



VIA Appendix A

Computer-Based Viewshed Analysis

Ocean Wind Visual Impact Assessment Report

1 March 2021

**COMPUTER-BASED
VIEWSHED ANALYSIS**

VIEWSHED MAP 1

**Potential Visibility Of
Turbine Blade Tips
Using Only
Topographic Data**

LEGEND

- Proposed Turbine Location
- Proposed Offshore Substation Location
- - - 40-Mile Study Area Boundary
- Area of Potential Blade Tip Visibility Based on DTM

ANALYSIS NOTES

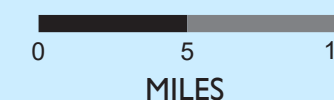
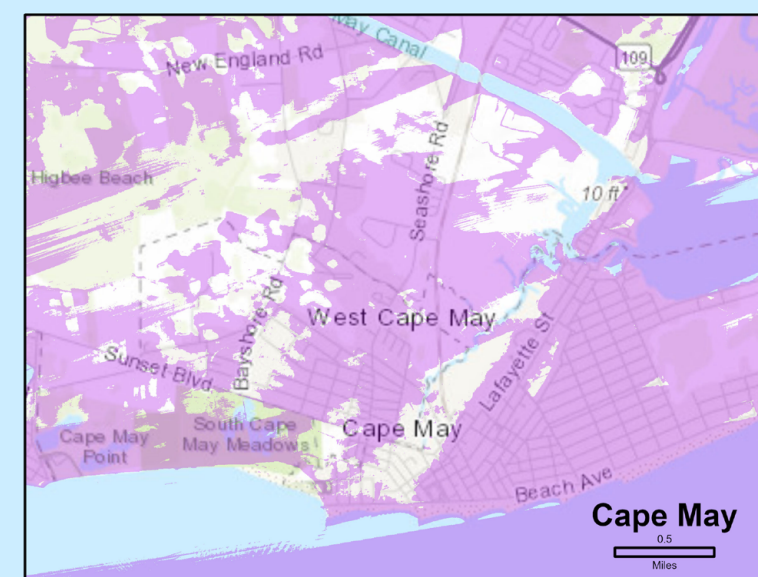
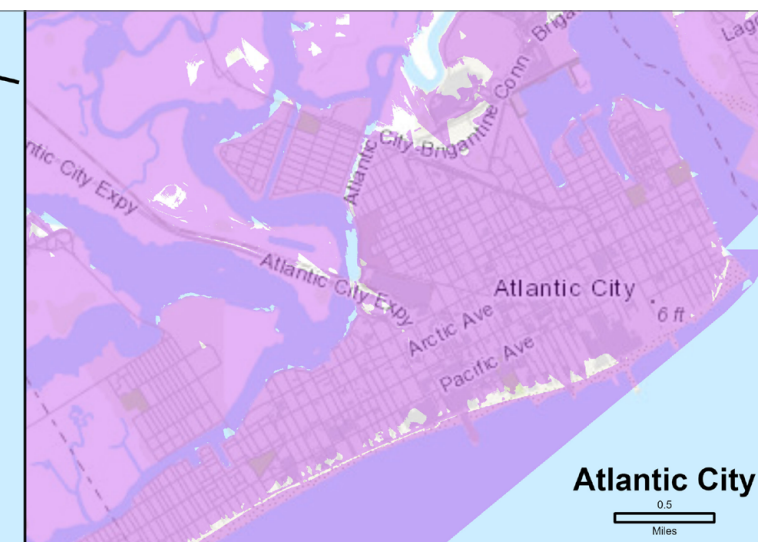
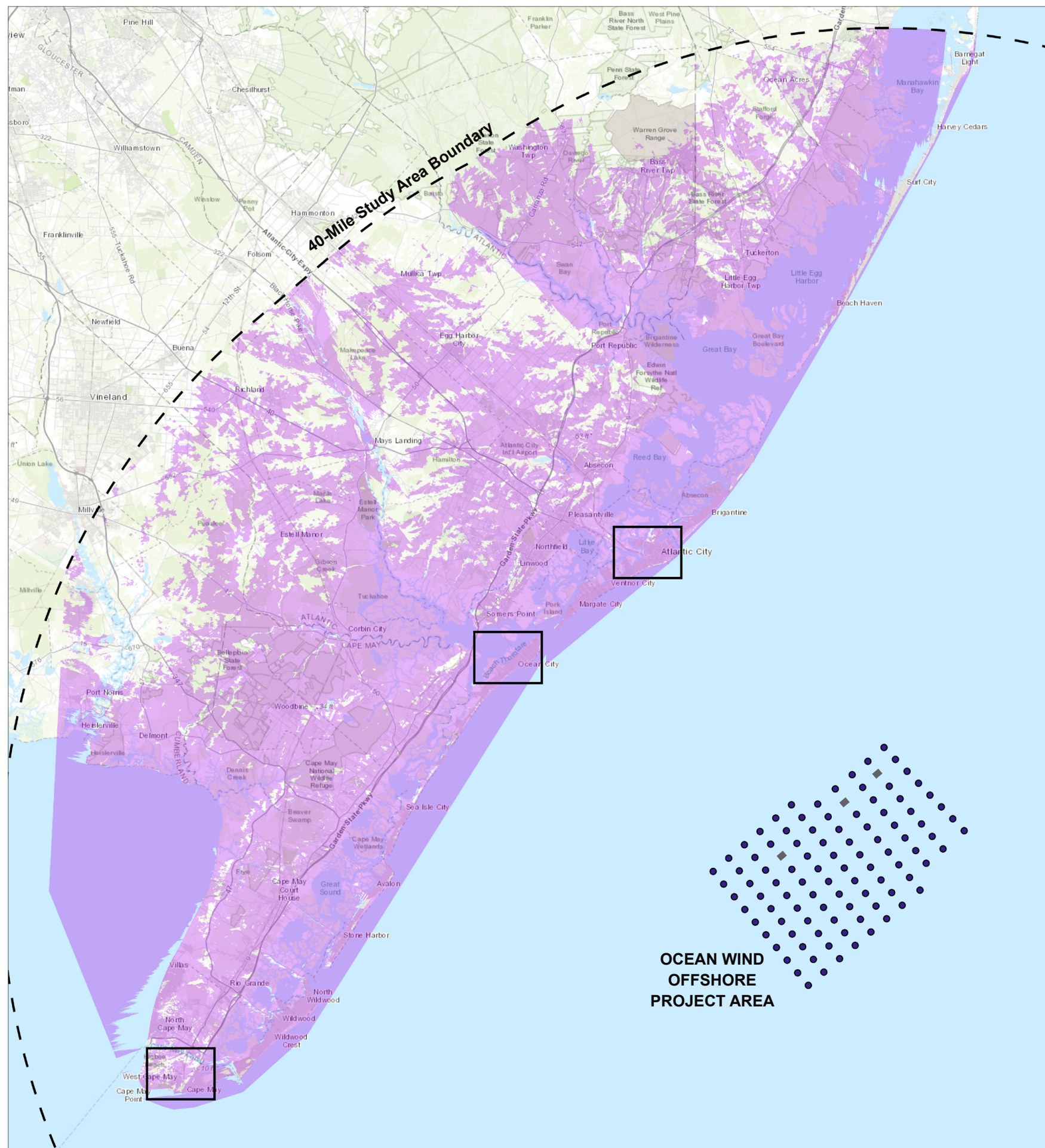
Map shows potential areas of visibility for offshore turbine blade tips, relying on the screening effects of topography alone (without accounting for vegetation and structures such as buildings).

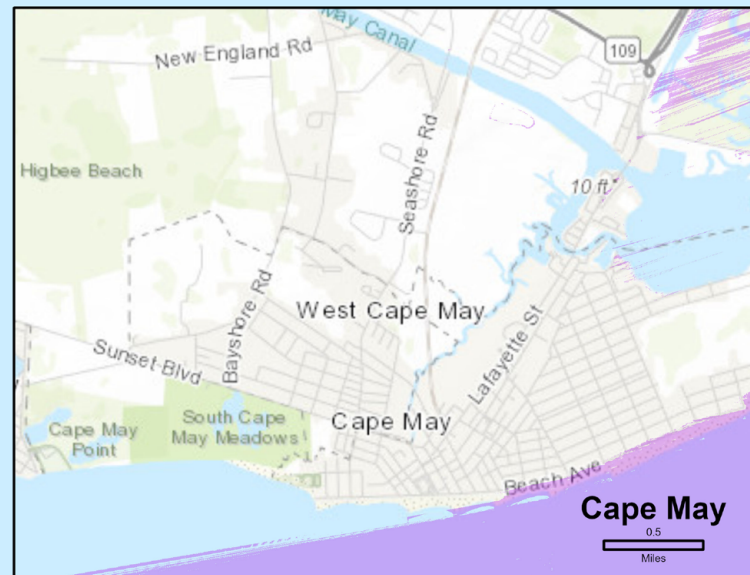
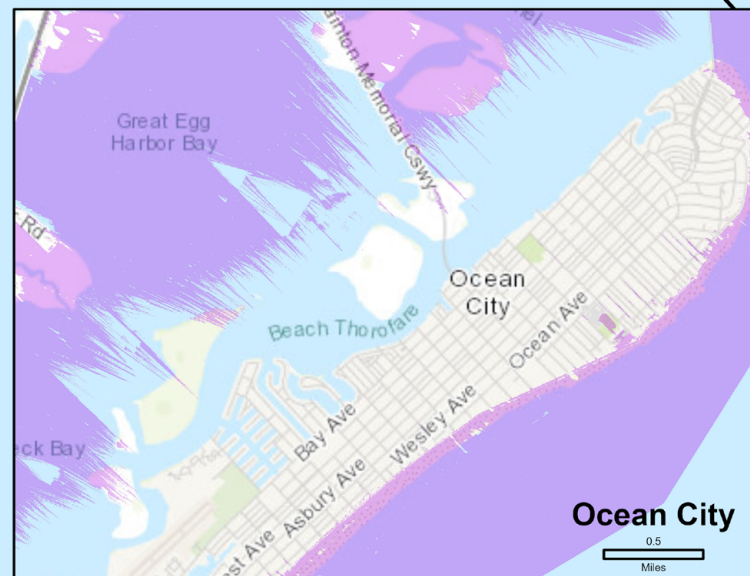
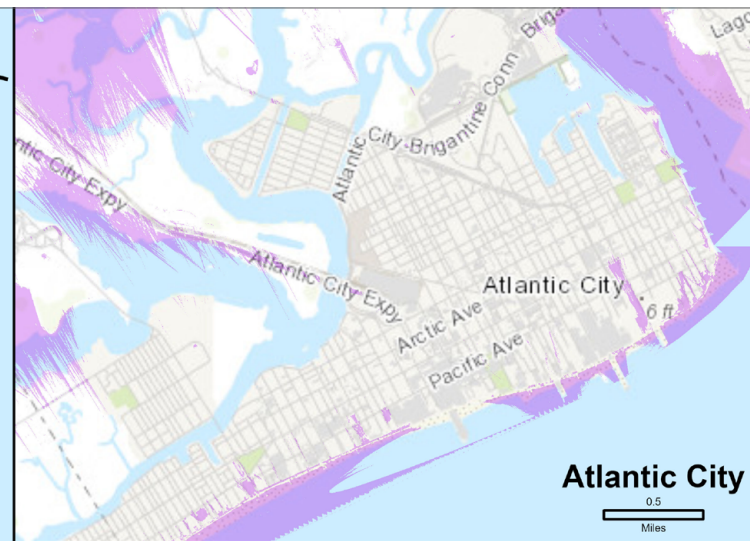
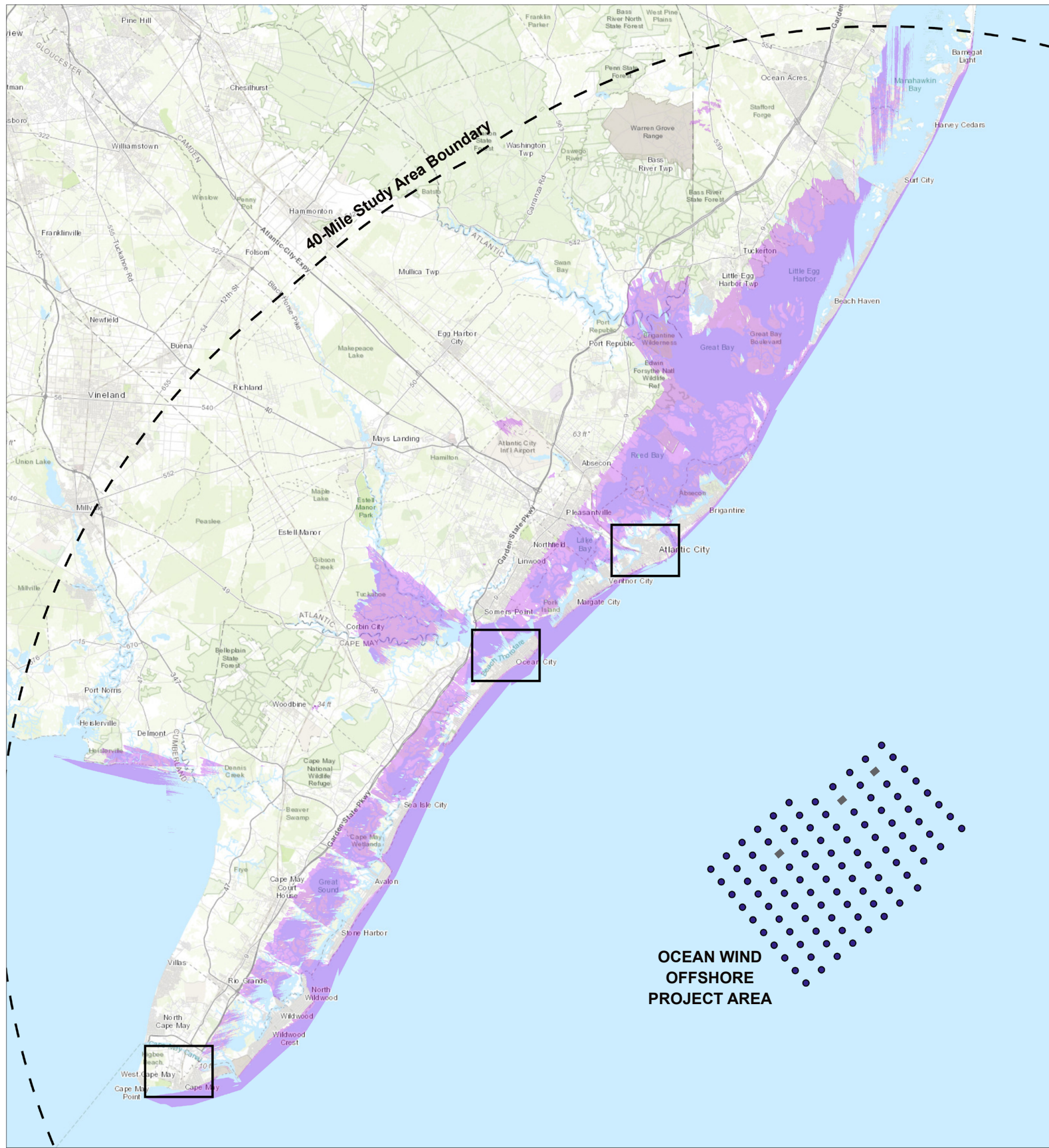
The analysis is based on a Digital Terrain Model (DTM) processed at 10-foot resolution from first return LiDar point cloud data acquired from the USGS National Map. The viewer height is set at 5ft above ground level elevation.

The purple areas represent where a viewer may see at least one turbine blade tip without intervening surface data.

The analysis does not determine the degree of visibility based on distance or the number of visible turbines. It does not take into account visual acuity or atmospheric conditions. Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

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COMPUTER-BASED VIEWSHED ANALYSIS

VIEWSHED MAP 2

Potential Visibility Of Turbine Blade Tips Using Topographic + Surface Data

LEGEND

- Proposed Turbine Location
- Proposed Offshore Substation Location
- - - 40-Mile Study Area Boundary
- Area of Potential Blade Tip Visibility Based on DTM + DSM

ANALYSIS NOTES

Map shows potential areas of visibility for offshore turbine blade tips, relying on the screening effects of both topography and surface data (accounting for vegetation and structures such as buildings). This analysis map represents the Area of Potential Visibility (APVI) as defined in the VIA.

The analysis is based on a Digital Terrain Model (DTM) processed at 10-foot resolution from first return LiDAR point cloud data acquired from the USGS National Map. The viewer height is set at 5ft above ground level elevation.

The purple areas represent where a viewer may see at least one turbine blade tip when accounting for intervening surface data.

The analysis does not determine the degree of visibility based on distance or the number of visible turbines. It does not take into account visual acuity or atmospheric conditions. Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.



COMPUTER-BASED VIEWSHED ANALYSIS

VIEWSHED MAP 3

Potential Visibility Of Turbine Blade Tips / Hubs Using Topographic + Surface Data

LEGEND

- Proposed Turbine Location
- Proposed Offshore Substation Location
- - - 40-Mile Study Area Boundary
- Area of Potential Blade Tip Visibility Based on DTM + DSM (hubs not visible in this area)
- Area of Potential Hub Visibility Based on DTM + DSM (blades also visible in this area)

ANALYSIS NOTES

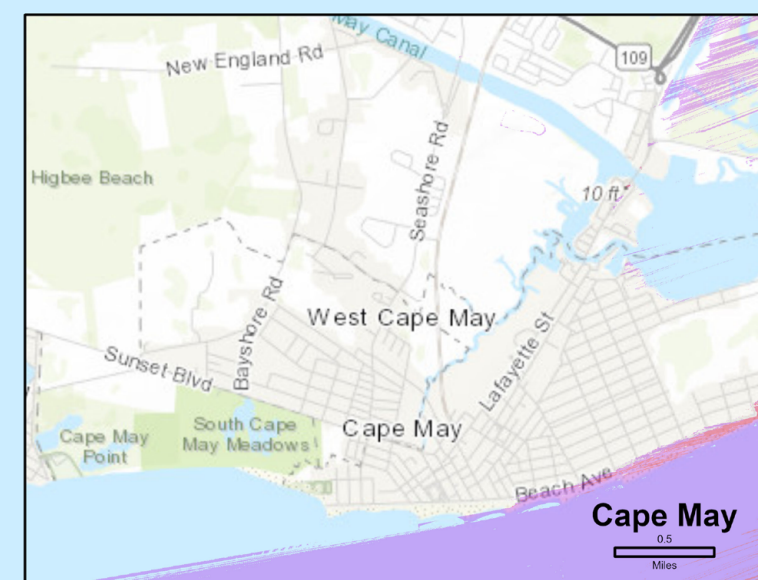
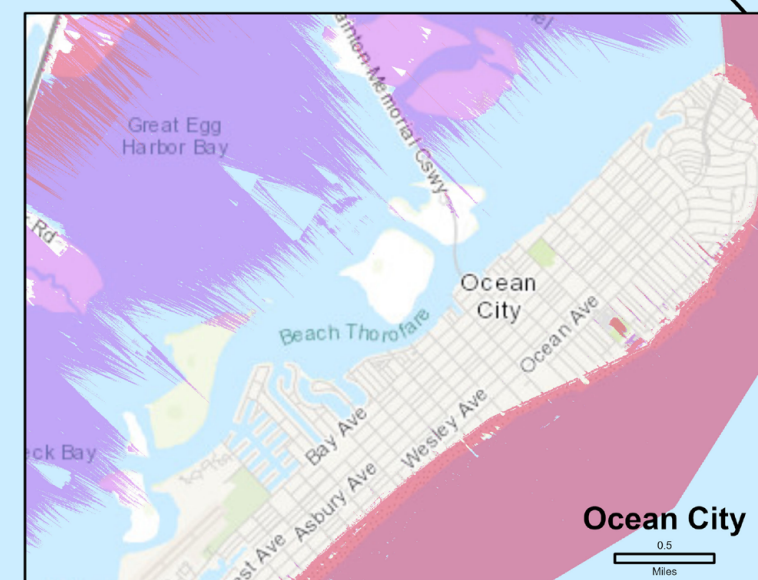
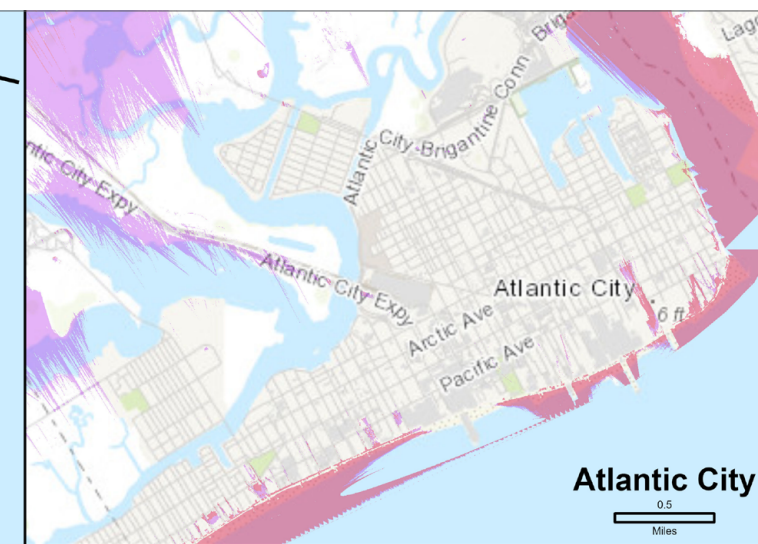
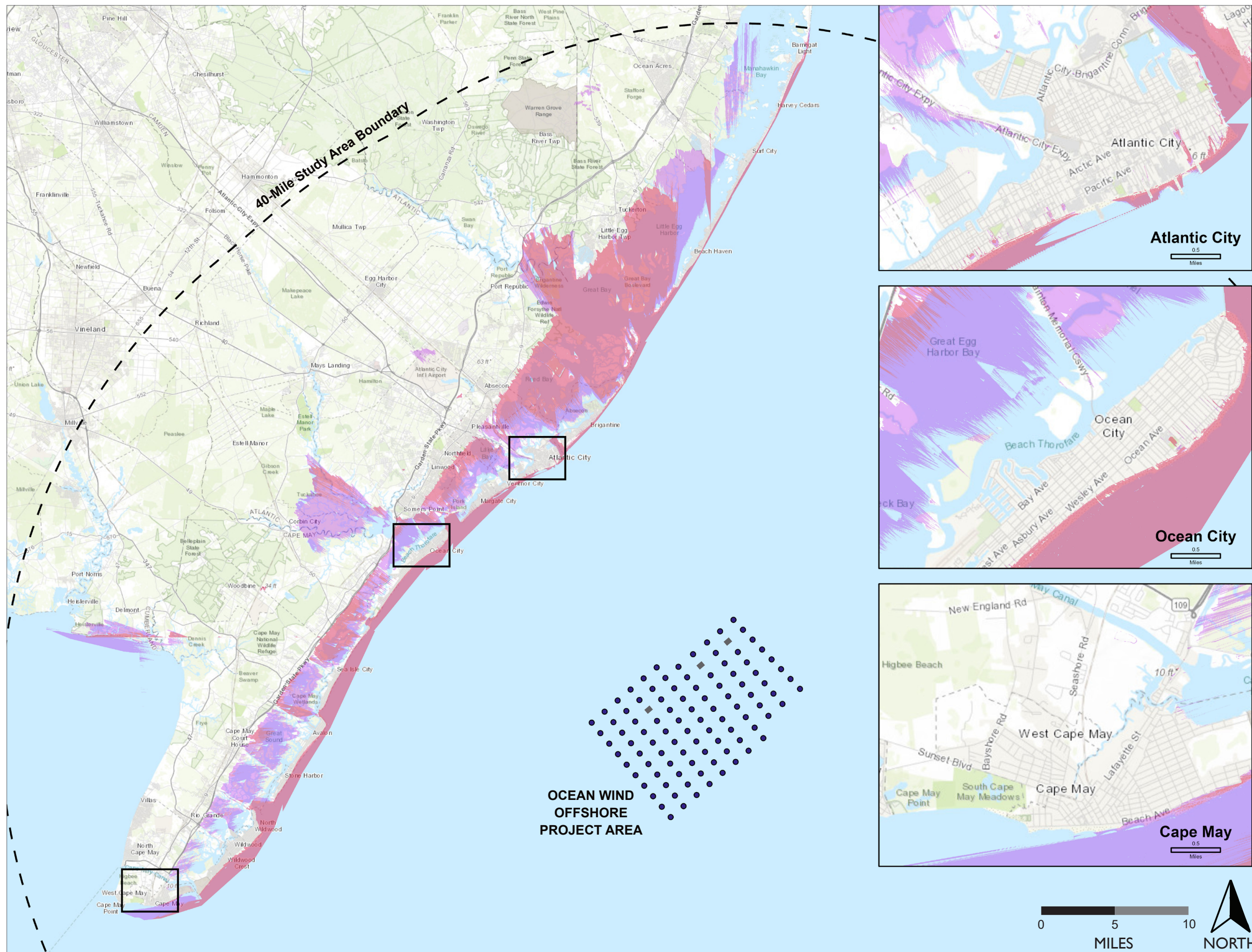
Map shows potential areas of visibility for both offshore turbine hubs and blade tips. The analysis relies on the screening effects of both topography and surface data (accounting for vegetation and structures such as buildings).

The analysis is based on a Digital Terrain Model (DTM) processed at 10-foot resolution from first return LiDAR point cloud data acquired from the USGS National Map. The viewer height is set at 5ft above ground level elevation.

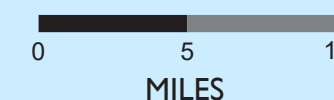
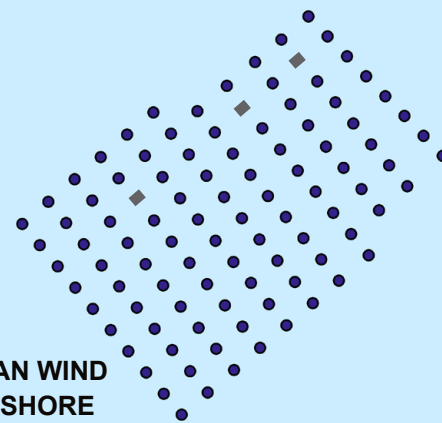
The areas of potential hub visibility (pink) are presumed to also have visibility of blade tips. The areas of potential visibility of blade tips alone (purple) do not have visibility of the turbine hubs.

The analysis does not determine the degree of visibility based on distance or the number of visible turbines. It does not take into account visual acuity or atmospheric conditions. Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

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**OCEAN WIND
OFFSHORE
PROJECT AREA**



**COMPUTER-BASED
VIEWSHED ANALYSIS**

VIEWSHED MAP 4

**Potential Visibility Of
Transmission Line/Lightning
Masts at Oyster Creek
Substation Using Topographic +
Surface Data**

LEGEND

- Proposed Transmission Structure or Lightning Mast
- Substation Property Boundary
- 1-Mile Substation Study Area Boundary
- Area of Potential Transmission Structure/ Lightning Mast Visibility Based on DTM + DSM

ANALYSIS NOTES

Map shows potential areas of visibility for the proposed above ground transmission structures and lightning masts associated with onshore substation. The viewshed analysis relies on the screening effects of both topography and surface data (accounting for vegetation and structures such as buildings). This analysis map represents the Area of Potential Visibility (APVI) of the transmission structures and lightning masts, as defined in the VIA.

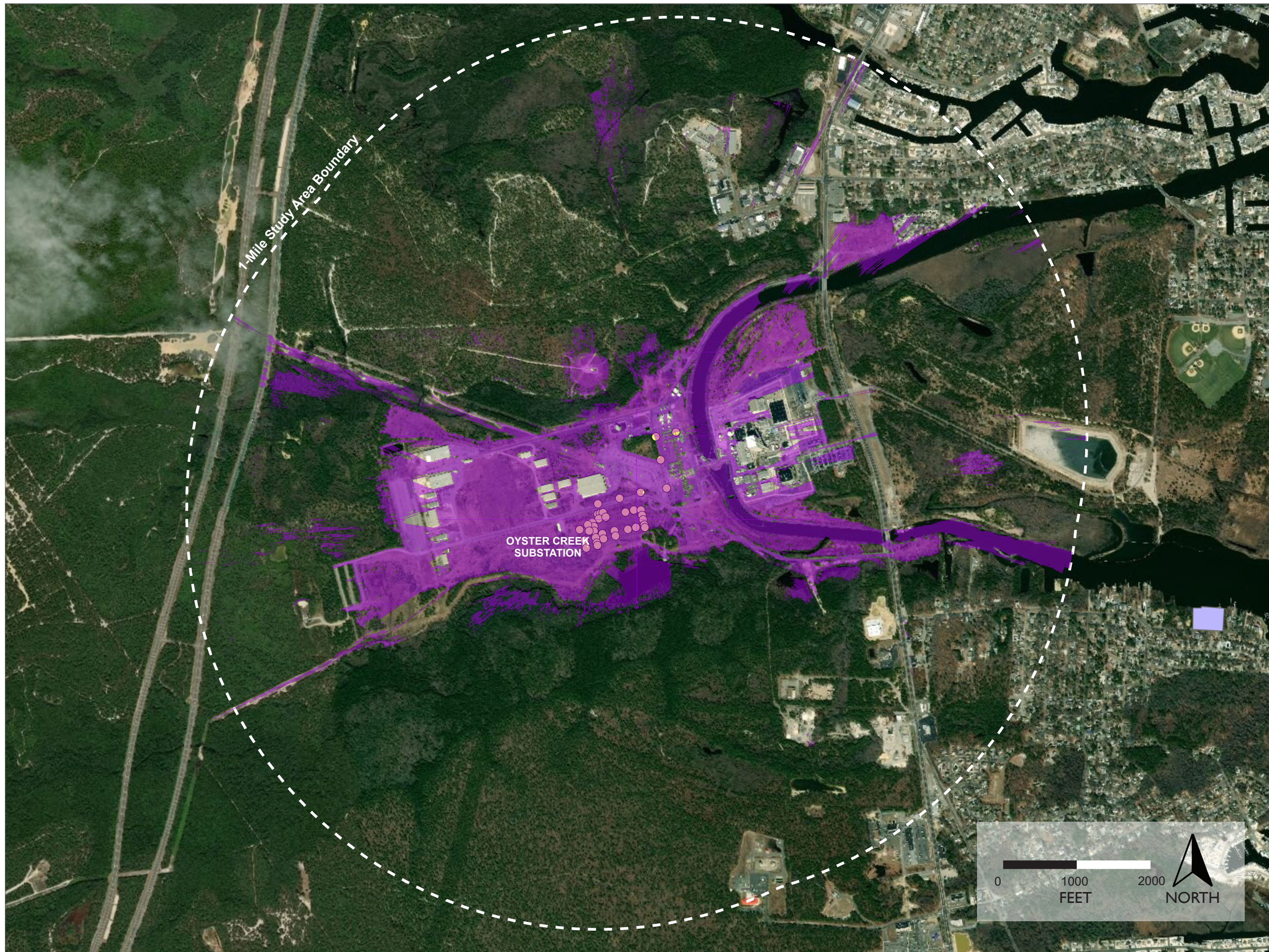
The analysis is based on a Digital Terrain Model (DTM) processed at 10-foot resolution from first return LiDar point cloud data acquired from the USGS National Map. The viewer height is set at 5 ft above ground level elevation.

The purple areas represent where a viewer may see the very top of the transmission structures (located at up to 115 ft above ground level) and lightning masts (up to 98 ft high) when accounting for intervening surface data.

The analysis does not determine the degree of visibility based on distance or the number of visible vertical structures. It does not take into account visual acuity or atmospheric conditions. Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

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**COMPUTER-BASED
VIEWSHED ANALYSIS**

VIEWSHED MAP 5

**Potential Visibility Of
Transmission Line/Lightning
Masts at BL England Substation
Using Topographic + Surface
Data**

LEGEND

-  Proposed Transmission Structure or Lightning Mast
-  Substation Property Boundary
-  1-Mile Substation Study Area Boundary
-  Area of Potential Transmission Structure/ Lightning Mast Visibility Based on DTM + DSM

ANALYSIS NOTES

Map shows potential areas of visibility for the proposed above ground transmission structures and lightning masts associated with onshore substation. The viewshed analysis relies on the screening effects of both topography and surface data (accounting for vegetation and structures such as buildings). This analysis map represents the Area of Potential Visibility (APVI) of the transmission structures and lightning masts, as defined in the VIA.

The analysis is based on a Digital Terrain Model (DTM) processed at 10-foot resolution from first return LiDar point cloud data acquired from the USGS National Map. The viewer height is set at 5 ft above ground level elevation.

The purple areas represent where a viewer may see the very top of the transmission structures (located at up to 115 ft above ground level) and lightning masts (up to 98 ft high) when accounting for intervening surface data.

The analysis does not determine the degree of visibility based on distance or the number of visible vertical structures. It does not take into account visual acuity or atmospheric conditions. Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

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