

Submerged Cultural Resources

Overview:

The Mid-Atlantic Power Pathway (MAPP) is part of the solution to provide reliable, cost-effective electricity to the Mid-Atlantic region. Pepco and Delmarva Power plan to build the line from northern Virginia, across southern Maryland, under the Chesapeake Bay and Choptank River, ending in Delaware.

Delmarva Power and Pepco understand that there will be questions about the measures taken to protect the environment during construction of this new line and are taking a comprehensive approach to planning. Before construction begins, environmental and archeological studies in the Bay, wetlands and other sensitive areas will be completed.

Studies:

Delmarva Power and Pepco have conducted extensive reviews of historical documents, field investigations, and agency consultations to identify potential cultural and historic resources in the project area, both in the water and on land.

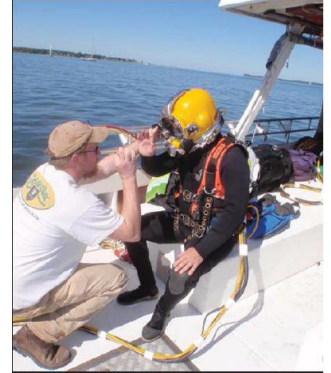
The waterbodies studied included the Potomac River, Patuxent River, Chesapeake Bay, Choptank River, and Nanticoke River.



Historic map of a section of the Choptank River. Historic maps are one tool used to identify resources.



Bay survey vessel



Diver preparing for a survey

Existing documentation was reviewed and geophysical surveys performed to identify potential submerged cultural resources within the waterbodies being crossed. As a result, areas were identified that potentially contain submerged resources. Further analysis of these areas was conducted to validate the initial findings. In some cases divers were used to locate the potential resources and determine their value.

Existing documentation that was reviewed included, but was not limited to, the National Oceanic and Atmospheric Administration (NOAA) wreck and obstruction information system, nautical charts, historic maps, vessel directories, archaeological reports, and shipwreck lists.

Examples of geophysical surveys used to identify submerged resources included:

- Side scan sonar survey - uses sound imaging which provides an understanding of the difference in material and texture of the seabed
- Subbottom profile survey - uses sound imaging to identify and measure various sediment layers and possible buried obstructions beneath the seabed
- Magnetic intensity survey - measures the variations in the magnetic field to identify iron and other magnetic objects on and below the seabed

In the Potomac and Patuxent Rivers the study area was 700 feet wide. In the Chesapeake Bay and Choptank River the study area was 300 feet wide. In the Nanticoke River the study area was 1,000 feet wide. Review of existing documentation was performed in all the waterbodies. In addition, diving assessments were performed in the Chesapeake Bay and Choptank River.

Submerged Cultural Resources

Based on extensive research and studies, submerged cultural resources were identified and protective measures were determined to avoid, minimize and/or mitigate impacts to these resources.

Results of Submerged Resource Studies

- No impacts to submerged cultural resources are expected as a result of construction

Potomac River

- 11 potential targets were identified within the study corridor
- 1 location may represent a submerged resource, of which a 200 foot avoidance zone has been established
- NOAA recently discovered a potential shipwreck adjacent to the Potomac River study area, of which a 200 foot avoidance zone has been established

Patuxent River

- 7 potential targets were identified within the study corridor
- 1 location may represent a submerged resource, of which a 200 foot avoidance zone has been established

Chesapeake Bay and Choptank River

- 23 potential targets were initially identified in the 39 mile, 300 foot wide submarine cable route study corridor
- 13 of these targets initially appeared to have submerged cultural resources
- 1 location proved to be a submerged cultural resource; a historic shipwreck of which the submarine cable route was adjusted to avoid

Nanticoke River

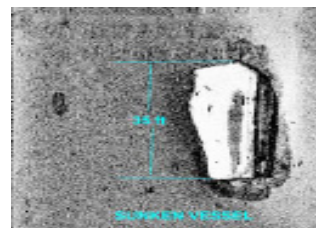
- No submerged resources were identified within the study corridor

Steps To Avoid, Mimize, or Mitigate Impacts¹

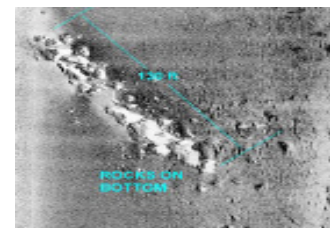
- Consultation with agencies occurred to determine the location of known archaeological sites and the best means to avoid, minimize, or mitigate impacts
- Design modifications were made to avoid and minimize impacts
- Avoidance zones were established for construction
- A 'Discovery Plan' has been prepared in the event of an unexpected discovery of a submerged cultural resource

¹All mitigation measures will comply with regulatory agency

Sonar surveys of the waterways were used to identify submerged resources. Below are results from the surveys.



Sunken Vessel



Rocks on Bottom

For more information see the following:

1. Volume III (Chesapeake Bay and Choptank River Analysis) Section 3.11 of the Chalk to Indian River Environmental Resource Document (ERD).
 2. Section 4.11 (Cultural Resources) of the Potomac River Crossing ERD
 3. Volume II, Section 1.11 (Cultural Resources) of the Chalk Substation to MD/DE State Line ERD
- The ERD's can be viewed at the Maryland Public Service Commission website, www.psc.state.md.us

MAPP is case number 9179; The ERD's are entries 1 and 180