

Delaware Statewide Wetlands Mapping Project (SWMP)

Introduction

Mapping Delaware wetlands using aerial photography is the best method to determine wetland acreage, to track changes over time, and to lead to wetland health assessments. It is nearly impossible to visit each wetland across Delaware to assess wetland health and determine how well services are being provided by each wetland. Wetland maps allow scientists to sample a population and extrapolate the data to determine the health of an entire watershed.

The [maps](#) created in 2007 are the most accurate wetland maps to date in Delaware. The maps were created in partnership with the U.S. Fish and Wildlife Service's National Wetland Inventory (NWI) Program, creating the first combined state and federal wetland maps for Delaware. Aerial photography is typically available every 5 years, however funding for wetland mapping is not regularly available and can be 10-15 years apart. Delaware's previous wetland mapping was completed in 1992, which by 2007 was outdated and limiting.

Methods

The current mapping is based on statewide aerial photography from 2007. In addition to aerial photography the project utilized soil type, geomorphic type, vegetation type, functional analysis, and hydrology data to assist with the photo-interpretation. On-the-ground visits were incorporated to verify the heads-up photo-interpretation and computer analysis.

In addition to mapping current Delaware wetlands, a wetlands trend map was created by comparing statewide aerial photography from 1992 to aerial photography from 2007. Trends were identified as going to (loss) or coming from (gain) a specific land use or land cover.

Results from the 2007 SWMP

- As much as 25% of Delaware is covered by wetlands, totaling over 320,000 acres inventoried
- Tidal wetlands represent 23% of the State's wetlands
- Non-tidal wetlands represent 77% of the State's wetlands
- Almost 50% (149,826 acres) of Delaware wetlands are located in Sussex county
- Delaware lost almost 50% more wetland acreage during the span of 1992 to 2007 vs. 1982 to 1992
- Delaware produced a comprehensive report ["Delaware Wetlands: Status and Changes from 1992 to 2007"](#) in 2011 to provide an update to wetland extent and wetland health.

Map Usage

Wetland maps are also an important tool in locating where wetlands exist and should be used preliminarily when determining wetland boundaries on the ground. The maps are used by many interest groups within the state of Delaware. These groups include: scientists, engineers, developers, permitting agencies, conservation groups, resource managers, realtors, consultants, and land use planners. These maps are often the only wetland resource these groups have access to when making their decisions regarding land areas in the state. It is imperative that NWI continues to produce good nationally recognized and robust wetlands maps.

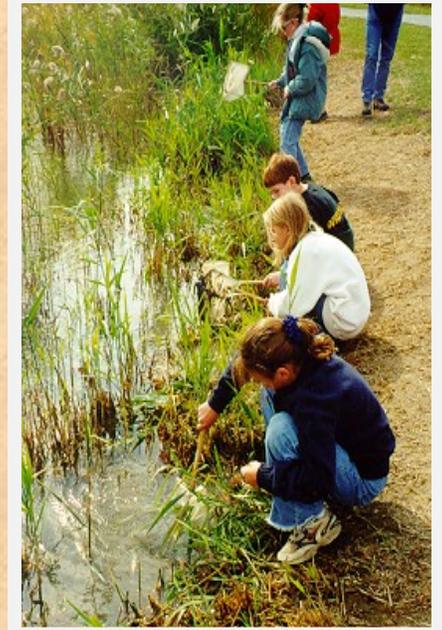
To view the maps and the full 2007 SWMP Report visit:

<http://www.dnrec.delaware.gov/Admin/DelawareWetlands/Pages/MonitorAssess.aspx>

Who Uses NWI Maps?



Scientists within Delaware use wetland maps for research, monitoring and assessment, planning of restoration and enhancement projects, protection of plants, animals and natural communities, large scale watershed management plans, and floodplain management.



Conservation Groups use the maps to help identify and strategically target wetland resources that need conserved and protected. Often these areas represent unique community types, or are home to rare species that need protection. Without the work of conservation groups, such as Delaware Wildlands, these areas could be damaged or lost.



Land Use Planners use wetland maps in site-specific situations to help guide projects in regard to infrastructure resources and when developing longer range comprehensive plans for widespread areas.



Acknowledgement

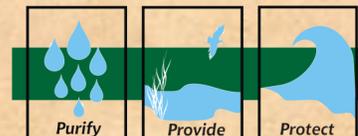
The National Wetlands Inventory (NWI) program is integral for the upkeep of national wetland mapping standards, as well as tracking the extent and health of wetlands across the United States. Without NWI guidance and funding, states would be left to complete and update wetland mapping only when resources are available.

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Delaware Wetlands



<http://de.gov/delawarewetlands>

