Yadkin-Pee Dee River Basin Basinwide Assessment Report Whole Effluent Toxicity Program 2007-2011
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 minnow, Pimephales promelas or the water flea, Ceriodaphnia dubia). Results of these tests have been shown by researchers to be predictive of a discharge impacts 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 require 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 DWQ administration. Ambient toxicity tests can be used to evaluate stream water quality relative to other stream sites and/or a point source discharge. All facilities are complaint for the 5-year basin cycle for the period of 2006-2011.

WET Monitoring in the Yadkin-Pee Dee River Basin 2007-2011

Seventy-five facility permits in the Yadkin-Pee Dee River basin currently require WET monitoring (Figure 1). Seventy-four facility permits have a WET limit while one requires monitoring without a limit.
Figure 1. Yadkin/Pee Dee River basin facilities required monitoring effluent toxicity