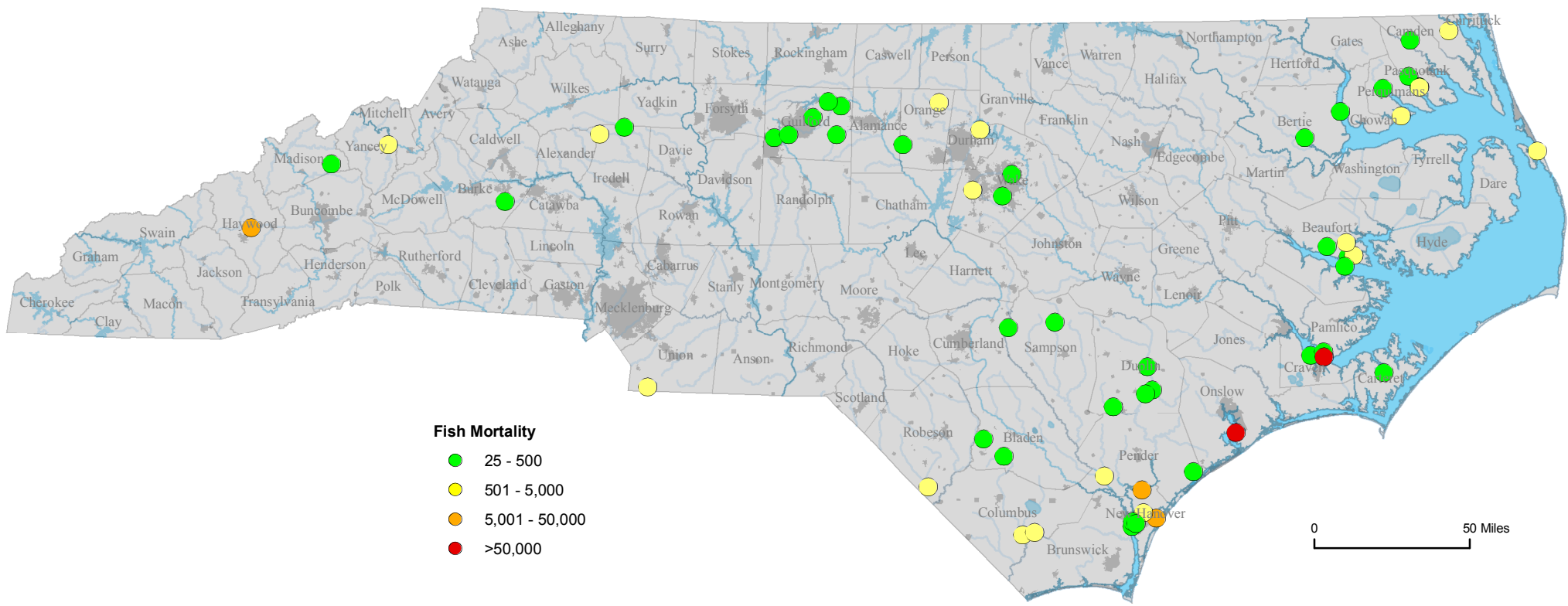


# Fish Kill Events Reported to the North Carolina Division of Water Quality - 1998



## 1998 Fish Kill Events (by County)

**Total 1998 Fish Kills: 58**

**Total 1998 Fish Mortality: 593545**

Date	Kill Number	Waterbody	Location	Mortality	Comments
<b>New Hanover</b>					
9/2/1998	WL98010	Greenfeild Lake	Wilmington	200	Hurrican Bonnie occurred days prior, low DO observed at time of investigation; investigators attributed DO depletion as cause for kill
9/2/1998	WL98009	Cape Fear River	State Ports	200	Hurrican Bonnie occurred days prior, low DO observed at time of investigation; investigators attributed DO depletion as cause for kill
<b>Total Kills for County: 2      Total Mortality for County: 400</b>					
<b>Beaufort</b>					
5/7/1998	WA98001	St. Clairs Creek		200	Investgators suspected possible farmland drainage from heavy rains preceeding kill, possible aerial spraying of herbicides to kill wheat, DO was 8.5mg/L ATI.
5/11/1998	WA98003	Pungo River	Mouth of Banjo Creek	550	Investigator noted some aerial spraying had occurred prior to the kill, fish dead for 2-5 days ATI, may be related to kills on St. ClairsCreek and North Creek (see WA98001 and WA98002)
5/11/1998	WA98002	Pamlico River	East Prong of North Creek	1200	Possibly related to St. Clair Creek fish kill on 5/7/98, see WA98001 report
9/25/1998	WA98017	Pamlico River	near Long Point	400	whitish sores seen on fish; dead menhaden ranged fro 8-10 cm; cause not specified ; NCSU Lab reported presumptive pfiesteria-like cell counts of 230 to 470 cells/ml
<b>Total Kills for County: 4      Total Mortality for County: 2350</b>					
<b>Bertie</b>					
7/10/1998	WA98004	Chowan River	north of US 17 Bridge	111	dead fish found inside and adjacent to pound net #02069 operated by SL Tynch; fish appeared dead from previous day; complainant reported 200+ fish dead in vicinity on 7/9/98; no fish observed dying or in distress at time of investigation, DO normal
9/2/1998	WA98019	Cashie River	Windsor	30	Hurricane Bonnie occurred days prior, low DO at time of investigation; dying fish observed at time of investigation.
<b>Total Kills for County: 2      Total Mortality for County: 141</b>					
<b>Bladen</b>					
6/29/1998	FA98002	Brown Marsh Swamp	Headwaters	25	numerous outfalls throughout roadside ditches in area, runoff from hog waste lagoon observed, waste ended up in field ditch after heavy rain, low D.O. observed in stream at time of investigation

Date	Kill Number	Waterbody	Location	Mortality	Comments
9/9/1998	FA98006	Singletary Pond	SR - 1124	50	low DO observed at time of investigation; investigators attributed DO depletion as cause for kill; fish scattered in low lying areas suggesting flooding
<b>Total Kills for County: 2      Total Mortality for County: 75</b>					
<b>Brunswick</b>					
9/1/1998	WL98015	Big Juniper Creek	near Exum	1000	Hurricane Bonnie occurred days prior, low DO at time of investigation; dying fish observed at time of investigation; kill composed of nearly all catfish; no discharges of sewage or animal wastes observed
<b>Total Kills for County: 1      Total Mortality for County: 1000</b>					
<b>Burke</b>					
8/18/1998	AS98002	Cub Creek		500	fish dying and dead at time of investigation; cause unknown
<b>Total Kills for County: 1      Total Mortality for County: 500</b>					
<b>Camden</b>					
9/1/1998	WA98010	Intercoastal Waterway (Pasquotank River)	below South Mills locks	75	Hurricane Bonnie occurred days prior, low DO observed at time of investigation; fish below locks were slow and lethargic; some seen surfacing and gasping; water described as reddish-brown color
<b>Total Kills for County: 1      Total Mortality for County: 75</b>					
<b>Carteret</b>					
9/3/1998	WA98009	South River	near headwaters	300	Hurricane Bonnie occurred days prior, low DO observed at time of investigation; investigators attributed DO depletion as cause for kill; fish appeared dead for 2-3 days at time of investigation
<b>Total Kills for County: 1      Total Mortality for County: 300</b>					
<b>Columbus</b>					
8/31/1998	WL98004	Waccamaw River	near Old Dock	5000	Hurricane Bonnie occurred 4 days prior, low DO at time of investigation; investigators attributed flooding, high organic loads, and DO depletion as cause for kill; most fish were bass and bluegill; gasping and lethargic fish also observed.
<b>Total Kills for County: 1      Total Mortality for County: 5000</b>					
<b>Craven</b>					
7/14/1998	WA98005	Neuse River	near Flanner's Beach	25	dead fish found on beach very stiff but not decomposed; DO slightly supersaturated; Burkholder lab reported pfiesteria cell levels of 250 /ml in water samples; cast net samples from area showed 10% of menhaden with lesions; 104 fish observed in cast net samples; most lesions seen in anal region; additional menhaden seen in distress with lesions in Slocum Creek on 7/15; 44% had lesions in Slocum Creek. Presumptive pfiesteria-like cell counts from water samples taken in area by ESB numbered 122 cells/ml. NCSU reported no active toxicity from bioassays of water samples with test fish.

Date	Kill Number	Waterbody	Location	Mortality	Comments
7/21/1998	WA98006	Neuse River	Seafarer Camp	500	Fish appeared dead for at least 12 hrs; lesions on 30% of the fish in the anal pore region; weather conditions around time of the kill included 90+ degree temps and strong SW winds; DO normal at time of investigation. Presumptive pfiesteria- like cell counts from water samples taken in area by ESB numbered 58 cells/ml.
7/28/1998	WA98007	Neuse Riiver	from Fisher Landing Point to Hancock	188000	river monitors showed chronic hypoxia in lower third of water column during month prior from Trent River to Hancock Creek; possible large scale mixing in river on July 26-27. Pfiesteria- like cell counts from water samples taken in area by ESB ranged from 0 to 367 cells/ml; Pfiesteria- like cell counts by NCSU ranged from 260 to 1500 cells/ml (NCSU and ESB samples were taken at different locations); 40 to 50% of live fish in the area showed lesions; up to 90% of dead fish showed lesions.NCSU reported active toxicity confirmed from bioassays of water samples with test fish.
					<b>Total Kills for County: 3      Total Mortality for County: 188525</b>

### Cumberland

7/6/1998	FA98003	South River	SR - 1823 (county line)	100	kill caused by low DO; conditions caused by heat, low flow, and decaying algae
					<b>Total Kills for County: 1      Total Mortality for County: 100</b>

### currituck

9/3/1998	WA98015	Canal System	Beechwood Shores Subdivision	550	low DO observed at time of investigation; investigators attributed DO depletion after Hurricane Bonnie as cause for kill
					<b>Total Kills for County: 1      Total Mortality for County: 550</b>

### Dare

11/3/1998	WA98018	Roanoke Sound	ditches near Pirates Cove, Manteo	3100	fish seen in distress and swimming erratically during investigation; low DO observed at several stations; fish ranged from 5-7 inches; cause unknown
					<b>Total Kills for County: 1      Total Mortality for County: 3100</b>

### Duplin

9/1/1998	WL98005	Northeast Cape Fear River	near NCWRC Ramp, Sarecta	50	Hurricane Bonnie occurred days prior, low DO at time of investigation; investigators attributed DO depletion as cause for kill; dying fish observed at time of investigation.
9/2/1998	WL98011	Rockfish Creek	SR - 1170	200	Hurricane Bonnie occurred days prior, low DO observed at time of investigation; investigators attributed DO depletion as cause for kill; fecal coliform count from water samples = 5700 col/ml
9/3/1998	WL98013	Northeast Cape Fear River	Hwy 41	100	Hurricane Bonnie occurred days prior, low DO at time of investigation; dying fish observed at time of investigation, swine waste spraying noted upstream near Sarenta
					<b>Total Kills for County: 3      Total Mortality for County: 350</b>

Date	Kill Number	Waterbody	Location	Mortality	Comments
<b>Durham</b>					
5/27/1998	RA98002	Private Pond	near Gorman	1500	Investigator noted heavy rainfall and turnover in pond resulting in DO depletion and the fish kill, DO recorded as 0mg/L ATI.
Total Kills for County: 1 Total Mortality for County: 1500					
<b>Guilford</b>					
3/16/1998	WS98001	Unnamed Lake	on UT to Deep River	175	a sewage spill of 114000 gallons was reported in the area, grease sheen and debris observed on the water surface, NCWRC performed cost assessment, total cost set at \$190.22
6/6/1998	WS98002	West Fork Deep River		1000	cause not specified in report to ESB, some fish seen gasping at surface, some dead fish collected previous to investigation
6/23/1998	WS98005	Private lake	Greensboro ( off Mt. Hope Church Road)	400	fish dead and beginning to decompose at time of investigation; heavy duckweed covering 75% of lake surface; water temperature = 31c; DO ranged from 0.75 to 4.75 mg/L; investigators suspect low DO as cause
6/25/1998	WS98006	North Buffalo Creek	near Summit Ave., Greensboro	500	water described as indigo blue-black color at time of investigation; some live fish observed; dead fish looked to be 24-48 hrs. old; pickup performed by NCWRC at a cost of \$2722
7/2/1998	WS98003	S. Buffalo Creek		62	12 million gallon sewage spill occurred at TZ Osbourne WWTP; low DO observed by Osbourne staff downstream of plant in S. Buffalo; dead fish observed at bridge crossings; some fish seen gasping at surface
7/6/1998	WS98004	Reedy Fork Creek	near Greensboro	76	fish dead and decaying attime of investigation; spill of 3000 gal sewage reported from the Reedy Creek Pump Station on 6/30/98; kills attributed to low precipitation and high temps (low DO) in area
9/11/1998	WS98007	Adams Farm Lake	near Jamestown	72	kill occurred earlier in week; some fish decomposed at time of investigation; cause unknown
Total Kills for County: 7 Total Mortality for County: 2285					
<b>Haywood</b>					
11/19/1998	AS98004	Lake Junaluska	near Waynesville	50000	kill attributed to silt and DO problems from draining lake too quickly for repair work; mortality seen in lake and downstream in Richland Creek from dam to the Pigeon River; enforcement action taken by ARO
Total Kills for County: 1 Total Mortality for County: 50000					
<b>Hoke</b>					
4/9/1998	FA98001	Private Ponds	near Raeford (Rockfish Creek	400	Heavy rains reported before the kill, water was a tan muddy color, filamentous algae present
Total Kills for County: 1 Total Mortality for County: 400					

Date	Kill Number	Waterbody	Location	Mortality	Comments
<b>Hyde</b>					
8/29/1998	WA98008	Smith Creek	near Scranton	207	kill occurred after Hurricane Bonnie; investigators suspected kill caused by low DO following storm; DO levels adequate during investigation.
Total Kills for County: 1      Total Mortality for County: 207					
<b>Iredell</b>					
6/26/1998	MO98001	High Shoals Branch	near Union Grove	50	kill caused by failure of waste application equipment at the Barry Myers Dairy Farm in Iredell Co, failure caused excessive runoff of waste from the waste application site.
Total Kills for County: 1      Total Mortality for County: 50					
<b>Madison</b>					
8/17/1998	AS98003	California Creek	SR 1608	60	fish observed surfacing all at once under bridge; ph taken on 8/15 measured at 5.3. No dead fish observed up or downstream; water appeared foamy; trailers observed 1/4 mile upstream . Cause unknown.
Total Kills for County: 1      Total Mortality for County: 60					
<b>New Hanover</b>					
6/16/1998	WL98001	Cape Fear River	Wilmington State Ports	70	cause not determined, sore/lesions reported on fish in area, no toxic algal forms identified in phyto samples collected at site, DO in normal range at time of investigation,
6/25/1998	WL98002	Pete Dye Lake	Landfall Development (Wilmington)	10000	investigators suspect kill caused by application of copper sulfate in lake to control algae; DO extremely low at time of investigation; toxic effects of copper sulfate suspected due to death of snails, insects, and hardy fish species this is a private golf course lake with no outlet to state waters except under severe circumstances
7/25/1998	WL98003	Smith Creek	near New Hanover Co. Airport	2000	no water quality problems or unusual activity detected during investigation; no lesioned fish observed; investigators suspected DO related kill due to compact school of menhaden in a small area
Total Kills for County: 3      Total Mortality for County: 12070					
<b>Onslow</b>					
9/29/1998	WL98012	New River	near Frenchs Creek and Grey Point	300000	some fish seen with damaged gill plate area; water appeared slightly darker than normal; numerous shrimp trawlers in the area - area opened for shrimping on 9/28; sores seen on 50% of fish; DWQ - ESB reported presumptive pfiesteria-like cells at 23-64 cells/ml; cause unknown
Total Kills for County: 1      Total Mortality for County: 300000					
<b>Orange</b>					
6/19/1998	RA98003	Private pond	near Caldwell	1000	strong algal bloom in progress at time of investigation, surface D.O. measured at 15.0 mg/L, 200 geese living on lake and in surrounding pasture.
Total Kills for County: 1      Total Mortality for County: 1000					

Date	Kill Number	Waterbody	Location	Mortality	Comments
<b>Pasquotank</b>					
9/3/1998	WA98013	Canal	Pike Road Housing Development	235	Hurricane Bonnie occurred days prior, low DO observed at time of investigation; blue crabs observed crawling on shore
9/3/1998	WA98012	Hall's Creek	Canal at Hall's Creek Boat Ramp	63	Hurricane Bonnie occurred days prior, low DO observed at time of investigation; blue crabs observed crawling up boat ramp out of the water
9/3/1998	WA98014	Canal	Hall's Creek Trailer Park	1115	Hurricane Bonnie occurred days prior, low DO observed at time of investigation; blue crabs observed crawling on shore
<b>Total Kills for County: 3      Total Mortality for County: 1413</b>					
<b>Pender</b>					
8/31/1998	WL98007	Northeast Cape Fear River	Castle Hayne	10000	Hurricane Bonnie occurred days prior; extremely low DO measured at time of investigation; kill still ongoing on 9/1; most of kill composed of hogchokers; many fish gasping in shallows at surface; sewage bypasses and a hog spill reported by UNCW investigators upstream; citizens reported dead fish in ten mile area
8/31/1998	WL98008	Virginia Creek Lake		200	Hurricane Bonnie occurred days prior, low DO observed at time of investigation; investigators attributed DO depletion as cause for kill; fish appeared dead for 2-3 days at time of investigation; other fish in lake observed OK
9/1/1998	WL98006	Moore's Creek	near Mouth	2000	Hurricane Bonnie occurred days prior, low DO observed at time of investigation; investigators attributed DO depletion as cause for kill; gasping and lethargic fish also observed
9/9/1998	WL98014	Northeast Cape Fear River	near Watha on Sr 1318	300	Hurricane Bonnie occurred days prior, low DO at time of investigation; water noted as dark with hydrogen sulfide smell
<b>Total Kills for County: 4      Total Mortality for County: 12500</b>					
<b>Perquimans</b>					
9/2/1998	WA98011	Holiday Island Canals	Holiday Island	2074	Hurricane Bonnie occurred days prior, low DO observed at time of investigation; distinct sewage smell and slick observed during investigation; larger fish observed breaking at surface; some small minnows observed at surface
9/3/1998	WA98016	Perquimans River	2 miles above RR trestle near Bagley	160	low DO observed at time of investigation; investigators attributed DO depletion after Hurricane Bonnie as cause for kill
<b>Total Kills for County: 2      Total Mortality for County: 2234</b>					
<b>Robeson</b>					
7/8/1998	FA98004	Ashpole Swamp	SR 2258 near Barnesville	1000	kill caused by low DO; low DO observed at time of investigation; low flow isolated fish in pockets from rest of swamp.
<b>Total Kills for County: 1      Total Mortality for County: 1000</b>					

Date	Kill Number	Waterbody	Location	Mortality	Comments
<b>Sampson</b>					
9/1/1998	FA98005	Great Coharie Creek	SR 1746	75	Hurricane Bonnie occurred days prior, low DO at time of investigation; investigators attributed DO depletion as cause for kill; abundant dead algae noted in stream along with brown scum and instream floes.
Total Kills for County: 1      Total Mortality for County: 75					
<b>Union</b>					
2/12/1998	MO98002	Cane Creek Lake	at Cane Creek Park near Monroe	2000	investigators suspected winter shad die-off as cause; few seen at time of investigation due to seagulls feeding on dead
Total Kills for County: 1      Total Mortality for County: 2000					
<b>Wake</b>					
1/5/1998	RA98005	Cooper's Pond	Eastgate Park	85	sewage spill reported in area; low DO observed at time of investigation; hundreds of fish observed gasping at surface
4/2/1998	RA98001	Private Pond	Golf Course at Raleigh Golf Assc.	200	Kill first occurred on 3/29/98, fish decayed ATI, no herbicides or pesticides applied recently, DO was 9.5 mg/L ATI.
5/12/1998	RA98004	UT to White Oak Creek	West Park Subdivision	2000	2.16 ppb dursban(chlopyrifos) detected in pond water samples; investigators suspected toxicant washed in with recent rainfall from a treated site near pond; bluegill were bedding in upper part of pond where wash in took place. No responsible party was identified.
Total Kills for County: 3      Total Mortality for County: 2285					
<b>Yancey</b>					
5/23/1998	AS98001	South Toe River	near Micaville	2000	Dead fish seen from S. Toe mile 3.5 to mile 0.0, dead fish also seen floating in the N. Toe. Live fish also seen in these areas, investigators suspect kill occurred in S. Toe and then floated downstream. Many more fish than count believed affected.
Total Kills for County: 1      Total Mortality for County: 2000					