



Conserving The Nature of America

Landfill Siting: The Importance of Protective Buffers for North Carolina National Wildlife Refuges

Environmental Contaminant staff with the U.S. Fish and Wildlife Service's (Service) Raleigh Ecological Services Office have provided technical input to State regulators with the North Carolina Department of Natural Resources Division of Waste Management (NCDWM) and others regarding inclusion of 5-mile protective buffer around National Wildlife Refuges (NWRs) in the State to prevent and mitigate potential impacts that may result from landfill siting, design, and operation.



Pollutant sources, like this burning landfill adjacent to an eastern North Carolina National Wildlife Refuge, can harm refuge plant, fish, and wildlife resources.

Overview. Eleven NWRs are located in North Carolina, comprising over 400,000 acres of habitat. Six refuge are located within 5 miles of existing (6), closed (6), or proposed (2) landfill sites. A landfill moratorium was enacted by the NC General Assembly last year authorizing a solid waste management study focused on siting, design, and operational requirements for landfills in areas susceptible to flooding, areas with high water tables, and other environmentally sensitive areas. Recommendations prompted by that study have been incorporated into the Solid Waste Management Act (SWMA) of 2007 which contains requirements for new landfills to conduct an environmental impact study and meet additional landfill standards for environmental protection. The Service has provided NCDWM and others with the technical basis for including a 5-mile protective buffer around NWRs in the final SWMA. Like other environmental standards in the SWMA (e.g., broader stream and wetland buffer requirements), refuge buffers could easily be incorporated before landfill rules are finalized.

Wider buffers have precedent in other states

- NJ prohibits hazardous waste landfills within 6.25 mi of Class I areas to prevent air quality problems (1 Class I NWR in NC, 10 Class II)
- GA rules require 3.2 mi between landfills and National Historic Sites; NWRs typically receive equal or greater priority in sensitive areas planning efforts.

Maintaining aesthetic quality of NWRs integral to mission

- Degraded viewscape could deter public use of NWRs
- Structures may be visible for 19 mi at sea level at the SWMA specified maximum landfill height of 200 ft.

Migratory birds on NWRs need separation from landfill scavengers

- Large flocks of landfill scavengers (gulls) may displace, harass, and destroy nests of other birds on NWRs

Refuges within 5 miles of landfills in NC:

- Great Dismal Swamp NWR
- Alligator River NWR
- Mattamuskeet NWR
- Swanquarter NWR
- Pocosin Lakes NWR
- Roanoke River NWR



Potential landfill impacts to NC Refuges:

- Diminish public enjoyment of NWRs (odors, viewscape, noise)
- Alter wildlife use patterns (landfill odors attract wildlife)
- Reduce wildlife habitat quality (pollution)
- Modify hydrology patterns
- Alter function/value of wetlands
- Increase vehicle traffic/wildlife collisions