

Total 2011 Fish Kills: 33

Total 2011 Fish Mortality: 135244

2011 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Beaufort					
8/13/2011	WA11002	Jacks Creek	near Washington	1000	DWQ Surface Water Staff investigated this kill on August 13th. Approximately 1000 menhaden were estimated in a localized area 600 meters upstream from the mouth of Jack's Creek. Other species of fish were observed swimming in the kill area at that time. Water quality data recorded Monday August 15th in the kill area indicated very low DO (2.0mg/L). Water temperatures were near 27 degrees C, pH of 7.1. Low Dissolved Oxygen within this area may continue to be an issue if the weather continues to remain hot.
Total Kills for County: 1 Total Mortality for County: 1000					
Bertie					
9/1/2011	WA11009	Cashie River	Sans Souci Ferry	10000	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen and stressed/dead fish were observed during investigation. Observations were made on 9/1/2011 when fish kills were just beginning. Additional reports of more dead fish were received after initial visit.
9/6/2011	WA11007	Chowan River	Tuscarora Beach	500	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen and stressed/dead fish were observed during investigation. Fish were observed gasping along the shoreline.
Total Kills for County: 2 Total Mortality for County: 10500					
Bladen					
4/12/2011	FA11001	Bryant Swamp Canal	near Bladenboro	500	Cause of kill: unknown at time of investigation; DWQ personnel took several water quality samples and sent DWQ Chem Lab to be analyzed.
Total Kills for County: 1 Total Mortality for County: 500					
Cabarrus					
6/15/2011	MO11002	Private Pond	near Midland	100	Event attributed to a lack of DO from excessive algal growth and decay. Fish kill occurred in early morning hours prior to dawn. Copper sulfate added to control vegetation prior to kill.
Total Kills for County: 1 Total Mortality for County: 100					
Chatham					
7/29/2011	RA11006	Jordan Lake	Near US 64	5140	Fish mortality attributed to high temperatures and low dissolved oxygen levels in Jordan Lake. Numbers of observed fish are likely underestimated due to decomposition and dispersion. Most observed fish were striped bass. Striped bass die-offs are common in NC lakes/reservoirs during warm summer months. Fish mortalities are continuing at the time of this report.
10/10/2011	RA11011	Jordan Lake	near Farrington	260	Possible algal bloom (high dissolved oxygen saturation, and high pH) observed during investigation. Majority of dead fish were decayed, dried, or consumed by birds, only about 12 fresh dead fish were observed.

2011 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Total Kills for County: 2 Total Mortality for County: 5400					
Craven					
8/2/2011	WA11001	Neuse River	near Fisher Landing	1200	The Estuarine Monitoring team investigated a fish kill near Fisher Landing on the Neuse River, August 4th. Over 1200 species including menhaden, spot, flounder, and blue crabs were estimated along the southern shoreline of the Neuse River from Fisher Landing extending downstream towards Flanner's Beach. The kill largely consisted of Menhaden (170-200 mm), Spot (50-70 mm), and Flounder (100-600 mm). A majority of blue crabs were less than 3 inches (carapace length). Physical data recorded near the fish kill indicated Dissolved Oxygen values near 4 mg/L (surface), falling to near zero below 1.0 meter. Salinities were ranged from 17 - 20 ppt respectively. Physical data recorded near Channel Marker 13 indicated DO values near 5 mg/L steadily dropping to near zero at 3 meters. Surface water temperatures were over 31 degrees C by noon. This event likely occurred 36-48 hours ago. High water temperatures had been consistent in this area for several days. It is likely that these fish succumbed to the stress of a combination of high temperatures and low Dissolved Oxygen.
8/31/2011	WA11004	Neuse River	New Bern to Spring Garden	70	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen and stressed/dead fish were observed during investigation along the Neuse R. from New Bern to Spring Garden.
Total Kills for County: 2 Total Mortality for County: 1270					
Davidson					
8/9/2011	WS11002	Tuckertown Reservoir	Cabin Creek	2300	Many affected fish were striped bass and largemouth bass. Cabin Creek was choked with hydrilla and other aquatic vegetation and displayed a reddish surface film.
Total Kills for County: 1 Total Mortality for County: 2300					
Durham					
8/3/2011	RA11007	Private Pond	near Gorman	100	More than half of the pond was covered by duckweed. Dissolved oxygen measured 0.5 mg/L and water temperature measured 30 C at time of investigation.
8/29/2011	RA11008	UT to Lick Creek	near Durham	2000	Kill occurred in a pond along a UT to Lick Creek. Low dissolved oxygen reported at time of investigation. Fish seen gasping and lethargic during investigation. Construction activity observed upstream as well as a leaking swimming pool.
10/14/2011	RA11012	Ellerbe Creek	Hillandale Golf Course-Durham	75	On October 14th Durham Stormwater staff reported approximately 75 fish dead in the upper portions of Ellerbe Creek in City of Durham off of Hillandale Road. Durham staff reported that they identified on one occasion 0.5 mg/l of chlorine in the stream. . . The remaining chlorine samples were all below detection. Dave Parnell of the RRO investigated the area Friday evening and confirmed dead fish, but he only saw few individuals (n=5). Investigators, like the City of Durham staff, were not able to identify a point source. There is a nearby water treatment plant, but RRO confirmed their discharge is connected to the collection system and does not discharge to surface waters. There had also been a sanitary sewer overflow in the area but Durham City explained that they had recovered the product. RRO and Durham Stormwater staff were unable to confidently identify the cause of the fish kill.
Total Kills for County: 3 Total Mortality for County: 2175					

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Date	Kill Number	Waterbody	Location	Mortality	Comments
Hertford					
9/8/2011	WA11012	Chowan River	near Winton	50000	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen and stressed/dead fish were observed during investigation. Fish counts were only taken by investigators in a few places, but many more dead fish were seen throughout entire Chowan River from Va state line to Holiday Island and in the Meherrin River upstream of Murfreesboro to the Chowan confluence. Many dead fish were likely washed into floodplain due to high water and south winds. Decomposition had begun on some fish, some were freshly dead and some were gasping at the surface. Fish kill was caused by dissolved oxygen crash following Hurricane Irene.
Total Kills for County: 1 Total Mortality for County: 50000					
Lee					
9/28/2011	RA11009	Deep River	US 15-501	100	Heavy rainfall caused and increased turbidity was reported prior to the event.
Total Kills for County: 1 Total Mortality for County: 100					
Martin					
9/13/2011	WA11013	Roanoke River	near Jamesville/Ply mouth	50000	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen and stressed/dead fish were observed during investigation. Observations made on 8/31,2011,9/1/2011, and 9/13/2011. Fish counts were only taken in few places mostly on 8/31 and 9/1, but many more dead fish were seen throughout Roanoke River a few miles above Williamston to the river mouth. Decomposition had begun on some fish, some were freshly dead and some were gasping at the surface. Fish kill was caused by dissolved oxygen crash following Hurricane Irene.
Total Kills for County: 1 Total Mortality for County: 50000					
Mecklenburg					
5/24/2011	MO11001	Edwards Branch	Charlotte	27	Fish kill caused by sewer overflow at 5900 Greenbrook Drive.
7/13/2011	MO11003	Private Pond	Charlotte	116	A sewer main leaked upstream of the pond on July 13, 2011 and was immediately repaired by Charlotte Mecklenburg Utilities ; however some of the sewage flowed into the pond. Pond was continuously flushed from nearby fire hydrants for two days to improve water quality.
7/29/2011	MO11004	Lake Norman	near Dam	360	Observed fish were all striped bass and in multiple stages of decay. The event marks the third consecutive year for a striped bass summer kill in Lake Norman. Water temperatures in July were high and suitable habitat in the lake hypolimnion was reported as essentially gone around the time of the investigation with maximum DO concentrations at 0.76 mg/L. Striped bass die-offs are common in NC lakes/reservoirs during warm summer months.
8/15/2011	MO11005	Trib to Briar Creek	Charlotte	110	Initial investigation occurred on 8/15/11. 100+ dead fish were observed in the stream channel. Living fish were observed as well, but appeared to be lethargic. The stream was slightly cloudy in deeper pool areas. There was a slight chemical odor detected. Investigation occurred until night fall. Investigation ensued the following morning, 8/16/11. No source was identified. The living fish in the stream channel seemed to recover on 8/16. No additional dead fish were observed.

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Date	Kill Number	Waterbody	Location	Mortality	Comments
9/21/2011	MO11006	Private Pond	Charlotte	100	Investigators reported sewage spill and algal bloom prior to kill. Most affected fish were large.
					Total Kills for County: 5 Total Mortality for County: 713
Pasquotank					
9/1/2011	WA11006	Halls Creek	near Woodville	200	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen was observed during investigation. Investigators suspected may more fish were affected than those reported. Many fish were dispersed from wind and currents.
9/2/2011	WA11010	Newbegun Creek	Weeksville	7000	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen and stressed/dead fish were observed during investigation.
9/6/2011	WA11011	Pasquotank River	Elizabeth City	1900	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen and stressed/dead fish were observed during investigation.
					Total Kills for County: 3 Total Mortality for County: 9100
Pender					
9/9/2011	WL11001	Ut to NE Cape Fear River	near Burgaw	500	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen was observed during investigation. Low dissolved oxygen reported throughout region especially in blackwater and swamp systems after hurricane.
					Total Kills for County: 1 Total Mortality for County: 500
Pitt					
8/31/2011	WA11003	Tar River	Washington to Grimesland	50	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen and stressed/dead fish were observed during investigation throughout the section of the Tar River from Washington to Grimesland.
9/1/2011	WA11005	Tar River	Greenville Town Commons	200	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen and stressed/dead fish were observed during investigation.
9/6/2011	WA11008	Contentnea Creek	Grifton	350	This kill event was reported in the aftermath of Hurricane Irene. Low dissolved oxygen was observed during investigation. All fish were in the parking lot and on the boat ramp where the water had receded the previous week. All dead fish were out of water and dried up on the shore.
					Total Kills for County: 3 Total Mortality for County: 600
Surry					
5/13/2011	WS11001	Dotson Pond (Private)	near Woodville	26	No extensive bloom was noted during the investigation and the owner of the pond did not remember any indication of one occurring prior to the fish kill. Results of phyto analysis: Algae densities in the pond were around 50,000 units/ml indicating extreme levels (>30,000 units/ml) of algae which is not unusual for small pasture ponds in summer. The dominant forms of algae were Ankistrodesmus (≈ 41,000 units/ml) and Euglena (≈9,000 units/ml). Water was observed as muddy with cows having pond access.

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Date	Kill Number	Waterbody	Location	Mortality	Comments
Total Kills for County: 1 Total Mortality for County: 26					
Vance					
6/6/2011	RA11005	Private Pond	near Henderson	500	Low DO suspected as cause for the fish kill. Low DO was observed at time of investigation. The owner of the mobile home park was also concerned that the chemicals applied on the nearby farm land might have entered the pond via stormwater.
Total Kills for County: 1 Total Mortality for County: 500					
Wake					
6/8/2011	RA11002	Kit Creek	near Lake Betz	200	Fish likely exited through the Lake Betz outlet structure and were trapped in a pool of water that was not connected to Kit Creek due to dry conditions, and no flow through the lake dam at the time of the investigation. Pool water measurement for DO was 2.40 and saturation was 13.2%. A few (2-3) living fish remained in the pool, and WRC was contacted regarding options.
6/9/2011	RA11004	Upper Barton Creek	near Raleigh	60	This incident is related to the sanitary sewage overflow (SSO) from Hawthorne Collection System. Low DO and possibly high ammonia may have caused the fish kill. Aqua N.C. owns the responsible station. The event prompted a violation notice, which outlined what Aqua had to do to return the stream to a condition suitable for aquatic life and bring oxygen levels back to state guidelines to allow fish life to survive.
8/23/2011	RA11010	Brier Creek Reservoir	Near RDU	200	Fish kill appeared complete at the time of investigation. High water temperature suspected as a cause for the kill.
Total Kills for County: 3 Total Mortality for County: 460					