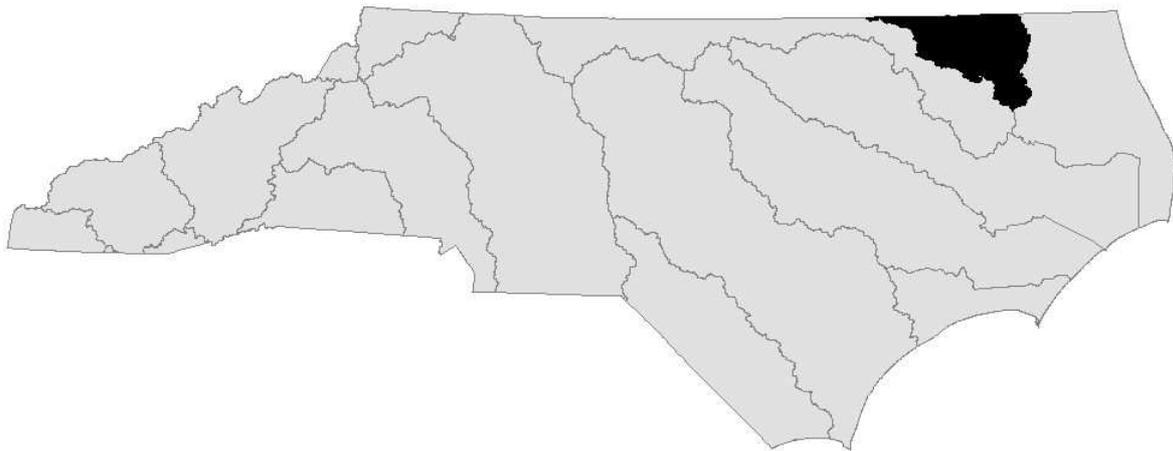


**Chowan River Basin  
Basinwide Assessment Report  
Whole Effluent Toxicity Program  
2006-2010**



## **The Division of Water Quality's Whole Effluent Toxicity Monitoring Program**

Acute and/or chronic toxicity tests are used to determine toxicity of discharges to sensitive aquatic species (usually fathead minnows or the water flea, *Ceriodaphnia dubia*). Results of these tests have been shown by researchers to be predictive of discharge effects to receiving stream populations.

Many facilities are required to monitor whole effluent toxicity (WET) by their NPDES permit. Facilities without monitoring requirements may have their effluents evaluated for toxicity by DWQ's Aquatic Toxicology Laboratory. If toxicity is detected, DWQ may include aquatic toxicity testing upon permit renewal.

DWQ's Aquatic Toxicology Unit maintains a compliance summary for all facilities required to perform tests and provides a monthly update of this information to regional offices and WQ administration. Ambient toxicity tests can be used to evaluate stream water quality relative to other stream sites and/or a point source discharge.

## **WET Monitoring in the Chowan River Basin – 2006-2010**

Six facility permits in the Chowan River basin currently require whole effluent toxicity (WET) monitoring (Figure 1 and Table 1). Three facility permits have a WET monitoring with no limit. The other three are not currently discharging.

The Division of Water Quality began including whole effluent toxicity (WET) limits in NPDES permits in 1987. The Aquatic Toxicology Unit began measuring compliance rates with those limits in 1990. The compliance of each facility is evaluated on a quarterly basis. Facilities are evaluated on each test submitted. A notice of violation (NOV) can be issued when the WET limit of the NPDES permit is violated. WET NPDES protocol provides for an increase in WET monitoring when a limit has been violated. For example, in certain NPDES permits, facilities are required to perform a pass/fail chronic test. If the facility fails this test then additional testing is required by the facility. The facility would be required to perform a minimum of one full range chronic test in each of the following two months. The additional tests are evaluated and compliance is determined according to the NPDES requirements.

All facilities are compliant for the 5 year cycle.

Figure 1. Chowan River basin facilities required to conduct whole effluent toxicity testing

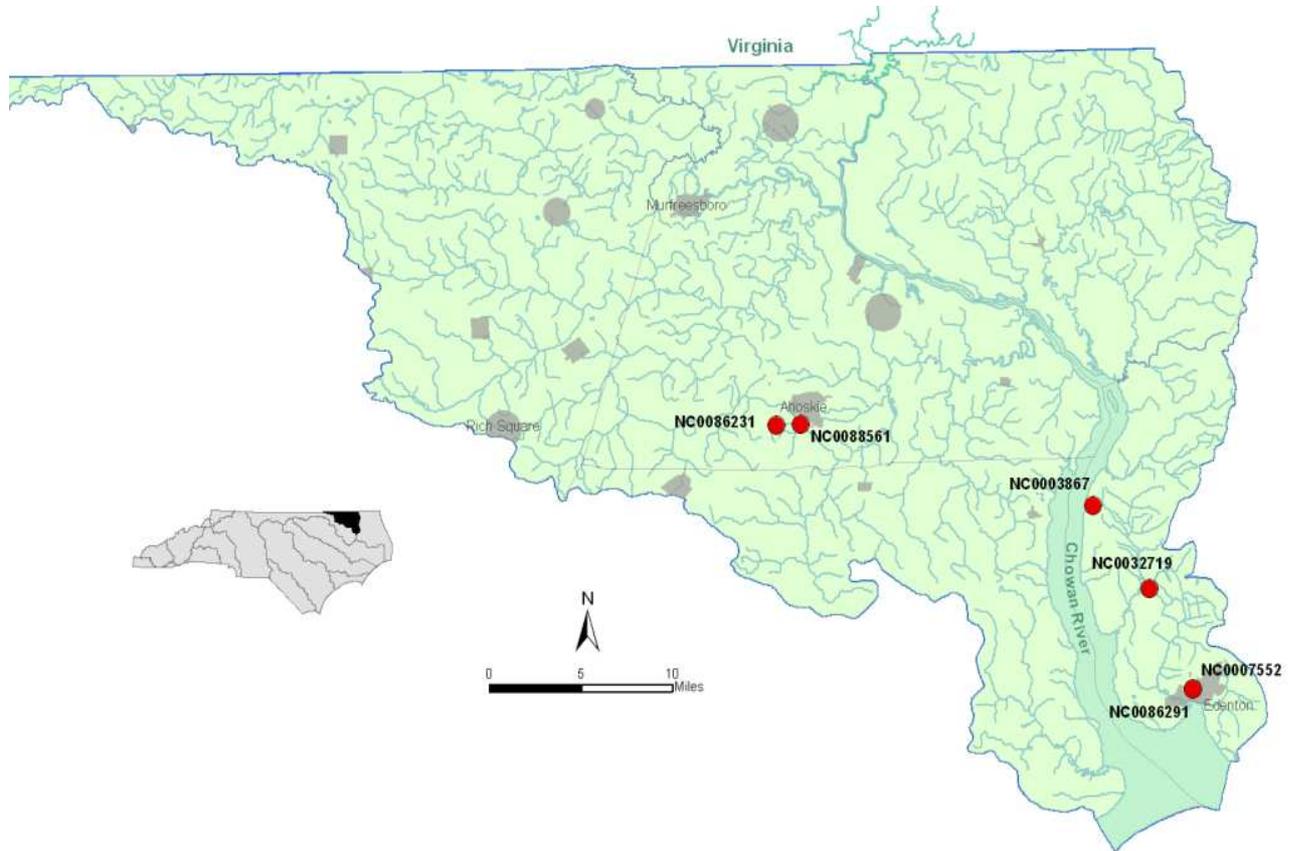


Table 1. Chowan River basin facilities required to conduct whole effluent toxicity testing

	NPDES Permit No.	Receiving Stream	County
<b>03-01-01</b>			
Ahoskie WWTP	NC0088561	Ahoskie Cr.	Hertford
Aluminum Casting Tech. WWTP	NC0086231	Ahoskie Cr.	Hertford
<b>03-01-03</b>			
Edenton Dyeing and Finishing, LLC	NC0003867	Chowan R.	Chowan
<b>03-01-04</b>			
Chowan County Valhalla WTP	NC0032719	UT Pollock Swamp	Chowan
Town of Edenton WTP	NC0086291	Filbert Cr.	Chowan
Freemason WTP	NC0007552	Filbert Cr.	Chowan