

The Delaware Wildlife Action Plan 2015-2025



*Keeping today's wildlife from
becoming tomorrow's memory.*

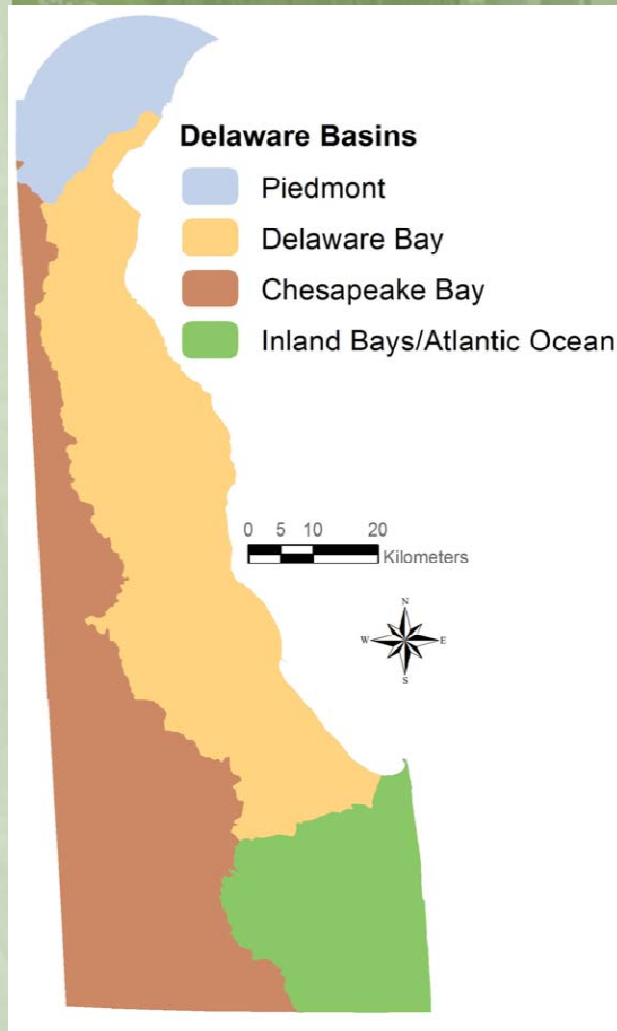
Habitat Priorities for the Chesapeake Bay Region in Delaware

Anthony Gonzon, DE Division of Fish and Wildlife, DNREC



*We Bring You Delaware's
Great Outdoors
Through Science and Service*

Delaware Habitats in a Watershed Context

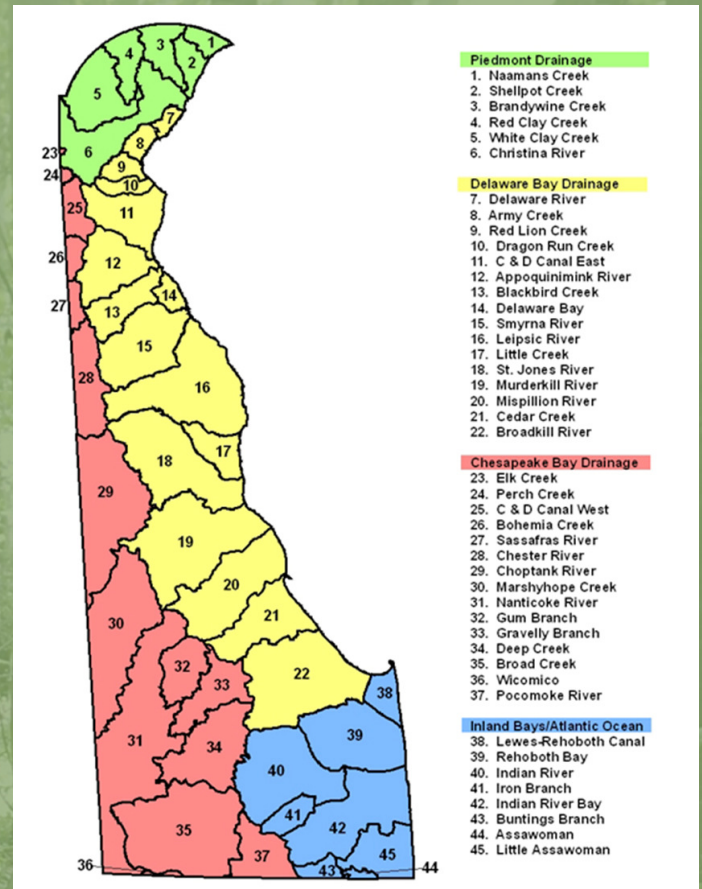


- Delaware contains four main drainage basins: Piedmont, Delaware Bay, Chesapeake Bay, and Inland Bays/Atlantic Ocean basins.
- Delaware Department of Natural Resources and Environmental Control (DNREC) has been implementing a drainage basin approach to assess, manage, and protect Delaware's natural resources (Whole Basin Management).
- Delaware's 451,268 acres of Chesapeake Bay drainage, spanning the western border of the state in all three counties, is about 1% of the land area of the entire Chesapeake Bay Watershed.



Delaware Habitats in a Watershed Context

- Delaware contains the headwaters of many of the rivers of the Chesapeake's eastern shore.
- The Delaware DNREC Division of Fish and Wildlife (DFW) manages over 20,000 acres in the watershed, including 7 wildlife areas and 10 millponds.
- DNREC's Watershed Assessment and Management Section oversees the health of the state's water resources and takes actions to protect and improve water quality for aquatic life and human use.



Nanticoke River Watershed

- The Nanticoke River is a major tributary of the Chesapeake Bay. Its watershed drains over 800 square miles in Maryland and Delaware and is widely recognized for its unique biological communities.
- In 2009, a Nanticoke River Watershed Restoration Plan was developed to improve water quality and wildlife habitat in the Nanticoke River Watershed.
- 80% of the natural streams are channelized. Many of these large channels traverse areas of intact forest habitat.
- Several restoration projects have been completed to restore these large, channelized streams to a more natural channel design that incorporates floodplain reconnection and should help restore wildlife value to these systems.



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DEWAP Habitat Priorities

- **Inland Xeric Sand Forest:** extremely dry forests and woodlands dominated by a mix of oaks, Virginia, shortleaf, and loblolly pine, and sand hickory.
- Inland sand ridges are found primarily in southwestern Sussex County in the Nanticoke watershed, and are associated with Parsonsburg Sand soils.
- Many invertebrate SGCN are associated with this forest type, including rare invertebrates, especially wasps, bees, tiger beetles and other burrowing species associated with exposed upland sands.
- Fire suppression and subsequent canopy closure is an important threat to this habitat type.



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DEWAP Habitat Priorities

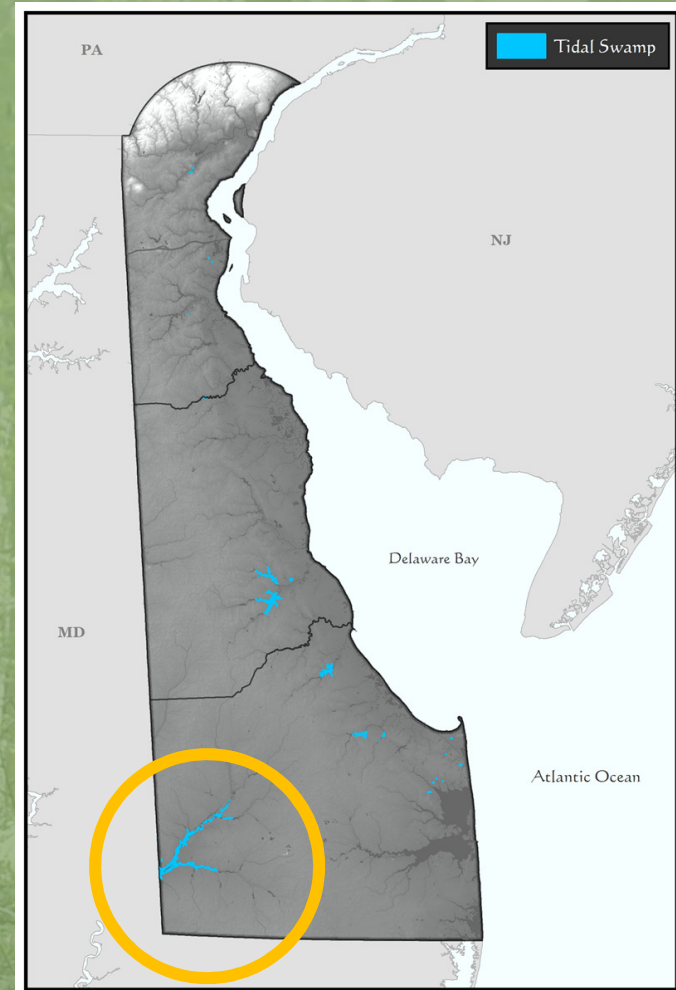


- **Atlantic White Cedar Wetlands:** characterized by stands of Atlantic white cedar on poorly drained, mucky soils along slow-flowing streams and at the headwaters of millponds.
- They feature hummock and hollow microtopography, with cedars often growing on hummocks.
- Numerous rare plant species, such as swamp pink, pitcher plant, and orchids, may be found in the herbaceous layer of some types.



DEWAP Habitat Priorities

- **Freshwater (Palustrine) Tidal Wetlands:** dominated by small trees and shrubs.
- Found at the head of tide or along the fringes of tidal creeks, where tidal flooding is irregular.
- SGCN associated closely with this habitat include numerous birds, especially foraging herons, as well as Swainson's and prothonotary warblers, many species of diadromous fish, and a variety of rare invertebrates.



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DEWAP Habitat Priorities



- **Freshwater Submerged Aquatic Vegetation:** found in varying degrees in streams and rivers throughout the state in portions of the channel that are permanently inundated during the growing season.
- Freshwater SAV includes 15 native species and 2 non-native, invasive species, Carolina fanwort (*Cabomba caroliniana*) and hydrilla (*Hydrilla verticillata*).
- Several SGCN are associated with freshwater non-tidal SAV, including bridled shiner, swamp darter, and banded and blackbanded sunfish.



DEWAP Priority Actions

- Several Key Conservation Actions align with CPB Habitat Goal outcomes and management approaches.
- Habitat acquisition and restoration are high priorities in the Nanticoke watershed.
- Improve mapping of benthic substrates to benefit fish SGCN, particularly Atlantic Sturgeon and Largemouth Bass.



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Fish Passage



- Documenting fish passage to upper reaches within Marshy Hope Creek.
- Significant concerns about the movement of non-native, invasive fish species such as blue catfish and snakehead.
- Mapping of important fish habitats at all stages – breeding, overwintering , staging and migration.



Submerged Aquatic Vegetation

- Protecting existing SAV and continue mapping occurrences throughout the Chesapeake basin.
- Need additional surveys and inventory to examine current extent of SAV.
- Acquisition of important uplands can buffer sensitive SAV occurrences and maintain their ecological integrity.



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American Black Duck



- Historically nested in Nanticoke watershed; small overwintering population.
- Land acquisition and easements provide protection for wetlands that can support black ducks.
- Control of non-native, invasive vegetation can increase habitat quality for waterfowl and other wetland species.



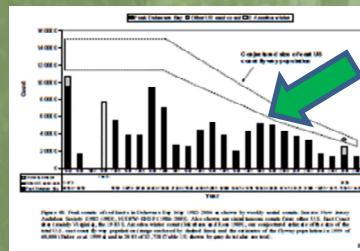
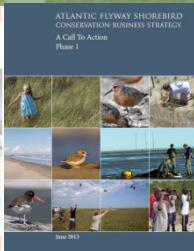
Stream Health

- Provide guidance and technical assistance to reduce impacts to streams and avoid further degradation from shoreline hardening, dredging, pollutants, etc.
- Work with the Division of Watershed Stewardship to ensure integration of key habitat and SGCN conservation and monitoring into all Pollution Control Strategies and state water quality standards
- Promote the implementation of BMPs for erosion and sediment control.



Next: Web-enabling the Plan

On the web, we can use graphics, links, and dynamic data presentations to replace database chains, leading to...

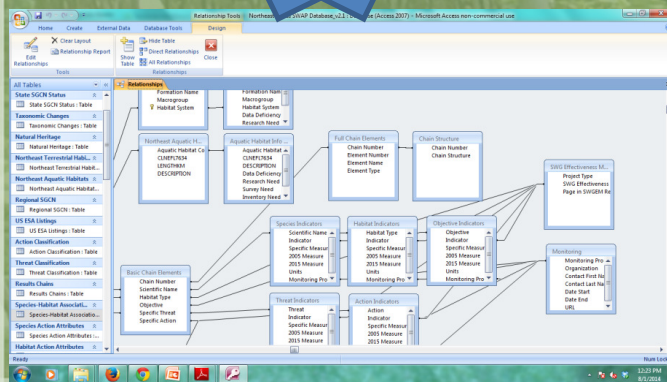


Proper planning...

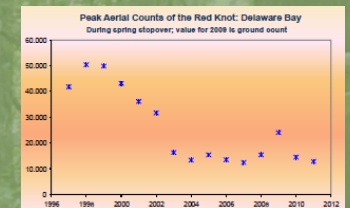
And solid objectives...

Increased effectiveness of conservation actions...

That reduce issues...



And benefit species and habitats in measurable ways



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