2021 Chester-Choptank Watershed Wetland Health Report

B

About the Watershed

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

The Delaware portion of the Chester-Choptank watershed is located in New Castle and Kent County, where it encompasses 113,944 acres (178 square miles) of land. It is composed of 12 sub-watersheds, and the entire Chester-Choptank watershed continues to the west into Maryland. Unlike most of Delaware's watersheds, the Chester-Choptank feeds the Chesapeake Bay. However, this report card only covers the Delaware portions.

By 2007, 25,024 acres of the watershed's historic wetlands, or 39% of historic wetland acreage, had been lost, mostly due to land conversion such as residential development. If wetland acreage decreases and community types change, then there are fewer natural wetlands to perform vital ecosystem services to people and wildlife.

Overall, the Chester-Choptank watershed's wetlands received a B for their health score. Common wetland stressors were residential development, agriculture, selective cut harvesting, and the presence of invasive species.

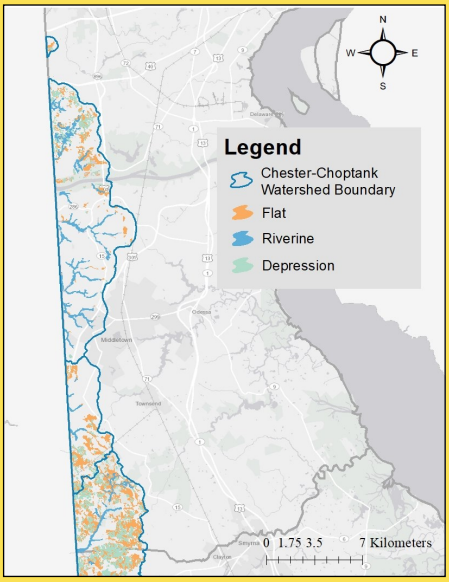
A very wet depression in the Chester-Choptank Watershed

How Are Wetlands Graded?

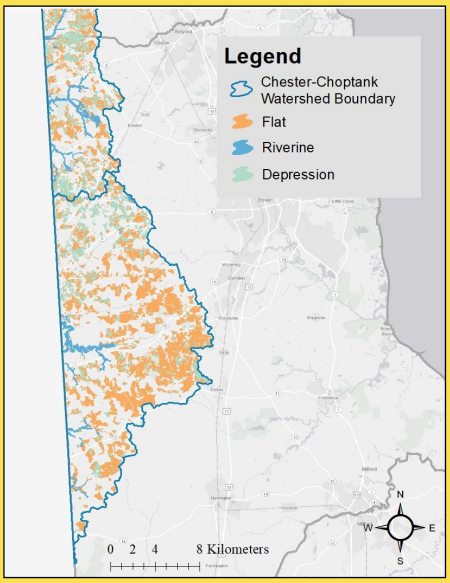
There are many different types of wetlands in Delaware, and to accurately grade their health, they are broken into two categories based on how they receive their water supply: tidal wetlands and non-tidal wetlands.

In the Chester-Choptank watershed, only non-tidal wetlands were assessed. The watershed is a headwater region of the Chesapeake Bay, which means it is too far inland for tidal wetlands to be present. Non-tidal wetlands are all freshwater in Delaware and include riverine, flat and depression wetlands. They receive their water from rain, snow and underground springs. The Delaware Rapid Assessment Procedure (DERAP) is used to grade them. This procedure looks for a variety of environmental indicators, such as disturbances to the plant community or the natural flow of water, to assess the general condition of a wetland site.

In this method, biologists look for and tally living and non-living stressors (also called environmental indicators) that prevent a wetland from functioning properly. **Throughout the Chester-Choptank watershed, a total of 76 sites were assessed and graded in 2018.**



New Castle County portion of the watershed



Kent County portion of the watershed

Environmental Indicators of Wetland Health

Wetland Habitat

Habitat indicators that cause a wetland's grade to decline include: forest harvesting, mowing, farming or grazing of the land, invasive species, and roads through the wetland.

The most common stressors to habitat in this watershed were selective tree cutting and invasive species, such as multiflora rose or Japanese stiltgrass.

Wetland Hydrology

Changes to water movement can cause a wetland's grade to decline. Indicators include: ditching, stream alterations, dams, stormwater inputs, and filling or excavation.

The most common stressors to hydrology in this watershed were ditching for added drainage and microtopographic alterations due to timber harvest.

Buffer

A buffer is a zone of land just outside of the wetland that has the ability to protect a wetland from disturbances occurring in the surrounding upland landscape.

The most common stressors in the buffer area in this watershed were channelized waterways in surrounding landscapes, agriculture, roads, mowing, and nearby development.

Grade by Wetland Type

Wetland Health Scale:

Excellent | Good | Fair | Poor | Very Poor

Habitat | **Hydrology** | **Buffer**

Riverine Wetlands

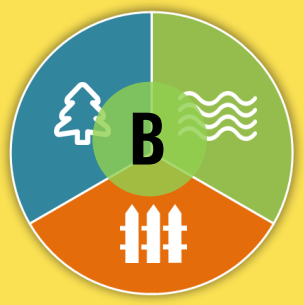
Riverine wetlands occur along streams or rivers and provide storage for floodwaters and groundwater. The water that moves into these wetlands is cleaned before it moves downstream. They form corridors of valuable wildlife habitat.

Common Problems: Invasive species, plus agriculture, development, and mowing in surrounding landscape

Flat Wetlands

Flat wetlands are typically located at the upper reaches of the watershed. They are seasonally wet and often appear dry on the surface. They absorb precipitation and filter water slowly into streams and groundwaters.

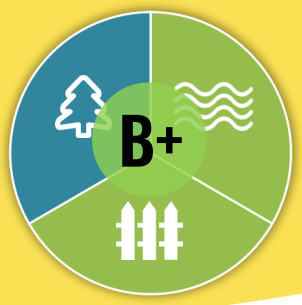
Common Problems: Selective cut harvesting, channelized streams or ditches and agriculture in surrounding landscape, and ditching



Depression Wetlands

Depressions are isolated shallow pools of water that occur in low lying areas. They are seasonally wet and provide critical habitat for amphibians like frogs and salamanders.

Common Problems: Microtopographic alterations, and roads and development in surrounding landscape



Did You Know?

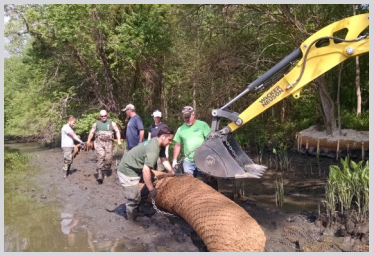
You can find out more information about Delaware's wetlands by visiting: dnrec.alpha.delaware.gov/wetlands

The Chester-Choptank Watershed's Wetlands Need Your Help!

What you can do:

Managing invasive species on your property by removing and replacing them with Delaware natives. Allow native plants to grow and thrive alongside wetlands, rivers and streams for cleaner water and erosion protection. For a list of Delaware's invasive plant species please visit: delawareinvasives.net

Adding nature-based landscaping designs and green infrastructure on your property to control erosion and water runoff and improve water quality. Consider installing rain gardens or rain barrels in your yard or planting trees in open areas. For more information on these practices and possible funding sources, please visit: de.gov/greeninfrastructureprimer.



Protecting and maintaining buffers around your wetlands. Buffers are natural planted strips along wetlands that can help wetlands stay in good health. It is best to not mow right up to the stream edge and to not clear the understory. For more information about buffers, please visit: wmap.blogs.delaware.gov/2019/12/10/grass-and-forest-riparian-buffers/.

Preserving or restoring wetlands on your land. Approximately 62% of the wetlands in this watershed were privately owned. This means we need your help in maintaining and improving our wetlands and the natural benefits they provide. To find out about restoration options, please visit: wetlandswork.org.

Supporting better wetland protection by contacting your local decision makers. Activities in non-tidal wetlands are not regulated by the State of Delaware, and every additional wetland filled or destroyed leads to less clean water, fewer wildlife habitats, and less flood protection for us all. de.gov/wetlandprotectionguidebook

Please visit de.gov/delawarewetlands to view the entire report and learn more about the assessment methods.

Delaware Department of Natural Resources and Environmental Control Division of Watershed Stewardship 302-739-9939

Discover more about Delaware Wetlands! Stay up-to-date and follow our social media pages.

This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement CD-96362201 and CD-96347201 to Delaware Department of Natural Resources and Environmental Control. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.