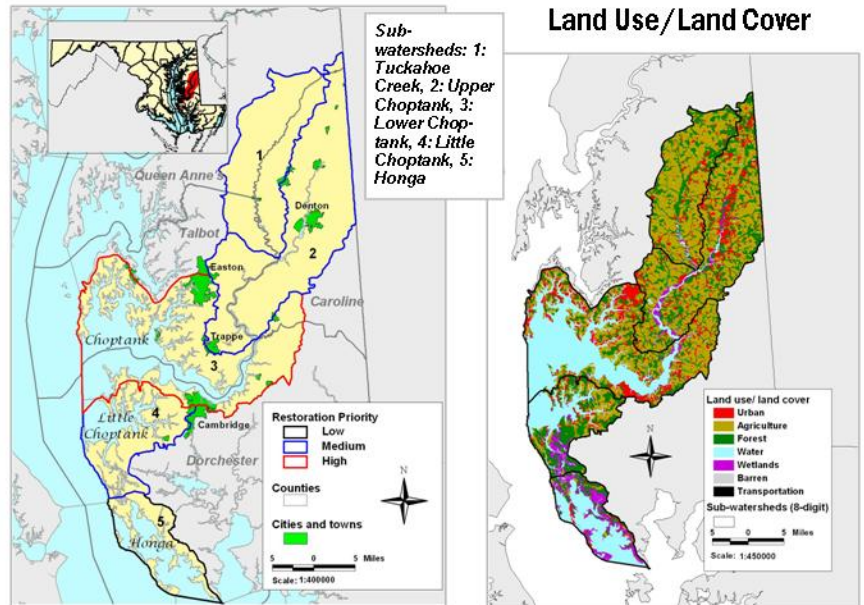


Choptank, Little Choptank, & Honga Rivers Water Quality and Habitat Assessment

Choptank River Basin

Maryland's Choptank River basin drains approximately 700 square miles in portions of Caroline, Dorchester, Queen Anne's, and Talbot Counties. The basin includes the Choptank, Little Choptank, and Honga Rivers. In 2010 there were approximately 80,000 people living in the basin, with low density (10-100 people per square mile) in most areas. Land use in the overall Choptank basin is over one-half agriculture (57%) and one-quarter forest (24%), with urban use (14%) comprising most of the rest. Between 2000 and 2010, urban land use increased by 5% and impervious surfaces cover 2% of the overall basin.



Overall Conditions

Choptank River

Upper

- Poor water quality with high and increasing nitrogen, phosphorus, and sediment levels
- Poor water clarity but algal densities have improved
- Bottom dissolved oxygen levels good but bottom dwelling animals not healthy

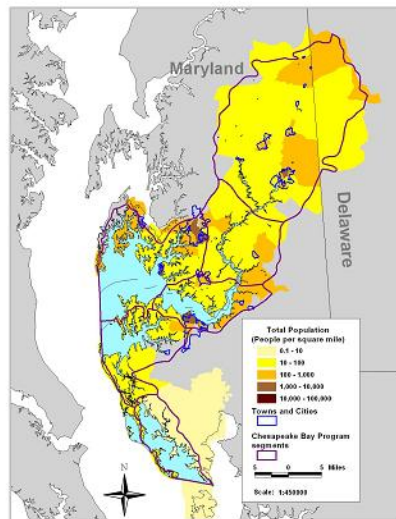
Middle

- Poor water quality with high nitrogen and degrading phosphorus levels, but sediment levels improving
- Impaired underwater grass habitat due to high algal densities and poor water clarity—grass coverage is 1% of restoration goal
- Fair summer bottom dissolved oxygen levels but bottom dwelling animals not healthy
- Harmful algal blooms occur in most years

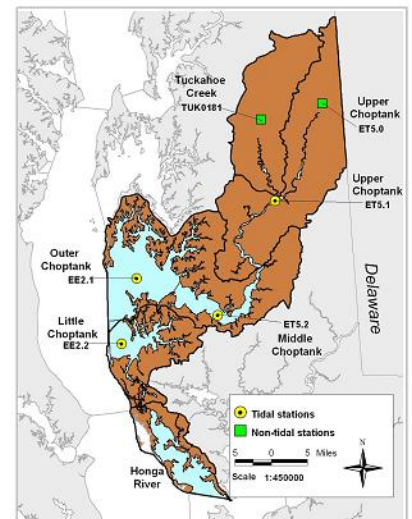
Outer

- Fair water quality with low nitrogen, phosphorus, and sediment levels
- Impaired underwater grass habitat due to degrading algal levels—grass coverage is 9% of restoration goal
- Summer bottom dissolved oxygen levels are fair but degraded habitat for bottom dwelling animals

Population



MD DNR Monitoring Stations



Little Choptank River

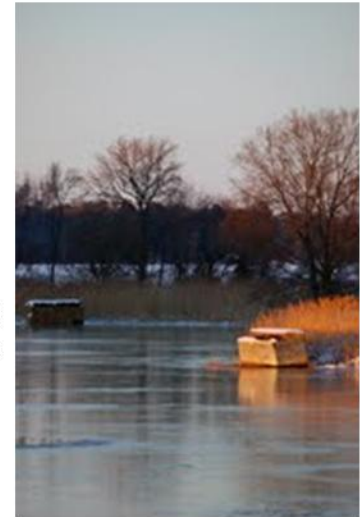
- Good but degrading water quality with low nitrogen, phosphorus, and sediment levels
- Fair underwater grass habitat, but grass coverage is 3% of restoration goal
- Poor summer bottom dissolved oxygen levels and degraded habitat for bottom dwelling animals

Honga River

- Good water quality with low nitrogen, phosphorus, and sediment levels
- Poor water clarity, possibly caused by sediments stirred up from shallow bottom
- Underwater grass coverage is 31% of restoration goal
- Good dissolved oxygen levels

Improving Water & Habitat Quality: What's been done and what needs to be done?

- Upgrades to the largest wastewater treatment plant that discharges into the Choptank River were scheduled to be completed by the end of 2012; previous upgrades to the facility reduced nitrogen loadings into the river by two-thirds and phosphorus loadings by 90% (No wastewater treatment plants discharge into the Little Choptank or Honga Rivers)
- Nearly 200 septic system retrofits were completed between 2008 and 2010, and stormwater retrofits have reduced nitrogen loadings and prevented 2,500 pounds of nitrogen from entering the rivers since 2003
- In 2010, more than 30,000 acres of cover crops were planted between growing seasons to absorb excess nutrients and prevent sediment erosion
- Fencing on over 300 acres of farmland was used to keep livestock out of streams and prevent streambank erosion and more than 16,000 acres of stream buffers are in place to reduce runoff and erosion
- More than 250 containment structures have been built to store animal wastes and allow these nutrients to be applied to the land in the manner most effective to reduce runoff
- Over 15,000 acres have been protected and preserved through various programs such as Program Open Space, the Rural Legacy Program, the Maryland Environmental Trust, and the Maryland Agricultural Land Preservation Program
- Efforts should focus on best management practices on agricultural lands to reduce nutrient and sediment runoff and, as urban areas increase, more waste should be processed through wastewater treatment plants instead of septic systems and alternatives to conventional building materials and methods should be used to reduce the amount of impervious surfaces
- The full assessment is available through the link: <http://tinyurl.com/orw9kwg> or by scanning:



Duck blinds on Hunting Creek, a tributary of the Choptank River near Preston, MD

What Can You Do?

There are many things you can do to help improve water and habitat quality of the Choptank watershed.

- **Plant trees along streamside property.** Tree roots will slow erosion and absorb the flow of nutrient runoff.
- **Pump out septic tanks regularly (every 3-5 years).** A failing system can contaminate groundwater.
- **Conserve water.** Use rainwater for plants, take shorter showers, and turn off the faucet when brushing your teeth.
- **Drain gutter spouts into rain barrels or grassy areas.** This will reduce erosion, which adds sediment to rivers.
- **Carpool, or try biking or walking.** Exhaust fumes contain nitrogen oxides, which can end up in rivers and bay.
- **Dispose of household chemicals properly.** Toxic chemicals poured down the drain could end up in rivers.
- **Use fertilizer sparingly.** If you must fertilize, try doing it in autumn, when it will have less of an impact on rivers.
- **Support land protection initiatives.** Preserving existing green space is much easier than restoring degraded areas.
- **Get involved.** Let county, state, and local officials know that water and habitat quality is important to you.

<p>Water quality data from the Choptank, Little Choptank, and Honga Rivers are available at: www.eyesonthebay.net</p>	<p>Please report fish kills, algal blooms, or any other events or problems to the toll-free Chesapeake Bay Safety and Environmental Hotline at 1-877-224-7229</p>
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Martin O'Malley, Governor

Joseph P. Gill, DNR Secretary



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