wildlife Refuge		•	•	•		•	
AI06	Sachuest Beach (Second)			•	•		•	
AI07	Hanging Rock		•	•			•	
AI09	Easton's Beach	•	•	•	•		•	
BI02	Great Salt Pond			•	•	•	•	
BI04	Southeast Lighthouse	•	•	•	•		•	•
BI06	New Shoreham Beach		•	•	•		•	
BI08	Fred Benson Beach	•	•	•	•		•	
BI12	Clayhead Trail	•	•	•	•		•	
BI16	Mohegan Bluffs	•	•	•	•		•	
C01	Beavertail Lighthouse	•	•	•	•		•	•
RI01	Watch Hill Lighthouse		•	•			•	

KOP Selection Criteria								
KOP ID	**KOP Name**	Identified by federal, state, local, or tribal officials/agencies.	KOPs that provide clear, unobstructed views toward the SRWF site.	Representative of the most open views available from historic sites, designated scenic areas, and other visually sensitive resources.	Representative of a larger group of candidate KOPs of the same type or in the same geographic area.	Represents typical views from LSZs where views of the Project are most likely to be available.[7]	Representative of viewer/user groups within the ZVI.	Typical views from a variety of geographic locations and under different lighting conditions.
RI02	Weekapaug Breachway				•		•	•
RI03	Point Judith Lighthouse	•	•	•	•		•	
RI04	South Shore Beach	•	•	•	•	•	•	
RI06	Trustom Pond NWR		•	•		•	•	•
RI08	Scarborough Beach	•	•	•	•		•	
RI09	Narragansett Beach	•	•	•	•		•	
RI11	Matunuck Beach		•	•	•	•	•	
RI12	Ninigret National Wildlife Refuge			•	•		•	

Sunrise Wind | Powered by Ørsted & Eversource

Attachment 8.5-1

Visibility Study Simulations (from New York State)

Camp Hero State Park Overlook

Viewpoint Information

County: Suffolk

Town: East Hampton

State: New York

Location: Long Island

Coordinates: 41.05725° N, 71.87172° W

Direction of View: East-Southeast (102.9°)

Distance to Nearest Visible Turbine: 31.2 miles

Visual Resources

Landscape Similarity Zone: Shoreline Bluffs

User Group: Resident, Tourist

Aesthetic Resource: Camp Hero State Park, Montauk Point, Montauk Point State Area of Scenic Significance

Notes: The Block Island Wind Farm is 17.8 miles from this location. Visibility was documented during field review.

Environmental Data

Date Illustrated: 9/11/2017

Time: 5:15 PM

Temperature: 62.6 °F

Humidity: 82%

Visibility: >10 miles

Wind Direction: Calm

Wind Speed: Calm

Conditions Observed: Clear

Camera Information

Camera: Canon EOS 5D Mark IV

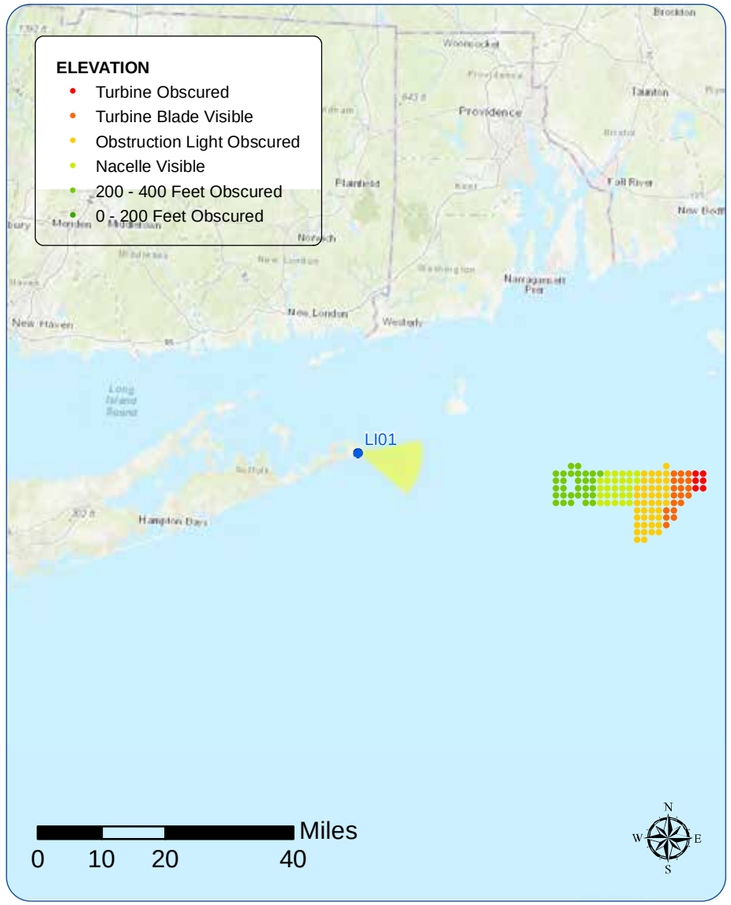
Resolution: 30.4 Megapixels

Lens Focal Length: 50 mm

Camera Height: 89.7 feet AMSL

Viewing Instructions:

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance 21 inches.



Context Photo: View to the North-Northeast

Context Photo: View to the East-Northeast

Simulation Photo: View to the East-Southeast

Context Photo: View to the South-Southeast

Sunrise Wind | Powered by Ørsted & Eversource

Existing Conditions

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Sunrise Wind

0 1 in 2 in

This scale is designed to insure the simulation images are printed at the intended size.

Sunrise Wind Farm Project

Outer Continental Shelf

Viewpoint LI01: View from Camp Hero State Park Overlook

Appendix C: Sheet 2 of 178

Simulation

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Sunrise Wind

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Sunrise Wind Farm Project

Outer Continental Shelf

Viewpoint LI01: View from Camp Hero State Park Overlook

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Montauk Point State Park

Viewpoint Information

County: Suffolk

Town: East Hampton

State: New York

Location: Long Island

Coordinates: 41.07208° N, 71.85901° W

Direction of View: East (100.1°)

Distance to Nearest Visible Turbine: 30.6 miles

Visual Resources

Landscape Similarity Zone: Maintained Recreation Area

User Group: Local Residents, Tourists/Vacationers, Fishing Community

Aesthetic Resource: Montauk Point State Scenic Area, Montauk Point Scenic Area of State Significance, Montauk Point State Park, Other Public State of New York Lands, Montauk Point Lighthouse

Notes: The Block Island Wind Farm is 17.0 miles from this location. Visibility was documented during field review.

Environmental Data

Date Illustrated: 9/11/2017

Time: 7:01 PM

Temperature: 62.6 °F

Humidity: 82%

Visibility: >10 miles

Wind Direction: Calm

Wind Speed: 0 mph

Conditions Observed: Clear

Camera Information

Camera: Canon EOS 5D Mark IV

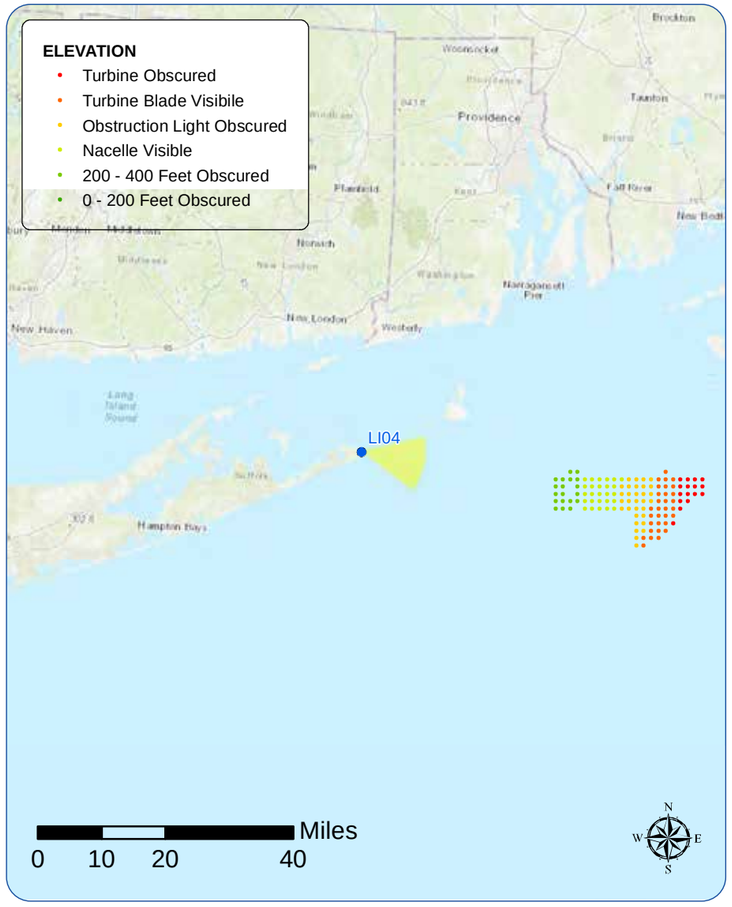
Resolution: 30.4 Megapixels

Lens Focal Length: 50 mm

Camera Height: 48.0 feet AMSL

Viewing Instructions:

Printed at 100% the resulting simulation size is 15 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed from a distance 21 inches.



Context Photo: View to the East-Northeast

Simulation Photo: View to the East

Context Photo: View to the South-Southeast

Context Photo: View to the South

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Existing Conditions

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Sunrise Wind

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Sunrise Wind Farm Project

Outer Continental Shelf

Viewpoint LI04: View from Montauk Point State Park, East Hampton

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Simulation

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Sunrise Wind Farm Project

Outer Continental Shelf

Viewpoint LI04: View from Montauk Point State Park, East Hampton

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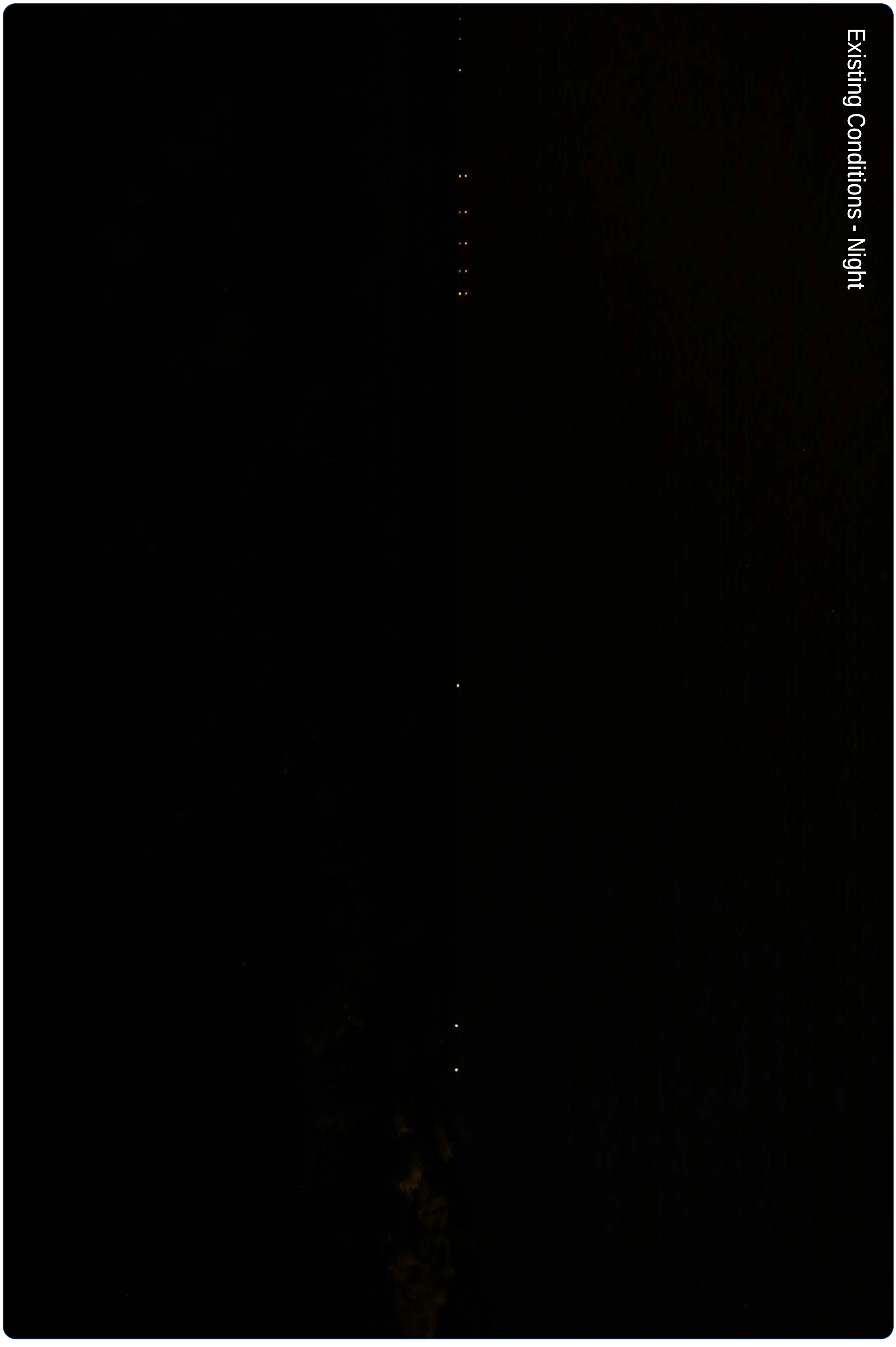
Existing Conditions - Night



Sunrise Wind Farm Project

Outer Continental Shelf

Viewpoint LI04: View from Montauk Point State Park, East Hampton

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0 1 in 2 in

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Sunrise Wind

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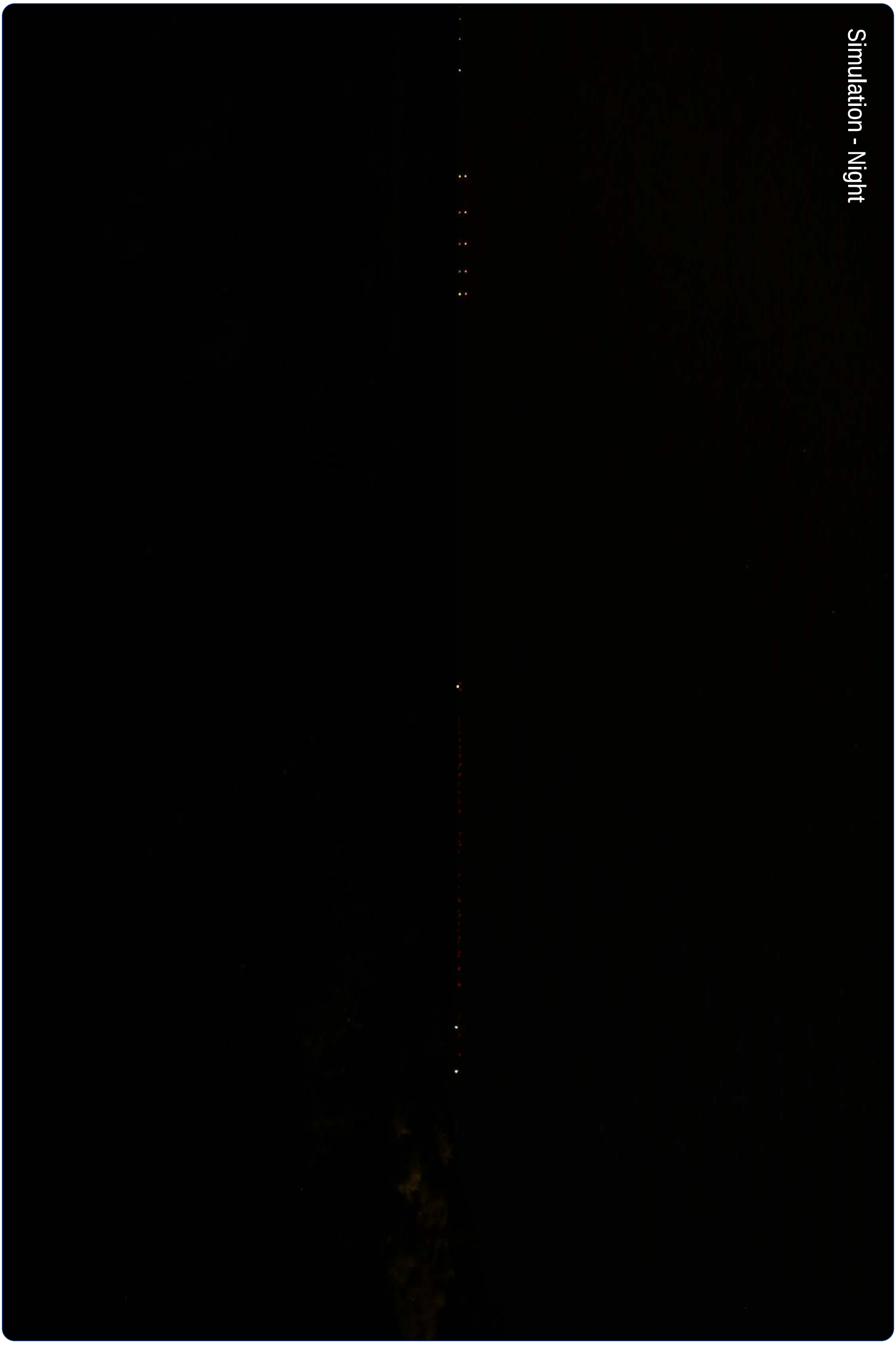

Sunrise Wind Farm Project
Outer Continental Shelf
Viewpoint LI04: View from Montauk Point State Park, East Hampton
Appendix C: Sheet 8 of 178

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Sunrise Wind

Powered by Ørsted & Eversource

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[redacted]

Portions of this proposal contain confidential, proprietary, and/or commercially sensitive information which has been redacted from the "Public Version" of this proposal. Sunrise Wind LLC has submitted a Confidential Version of this proposal which includes the redacted information, and which should be treated as a non-public record that is exempt from disclosure to the extent permitted under applicable laws and/or as expressly set forth in the Request for Proposals.

[redacted]