



THE IMPORTANCE OF SMALL WETLANDS

Small wetlands can be defined as being less than an acre in size.

Small wetlands are distributed throughout North Carolina, occupying a range of landscape positions and varying in abundance.¹

Blue Ridge Mountains:

Fewest amount of wetlands and smallest wetlands in size

Piedmont:

Moderate amount of wetlands and moderately sized

Coastal Plain:

Greatest extent of wetlands in quantity and size

Seven wetland types are commonly associated with small wetlands:

basin, bog, floodplain pool, headwater forest, non-riverine swamp forest, pocosin, and seeps.²

Current wetland regulations are focused on direct surface hydrologic connectivity and the size (or amount) of wetland impacts; therefore, small wetlands may be lost without requiring permitting and avoidance and minimization measures.

In North Carolina, approximately half of all wetlands were lost by the mid-1980s, with the amount of wetlands reduced from approximately 11 million ac to around 4 million ac.³

The size of a wetland is not a direct indicator of how well the ecosystem is functioning or the value it has to the surrounding environment.

The destruction of small wetlands can lead to issues such as decreased water quality, increased flooding, a decline in biodiversity, and economic losses.⁴

Benefits of Small Wetlands

Flood storage:

- The U.S. Environmental Protection Agency (EPA) estimates that one acre of wetland can store up to 1.5 million gallons of water.⁵

Wetlands can:

- Store precipitation and slowly release it over time, which reduces stormwater runoff and lessens flash flood damage
- Reduce the number of severe overbank flooding events by holding and storing significant amounts of floodwater from overflowing streams.
- Minimize drought impacts
- Reduce saltwater intrusion

Water Quality:

- Reduce excess stormwater runoff that can carry harmful contaminants, excess nutrients, and sediment that impair water quality.

Photo Courtesy of ncwetlands.org

- “one inch of rain on an acre of woods produces little to no stormwater runoff” while “one inch of rain on an acre of asphalt produces 27,000 gallons of stormwater runoff that contains a variety of pollutants and causes widespread erosion.”⁶

Recreation

- Preserving small wetlands can boost local economies for tourism and hunting, make outdoor recreation activities more accessible, improve nearby property values, and support physical and mental health.⁷

Biodiversity

- Provide habitat for over 90 rare, threatened, or endangered plant and animal species in the Mountains and western Piedmont.⁸
- Critical breeding grounds for amphibian and crayfish species.⁹
- Host a variety of invertebrates and insects that are an excellent food source for birds and other wildlife.¹⁰
- Important clean water drinking source for wildlife, especially in areas surrounded by uplands where drinking sources may be limited.

Recommend Actions to Protect Small Wetlands

Other criteria based on the benefits a wetland can provide need to be incorporated into wetland regulations.¹¹

A landscape approach to regulate wetlands can be used to avoid and minimize impacts to wetlands that have the potential to provide the most environmental, economic, and community benefits.

References

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