

Total 2018 Fish Kills: 29

Total 2018 Fish Mortality: 487,720

2018 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Alleghany					
5/29/2018	WS18001	Big Pine Creek	South of Barrett	300	Initial estimate of 300 dead fish, ranging 4" (minnows) to 10" trout were found floating in stream. No odor, discoloration, or foam present in the stream at time of fish kill. Stream parameters: pH, DO, % DO, specific conductance, temp, etc. were all normal and as expected for a mountain surface water on the date of investigation. No dead or burnt vegetation observed. Of note, NO live organisms were observed in the surface water for at least 5 miles upstream of investigation site.
Total Kills for County: 1 Total Mortality for County: 300					
Beaufort					
8/14/2018	WA18004	Pamlico River	Hawkins Beach	9,200	Citizen from Hawkins Beach noticed blue crabs gasping along the bulkhead near the entrance to the Beach boathouse. Within an hour, he saw menhaden washing up along the shoreline. It was a very localized, small event. Transects were made and a count totalled approximately 9,200 menhaden. Physical measurements indicated DO values near 6 mg/L, warm temperatures near 30 degrees C and salinities near 5 ppt. No samples were taken. Cause unknown.
8/17/2018	WA18006	Pamlico River	near Sparrow Bay	8,000	The Pamlico Riverkeeper sent along information regarding dead fish along the shoreline of Sparrow Bay Friday morning on 8/17/18. Spot, pinfish, croaker, flounder and blue carbs were observed along the shoreline of the Bay near Crystal Beach. Event was a very localized and small. Transects were made and a count totalled approximately 8000 fish. No samples were taken. The previous night's weather pattern indicated strong thunderstorms from the south, including 30 mph winds, heavy precipitation and some hail.
8/29/2018	WA18007	Pamlico River	Blounts Bay	192,050	DWR EMT received a call on 08-29-2018 from a homeowner at Gilead Shore on west side of Blounts Bay about a fish kill. EMT staff arrived 2 hrs later to find dead Spot, Croaker, and Flounder(<24hr old). No lesions were observed. The kill ran 0.25 mi down the shoreline and extended 100' out from the shoreline, totalling 192,050. Meter readings showed slightly elevated algal bloom activity. Schooling fish and feeding crabs were observed in the affected area. Homeowner said on 08-28-2018 the water was clear and no dead fish observed. On 8-29-2018 the water had a brownish color. Physical data recorded a slight bloom. Samples were collected and sent to the DWR Water Quality lab in Raleigh for further analyses.

Total Kills for County: 3 Total Mortality for County: 209,250

2018 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Bertie					
7/6/2018	WA18003	Chowan River	Colerain	2,000	On July 6, 2018 at 7:30 AM the DMF received a call from a member of the public reporting an active fish kill at Colerain Beach Club in Colerain, NC. DMF staff arrived at the site around 10:30 AM and took discrete water quality readings from the Colerain Beach Club pier (end and middle) and from the beach area. DO readings were poor (<2.0 mg/L) at all locations measured. Staff observed 100's of American eels washing in the little waves on the beach and swimming in inches of water. The water was very turbid and fish were floating out over 100 yards from shore, but scattered, mostly white perch and catfish. In the boat staff observed dead fish in all discrete sample locations.
9/20/2018	WA18008	Roanke R. , Cashie R.	Near Plymouth, Windsor	10,000	Event occurred in the wake of Hurricane Florence. Extremely low dissolved oxygen levels(<1 mg/l) were measured by investigators at multiple sites.
Total Kills for County: 2 Total Mortality for County: 12,000					
Bladen					
5/4/2018	FA18001	White Lake	Town of White Lake	115,000	At 1235 hours on May 4, 2018, NCWRC staff was notified of a fish kill in progress at White Lake. At 1335 hours District-4 Fisheries Biologist, arrived at White Lake and assessed water quality. Water quality samples indicated dissolved oxygen and pH were within the EPA's National Recommended Aquatic Life Criteria and sufficient to support freshwater aquatic life. On May 8, 2018 at approximately 1600 hours, NCDEQ requested the NCWRC conduct a formal enumeration of the fish kill. On May 9, 2018, NCWRC staff collected dead fish from six randomly selected 100-meter shoreline transects and six randomly-selected lake transects. Total hatchery production costs for the 114,770 fish from NCWRC transect sampling and removals by the Town of White Lake is \$634,132. The total administrative cost of the NCWRC investigation was \$6,257.
9/27/2018	FA18002	Cape Fear River	Lock and Dam 1	10,000	Event occurred in the wake of Hurricane Florence. Extremely low dissolved oxygen levels(<1 mg/l) were measured by investigators . Approximately 5,000-10,000 fish aggregated in boating access area parking lot. Many Blue Catfish and American Eel lethargic at edge of water. Kill likely occurred throughout river and fish aggregated in still water at boat ramp. Anoxic water observed for miles upstream and downstream.
9/27/2018	FA18003	Cape Fear River	Lock and Dam 2	1,000	Event occurred in the wake of Hurricane Florence. Low dissolved oxygen levels were measured by investigators. Several hundred fish observed along 1-km of bank at Lock and Dam 2. Fish were not aggregated. Hypoxic waters observed downstream.
Total Kills for County: 3 Total Mortality for County: 126,000					

2018 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Buncombe					
5/2/2018	AS18002	Clayton Creek	near Bent Creek	70	The construction company on site, indicated that water lines had been flushed the previous day; chlorine was used to disinfect the lines. On 5/3/18 ARO spoke with the property owner. The owner said the water was dechlorinated using dechlor tablets (Norweco bio-neutralizer tablets) prior to discharge. They placed tablets in the manholes of the storm drain network that discharges to Clayton Creek. It is unclear if there was sufficient contact with the chlorinated water and the dechlor tablets prior to discharge. The following water quality parameters at both collection sites were found to be in the acceptable range: pH, dissolved oxygen, water temperature and conductivity.
Total Kills for County: 1 Total Mortality for County: 70					
Chatham					
5/30/2018	RA18004	Private Pond	Bear Creek	250	Low dissolved oxygen levels observed at time of investigation (0.55 mg/L). No algal blooms, spills, or unusual odors observed.
Total Kills for County: 1 Total Mortality for County: 250					
Columbus					
10/1/2018	WL18004	Waccamaw River	near Old Dock	100,000	Event occurred in wake of Hurricane Florence. Fish observed from Crusoe to SC state line (45 river miles). Approximately 10 fish per 100 yards of shoreline, more fish aggregated at some bridge crossings and boating access areas (e.g., Dock Rd bridge, Pireway BAA). Total losses are incalculable but certainly exceed 100,000 fish.
Total Kills for County: 1 Total Mortality for County: 100,000					
Currituck					
2/26/2018	WA18001	Atlantic Ocean	Corolla	10,000	Kill occurred over several days involving mainly menhaden. Event appeared to be the result of fish schools getting too close to shore and predators chasing fish onshore. At the site of the kill, Marine Patrol Officers could see dense schools of live fish in the water just behind the breakers from Corolla to Kill Devil Hills and saw dolphin chasing the live fish in the waters. Event occurred from mile marker 13 to 17.
9/21/2018	WA18009	Canal to North River	near Grandy	400	Event occurred in the wake of Hurricane Florence. Extremely low dissolved oxygen levels (<1 mg/l) were measured by investigators.
Total Kills for County: 2 Total Mortality for County: 10,400					

2018 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Durham					
6/19/2018	RA18005	Ellerbe Creek	Durham	60	The fish kill was located in Ellerbe Creek between Hillandale Road and Indian Trail Park/Albany Street. Staff at the Williams Water Treatment Plant located a short distance upstream said that they have been draining their reservoir, which is their raw water primarily from Lake Michie. They discharge a couple of hundred feet west of where Hillandale Road crossed Ellerbe Creek. As far as plant staff was aware, they had no spills of any chemicals recently. The field water chemistry didn't indicate that their discharge was harmful. Cause was unknown.
Total Kills for County: 1 Total Mortality for County: 60					
Edgecombe					
5/11/2018	RA18003	Farm Pond	near Pinetops	15,000	Dead fish located in East Pond. Algal Bloom including high levels of Microcystis (35ug/L) observed in adjacent (West) pond. Ponds were reported as not being connected. Cause unknown.
Total Kills for County: 1 Total Mortality for County: 15,000					
Lincoln					
8/13/2018	MO18004	Lake Norman	Near Cowans Ford Dam	730	Duke Energy water quality data shows summertime oxygen squeeze was cause of the fish kill. Metalimnion became anoxic before hypolimnion. Fish became trapped in hypolimnion, which eventually became anoxic and resulted in the fish kill.
Total Kills for County: 1 Total Mortality for County: 730					
Mecklenburg					
4/23/2018	MO18001	Long Creek	Charlotte	150	Fish kill was caused by a drastic drop in DO due to a large sanitary sewer discharge caused by a broken pipe. Stream flooding due to a large rainfall event caused an incomplete count of deceased fish.
7/16/2018	MO18002	Timber Lake	Charlotte	2,000	The pond was being drained by a contractor hired by the city of Charlotte before constructing a new discharge weir in the corner of the dam. During the draw-down, insufficient water remained in the pond and almost all fish died. Before arrival by investigators, residents collected and disposed of the majority of fish that could be reached.
9/8/2018	MO18003	Guymanton Lake	Charlotte	750	Initial investigation determined the cause for the fish kill to be low oxygen. Low DO is believed to be due to a large stagnant body of water with one fountain for circulation.
Total Kills for County: 3 Total Mortality for County: 2,900					
Nash					
1/25/2018	RA18001	Quarry Pond	near Rocky Mount	150	Incident happened right after that very cold spell. About 150 dead largemouth bass and bluegill were observed. Investigator noticed very low DO in the pond both near the surface and at about 5 meters. Loss of DO due to reverse stratification was suspected as a cause.

2018 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Total Kills for County: 1 Total Mortality for County: 150					
New Hanover					
9/22/2018	WL18001	Greenfield Lake	Wilmington	3,000	Fish kill occurred in the wake of Hurricane Florence over multiple days. Riverwatch staff measured dissolved oxygen at less than 1.0 mg/l. Event was not investigated by DWR staff due to hazardous conditions during and after storm.
9/27/2018	WL18002	Sutton Lake	Wilmington	0	Event occurred in the wake of Hurricane Florence. Approximately 1 to 2 fish per acre in Duke Energy ponds 1, 3, and 5. Did not see any actively dying fish. Water was anoxic in ponds along Cape Fear River dam, Duke Energy reported higher dissolved oxygen in Duke Energy pond 8. Anticipate additional fish mortality due to anoxic/hypoxic conditions.
9/27/2018	WL18003	NE Cape Fear River	Castle Hayne	2,000	Event occurred in the wake of Hurricane Florence. Many American Eel lethargic at edge of water. Most fish were aggregated in parking lot of boating access area. Kill likely occurred throughout the river, yet fish aggregated here due to calm water. Anoxic conditions occur for miles upstream and downstream of this location.
Total Kills for County: 3 Total Mortality for County: 5,000					
Pamlico					
8/13/2018	WA18005	South Creek	Aurora	200	NCWRC investigated a fish kill in South Creek near Aurora Monday August 13th. The kill extended from the bridge in Aurora to Jacobs and Drinkwater Creeks. The bridge height restricted access to continue counting the striped bass. No gill net or any other marks were observed on the fish. The eyes were bulging however. This may have been due to quick decay in warm waters.
Total Kills for County: 1 Total Mortality for County: 200					
Transylvania					
7/3/2018	AS18001	French Broad River	Rosman	4,300	A valve left open in a chlorine tank at the Rosman Champion Park pool resulted in 250 gallons of chlorine spilling into the French Broad River. An estimated 4,279 fish were killed within the affected reach of the French Broad River from the Champion Park Pool in Rosman downstream to the confluence of the East Fork French Broad River. Species included Central Stoneroller, Warpaint Shiner, River Chub, Smallmouth Bass, Green Sunfish, Rock Bass, Chain Pickerel, Northern Hogsucker, Silver Shiner, Rainbow Trout, Brook Trout, Brown Trout, White Sucker, River Redhorse, and Greenside Darter. Commission staff was notified of the kill on the evening of July 3 and conducted a formal enumeration in the late afternoon of July 3. The kill incorporated approximately 1.2 miles of the river. Staff visually identified and counted dead fish from three 100-yard segments within the fish kill reach.
Total Kills for County: 1 Total Mortality for County: 4,300					

2018 Fish Kill Events (by County)

Date	Kill Number	Waterbody	Location	Mortality	Comments
Tyrrell					
6/1/2018	WA18002	UT to Scuppernong Creek	near Creswell	1,000	Creswell resident near 30 foot canal road noticed dead fish on 6/1/18. EMT staff arrived on site approximately 1300 in the afternoon. Canal water along 3.5 miles adjacent to the 30 foot canal road was turbid, warm, and had very little dissolved oxygen (2.6 mg/L). Staff traced the path of dead fish to where 30 foot canal road and South fork Creek Rd intersect. This canal leads straight to the headwaters of the Scuppernong river. Heavy rainfall during the previous 3 to 4 days was obvious as leaf sediment was visible where the water levels recently receded. A slight green sheen was observed near where the tributary crosses under the South fork Creek road bridge. Farmland was the majority land use in this area. Corn had been planted recently. Extent of the affected kill area was adjacent to unbuffered farmland. Canal waters that were heavily buffered were clear, not turbid, and had no casualites.
Total Kills for County: 1 Total Mortality for County: 1,000					
Wake					
2/9/2018	RA18002	Falls Lake	Barton Creek	50	Kill suspected to be the result of cold temperatures. No signs of spills or lake turnover at time of investigation.
6/22/2018	RA18006	Kit Creek	Morrisville/RTP	60	Low Dissolved oxygen and high water temps observed during investigation. Fish were trapped between lake outfall and culvert.
Total Kills for County: 2 Total Mortality for County: 110					

Figure 1: DWR staff kill reports and fish kill app reports received during 2018

