



A hog waste lagoon in Georgia.

Accidents Waiting to Happen

Agricultural Waste Lagoons

Waste lagoons used by industrial agricultural operations threaten spills that can cause catastrophic damage to America's rivers, lakes and streams.

Factory Farms Store Manure in Massive, Dangerous Waste Lagoons

In recent decades, agriculture in the U.S. has undergone a dramatic shift from small family farms to giant industrial operations. These factory farms produce large amounts of solid waste: One farm with 2,500 dairy cows produces as much as a city of 411,000 people. Even regular operations create runoff pollution that can harm waterways. With more manure than can be spread on nearby fields, waste is often stored in large pits, or lagoons, where it is mixed with water and eventually transported for use as fertilizer.

Manure Lagoons Put Water at Risk

Waste lagoons are prone to leaks and spills, as they are often uncovered, unlined and separated from waterways by narrow embankments that can overflow or collapse. Spills can be highly damaging to the environment. Manure waste can cause algae blooms in lakes and ponds that harm aquatic ecosystems, and can also contain dangerous pathogens like *E. coli*, growth hormones, antibiotics, chemical additives to manure and animal blood.



Recent decades have seen a dramatic shift to industrial agricultural operations, where animals are raised in confined facilities and manure waste is stored in pits.



This North Carolina waste lagoon was among 32 to overflow as a result of flooding caused by Hurricane Florence.

Manure Lagoon Spills Are Common

Current data on the extent of waste lagoon spills is limited, but one study found more than 1,000 spills between 1995 and 1998 that killed a total of more than 13 million fish. And a *Chicago Tribune* analysis of Illinois data found that hog confinement spills and leaks killed 492,000 fish from 2005 through 2014.

Waste lagoons are at particular risk during extreme weather events. In North Carolina, hurricanes Floyd (1999), Matthew (2016) and Florence (2018) led to the failure of dozens of waste lagoons, resulting in the contamination of waterways including the South River and tributaries of the Cape Fear, Neuse and Tar rivers.

Waste can also spill into the environment when it is transported to fields via hoses and pipes. In July 2012, a malfunctioning irrigation pivot spilled liquid waste into Beaver Creek in Iroquois County, Illinois, at a rate of 300 gallons a minute for three days. The spill contaminated 20 miles of river, killing more than 100,000 fish.

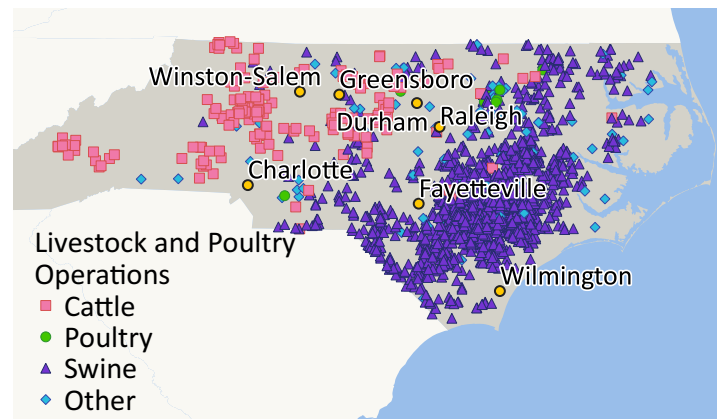
Protect American Waterways from Damaging Spills

Manure lagoons put America's streams and rivers at risk, but it doesn't have to be that way. Policymakers have a number of options to protect our waterways from all types of catastrophic accidents. Policymakers should work to:

Limit or end operations that pose severe threats to water. The best way to prevent toxic spills is to limit activities that create the potential for spills in the first place, including by banning manure lagoons and establishing moratoria on new or expanded industrial-scale livestock operations.

Keep risky facilities away from water. As long as high-risk agricultural operations remain, policymakers should ensure that they are kept far enough from waterways to eliminate the risk of contamination.

Set and enforce strict standards for existing risky facilities that operate near waterways. Strict standards should apply to any facilities that store or transport hazardous material near water.



Livestock and poultry operations in North Carolina.

Threat Spotlight: North Carolina's Waste Lagoons Put Water at Risk

North Carolina farms raise millions of food animals, including 9 million hogs, 430,000 cattle, and more than 830 million chicken. Waste lagoons used by state agricultural operations frequently spill and leak, including 32 spills caused by flooding during Hurricane Florence.

A 2016 analysis of waste lagoons in North Carolina by the Environmental Working Group and Waterkeeper Alliance (EWG/Waterkeeper) helped reveal the extent of waste lagoons threats to water.

EWG/Waterkeeper's analysis of satellite imagery in North Carolina found 4,145 waste lagoons in the state, covering nearly 7,000 acres. The analysis found that 170 of those waste lagoons were within a 100-year floodplain (from the North Carolina Flood Risk Information System), while 136 lagoons were within a half-mile of a public water well.



*For more information and the full report,
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