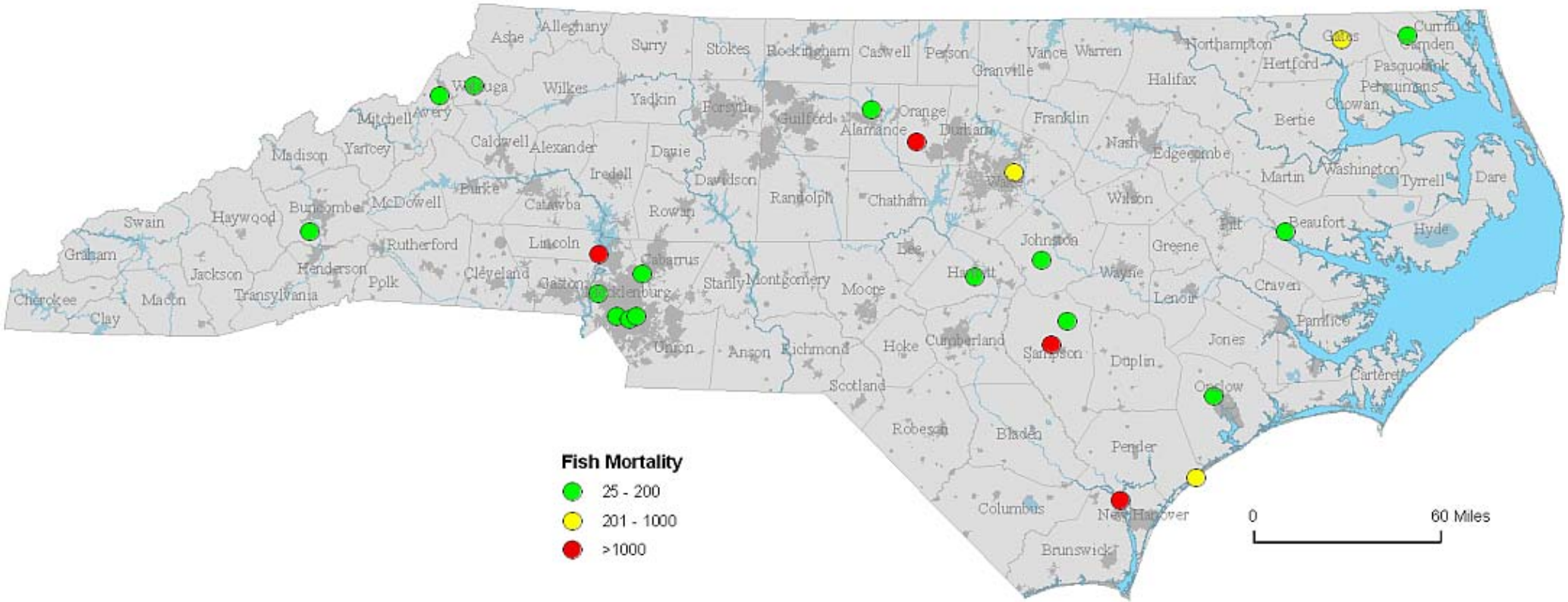
Fish kill events and observed mortality reported to NCDWQ during 2010



Total 2010 Fish Kills: 22

Total 2010 Fish Mortality: 15715

2010 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Alamance					
7/22/2010	WS10002	Haw River	near Glencoe	170	Initially 60 dead or dying fish were observed on 7-18-2010 between noon and 3 pm on the Haw River above Glencoe. Fishermen near Gerringer Mill Road indicated that they observed appx. 400 dead fish between 10 and 12 that morning. A total of 170 fish were observed by DWQ investigators at various sites over 2 days.
					Total Kills for County: 1 **Total Mortality for County: 170**
Avery					
6/25/2010	AS10001	Elk River	near Banner Elk	25	Only 15 trout were confirmed killed in this event. Manager of Elk River Club reported as many as 100 fish but numbers were not confirmed by DWQ. Public works director from Banner Elk reported parameters from WWTP normal at time of kill. Elk River Club reported spraying normal applications of the following fungicides: Daconil, Pentatheon and Spotrete. No abnormal applications were made nor was anything used that was not used numerous times in the past.
					Total Kills for County: 1 **Total Mortality for County: 25**
Beaufort					
5/6/2010	WA10001	Jacks Creek	Washington	77	The Pamlico Team responded to a fish kill call from the City of Washington, Thursday May 6th. Staff counted 76 decomposed Gizzard Shad and 1 Bluegill along ¼ mile of the shoreline of Jack's Creek. The fish were approximately 48 hours old. Dissolved oxygen values recorded 1.4 mg/L at the surface and 0.23 mg/L near the bottom (1 m down). Water temperatures were near 24 degrees C. Salinities were near zero (0.07 ppt).This ½ mile long Creek receives a large amount of the City's storm water runoff. Precipitation accumulated from 1/10th to 1/4th of an inch of rain late Monday and Tuesday in Washington. It is likely that the storm water runoff exacerbated pre-existing low DO levels. Ducks, otters, turtles, and juvenile fish were observed swimming in the area during the investigation. No lesions were observed, no samples were taken.
					Total Kills for County: 1 **Total Mortality for County: 77**
Buncombe					
11/4/2010	AS10002	Wesley Creek	south of Asheville	180	The fish kill appears to be the result of DOT working on a bridge just upstream of the WWTP. Concrete came in contact with the stream raising the pH. Dead were mostly creek chubs.
					Total Kills for County: 1 **Total Mortality for County: 180**

2010 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Camden					
7/2/2010	WA10003	Dismal Swamp Canal	Downstream of Locks	200	Lynn Henry, DMF reported a fish kill in the Dismal Swamp Canal downstream of the locks at South Mills . The initial report estimated 50-200 dead fish and more fish in distress. The fish kill was apparently completed upon site visit. Investigator only observed one dead catfish in the area of the reported event. Hypoxic conditions persisted during the site visit and were likely the cause of the fish kill. Previous hot air and water temperatures likely accelarated the decrease in dissolved oxygen. Elevated conductivity readings in and near Joyce Creek, which is just downstream of the locks, are somewhat concerning and may indicate a source of nutrient loading.
					Total Kills for County: 1 **Total Mortality for County: 200**
Gates					
6/28/2010	WA10002	Bennetts Creek	Near Millpond Dam	335	Dissolved oxygen likely crashed in the creek because the millpond water level dropped below the dam elevation and flow from the millpond into Bennet's Creek ceased. Hot conditions and warm water likely accelarated the decrease in dissolved oxygen. Many small catfish were observed gasping at the surface and many small (3-4 in) American eels were observed swimming at the base of the dam. Opening the fish ladder gate seemed to improve conditions because DO concentrations in the fish ladder and downstream of the discharge point (2.1 and 1.1 mg/L, respectively) were higher than DO at the base of the dam where most dead fish were observed.
					Total Kills for County: 1 **Total Mortality for County: 335**
Harnett					
10/26/2010	FA10003	Upper Little River	near Lillington	200	Most of the 200 dead fish were redhorse suckers, ranging from 0.5 to 2 feet long. The conductivity upstream was 62.6 micro Semiens, but near the fishkill at 705 micro Semiens. Investigators suspected a spill or discharge in the area but could not confirm.
					Total Kills for County: 1 **Total Mortality for County: 200**
Johnston					
6/22/2010	RA10003	Private Pond	near Four Oaks	150	Goats and one horse have access to pond. Manure from horse and goats could be seen on pond's edge. Excessive algae mats noted however, measurements indicated no algae bloom. Most likely cause of fish kill is from excessive high temperature and possible high nutrient runoff.
					Total Kills for County: 1 **Total Mortality for County: 150**

2010 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Lincoln					
7/12/2010	MO10004	Lake Norman	near Cowans Ford Dam	7000	Duke Energy scientific services notified the NC Wildlife Resources Commission (NCWRC) that dead striped bass were appearing around Cowans Ford Dam. Since July 12, Duke staff collected approximately 7000 stripers. Some appear to have died from fishing related activities (catch and release), but some displayed signs of oxygen deprivation. Striped bass are not native to southeastern lakes and are stocked by the Wildlife Resources Commission. This species is particularly susceptible to low dissolved oxygen levels and higher water temperatures, and, if severe enough, can die from these effects. Although this is a natural phenomenon, the combination of an unusually long stretch of early, hot weather and the operation of McGuire's lower-level intake (LLI) pumps may have contributed to this occurring slightly sooner than normal. On July 19, Duke began operating LLI pumps to use cooler water in their condenser cooling system to remain compliant with permitted thermal limits and continue operations to meet customer demand. Prior to the operation of the LLI pumps, Duke personnel observed incidental fish mortalities. Striped bass mortality is expected to continue into August as dissolved oxygen and temperature conditions worsen.
					Total Kills for County: 1 **Total Mortality for County: 7000**
Mecklenburg					
3/6/2010	MO10001	Private Pond	UT to Paw Creek	194	Pond impacted by sanitary sewer overflow.
4/28/2010	MO10002	Pond	Park Road Park	136	Fish kill was suspected to be caused by spring turn over in the pond. Many small fish and tadpoles were present at time of investigtion and did not appear to be stressed.
6/3/2010	MO10003	UT to Mallard Creek	near UNCC	100	Kill caused by spill of process/wastewater from Mallard Creek Polymers into storm drain. Investigators reported Styrene in spilled water. Stream was flushed by facility.
7/26/2010	MO10005	Private Pond	Charlotte	34	The fish kill is thought to be caused by low dissolved oxygen content in the pond water. Water in pond was green in color from algae and the temperature was observed to between 31.6^{0}C to 33.20^{0}C. Thirty-six Canadian Geese and 5 Mallard Ducks were observed at the pond during the investigation. The amount of waste generated by the waterfowl should provide adequate nutrients for the algae to grow. Algae samples were collected and sent to to DWQ ESS (Mark Vanderborgh). Location of pond: 5672 International Drive Charlotte, NC 28270
9/19/2010	MO10006	McAlpine Park Pond	Charlotte	153	Green /brown algal masses seen on the pond bottom. Hot dry weather reported days prior to event. Most affected fish were catfish.
					Total Kills for County: 5 **Total Mortality for County: 617**

2010 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
New Hanover					
7/23/2010	WL10001	Sutton Lake	Wilmington	2340	The fish kill was first reported on July 23, 2010 (Friday). The fish kill was first observed at 1800 hrs on July 22,2010, by Progress Energy staff. DWQ received a call at approximately 0800 on 7/23/2010. Linda Willis met with Bob Barwick, Justin Homan (NC Wildlife), and Kent Tyndall on 07/23/2010 at 1300 hrs at the Sutton Boat Ramp. Progress Energy appears to have applied Sonar (active ingredient Fluridone), in accordance with the label instructions. The target concentration for the active ingredient in Sonar was 15 ppb. The label cautions against a cumulative concentration (for the year) of 150 ppb. On July 17, a blue green algae had developed in Sutton Lake. Captain was used to treat the algae. DWQ asked Progress Energy to collect samples in bays 2, 4 and 8 at the bottom, middle and surface of the bays in order to establish a profile for the water column. The parameters requested were biological oxygen demand (5 day), chemical oxygen demand, toal Kjeldahl nitrogen, nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, total phosphorus and copper. The data was collected on 7/23/2010. DWQ also requested physical parameters (pH, temperature, conductivity, dissolved oxygen, percent saturation) in bays 2, 4, 8 at the bottom, middle and top of the water column. Physical parameters were taken from 7/23/2010 through 7/29/2010. DWQ requested the sampling continue until the physical data suggested recovery. DWQ requested that Progress Energy pump water from the Cape Fear River into the lake in order to provide an increase in oxygenated water. On Saturday the dissolved oxygen continued to fall. On Sunday (07/25) the dissolved oxygen began to improve. Progress Energy was encouraged to consider treating aquatic vegetation during those months of the year when water temperatures are not as elevated and investigate ways to alleviate the effects of adding chemicals to the lake to control aquatic weeds/algae to avoid fish kills. The only method available at the time to increase DO in the lake was to pump water in from the Cape Fear River. **Total Kills for County: 1** **Total Mortality for County: 2340**
Onslow					
9/7/2010	WL10003	New River	above Jacksonville	150	Cause reported as unknown. Low dissolved oxygen detected by investigators at various locations along the river. Fish first observed 5 days prior to investigation. **Total Kills for County: 1** **Total Mortality for County: 150**
Orange					
6/8/2010	RA10002	Norther Pond	near Hillsborough	1100	Some fish observed with bulging eyes. Low dissolved oxygen observed at time of investigation. Extremely hot weather prior to event. **Total Kills for County: 1** **Total Mortality for County: 1100**
Pender					
4/7/2010	WL10004	Atlantic Ocean	Surf City	1000	Only croaker affected. A gill net was placed in the vicinity but no obvious net marks seen on carcasses. **Total Kills for County: 1** **Total Mortality for County: 1000**

2010 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Sampson					
4/16/2010	FA10001	Boone Pond	near Great Coharie Creek	1400	FRO estimated that there were 1400 Bluegill involved in the fishkill; no other species. The immediate cause appeared to be low dissolved oxygen. Tom Rachel (Wildlife) was also present at the fishkill on Friday. His main recommendation was mechanical aeration. Algal samples revealed alarge quantity of flocculent organic matter. The assemblage was diverse and included, cryptomonads, greens, dinoflagellates and the colonial bluegreen, Microcystis. Excessive amounts of organic matter are known to create a high biological oxygen demand as it is decomposed by microorganisms.
8/25/2010	FA10002	Gautier Property Pond	near Newton Grove	41	Landowner advised to areate pond. High conductivity readings in upstream tributary. Red film noticed on water surface.
					Total Kills for County: 2 **Total Mortality for County: 1441**
Wake					
6/12/2010	RA10001	Branchwater Pond	Raleigh	630	Kill caused by sewer overflow from upstream manhole due to vandalism. The pond was pumped down and sewage/fish removed before arrival at site around 4:00PM. Pond was refilled with City Water and City of Raleigh reported that dechlorination tablets were randomly added to pond.
					Total Kills for County: 1 **Total Mortality for County: 630**
Watauga					
7/19/2010	WS10001	Hodges Creek	near Boone, NC	100	Kill occurred as a result of parking lot sealant runoff. The estimate of fish mortality is from Donna Lisenby who reported that the majority were trout and that 21 crayfish were also found dead. The fish kill was reported to NC Emer. Mgt. at 12:01 am 7-18-2010. The sealant runoff occurred during a rain event on 7-17-2010 at noon. A second rain event ocurred later that evening. Source of sealant runoff was 2458 NC Hwy. 105 South, Boone.
					Total Kills for County: 1 **Total Mortality for County: 100**