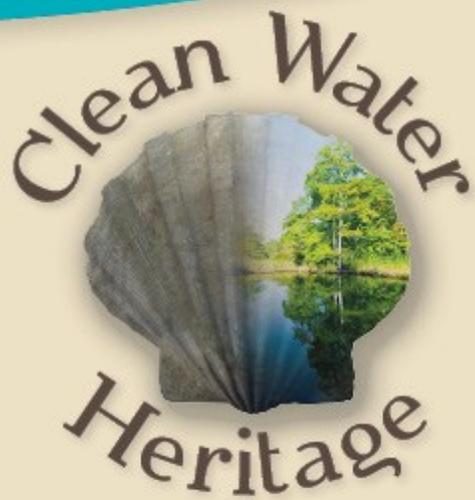


# 2016 Ware Creek Watershed



## Water Quality Report



## Restore & Protect

[www.jamescitycountyva.gov/857/Stormwater](http://www.jamescitycountyva.gov/857/Stormwater)

## **James City County Water Quality Strategies**

As part of a long term commitment to environmental stewardship, James City County volunteers and staff have been gathering information about stream health throughout the County since 2008. The goal of collecting water quality information is to be able to identify emerging water quality problems, target areas for restoration and preservation, document improvements from citizen and County actions and provide educational and volunteer opportunities for the public.

Volunteers and staff collect two types of data: one looks at the types of small creatures that live in streams and the other provides an indication of the amount of harmful bacteria present in a stream. Together, this information provides evidence of the overall health of the County's waterways.

The following information is a summary of known water quality conditions in the County, gleaned from data collected by the Virginia Department of Environmental Quality, from the County's volunteer water monitoring program and from completed James City County watershed management plans. As more information becomes available, this report will be updated.

### **Ware Creek Watershed**

The Ware Creek Watershed is located in the most northern part of James City County and drains into the York River. Three quarters of the watershed is undeveloped and consists of forested lands, wetlands and stream Resource Protection Areas. The rest of the area has been traditionally agricultural, while low-density residential neighborhoods and single-family homes are becoming more numerous. The watershed also encompasses some newer development, golf course communities, industrial areas such as Stonehouse Commerce Park and Hankins Industrial Park and Highway 64 as part of its drainage area.

## Water Quality Conditions

Ware Creek is on the VA Department of Environmental Quality's (VADEQ) impaired waters list for: fecal coliforms, e. Coli bacteria, low dissolved oxygen, and benthic macroinvertebrates. There are swimming and shellfish advisories in effect for Ware Creek because of the level of bacteria pollution. Ware Creek's impairments for low dissolved oxygen, and benthic macroinvertebrates signify that it's not able to sustain the aquatic life that should be found in it.

In 1998, VADEQ listed the tidal area of Ware Creek on its list of impaired waters as impaired for bacteria, due to the high counts at their monitoring station. High bacteria counts from VADEQ's monitoring of the Ware Creek main-stem area caused that part of the creek to be listed in 2010. A Total Maximum Daily Load (TMDL) has been written for Ware Creek which gives an account of the bacteria infractions and the numbers that would indicate an acceptable level.

Through the Stormwater Division's Water Quality Monitoring Program and the efforts of County staff and citizen volunteers, two sites within the watershed are monitored. Although the results indicate that Ware Creek does measure some degree of stress, it meets Virginia's water quality standards most of the time.

## Problems in the Watershed

- Bacteria levels are too high for contact recreation or food consumption. While coliform bacteria will naturally be found in the environment from wildlife sources, almost half of the bacteria loading comes from humans and pets. The current goal is a 100% reduction in bacteria from these sources.
- Upper Ware Creek tributaries have been eroded and are contributing to stream degradation due to increased stormwater flows from development. Sediment is being washed downstream and is clogging drainage areas.

- Stormwater infrastructure is in need of repair, maintenance and/or upgrade. Effective stormwater treatment is essential in protecting Ware Creek water quality.

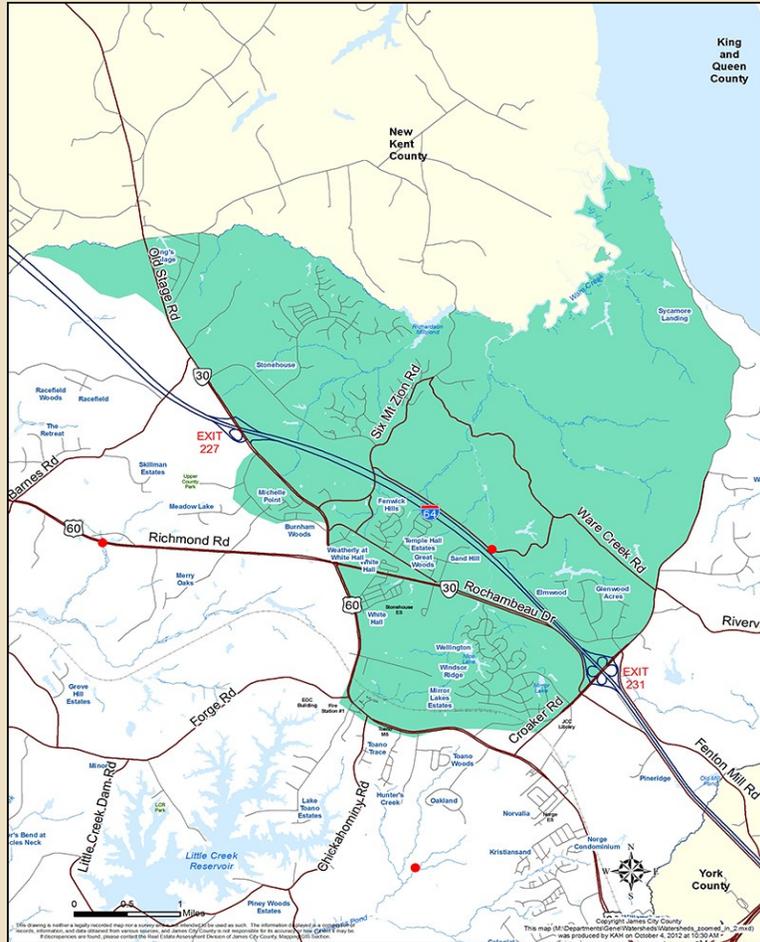
## Completed Studies and Plans

TMDL Report for Chesapeake Bay Shellfish Waters:  
Ware Creek, Taskinas Creek, and Skimino Creek Bacterial  
Impairments (VADEQ, 2010)

## What Can Citizens Do?

- Clean up after your pet. Pet waste contains bacteria and viruses that are harmful to people and the environment.
- Fertilize properly. Know your soil and the type of grass in your yard before you make a responsible fertilizing plan. Contact Turf Love at 757-564-2170 for help in identifying your yard needs.
- Leave a natural plant buffer around streams or stormwater ponds. Vegetation filters pollutants before they get to the water.
- Don't put fats and oils down the drain. Fatty deposits build up in the sewer system and can lead to sanitary sewer overflows, leaving harmful bacteria and viruses in the environment.
- Wash your car on grass, not on pavement. Soap and grease will be filtered through the grass and soil before getting into groundwater.
- Plant a rain garden. These beautiful landscaped areas can act as a trap for rain water and can prevent erosion in areas where there is a lot of stormwater run-off.
- Power-wash with care. Look for cleaning products with environmentally-friendly ingredients.
- Don't put leaves and yard clippings in road ditches or on top of storm-drain inlets. Collect leaves and clippings for compost or drop off them off at a County transfer station.
- Go to [askhrgreen.org](http://askhrgreen.org) for more helpful ideas.

## Ware Creek Watershed Map



## For More Information

If you are interested in more information, go to [jamescitycountyva.gov/857/stormwater](http://jamescitycountyva.gov/857/stormwater) or call 757-259-1446.

James City County continues to be proactive in the protection and preservation of natural resources in its commitment to create and sustain a quality community. Remember...caring for our natural resources requires a team effort. Together, we can make sure water quality in Ware Creek Watershed is protected for generations to come.