

I. Overview



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A. Purpose and Scope of this Management Plan

This document is the second edition of the management plan for the Delaware National Estuarine Research Reserve (DNERR), and covers the period of 2004–2009. This plan is an addendum to the original management plan that was approved by the National Oceanic and Atmospheric Administration (NOAA) and adopted by the DNERR in 1993.

The original management plan established the inclusion of the DNERR in the National Estuarine Research Reserve System (NERRS). At that time, administration and management of the Reserve were provided by the Delaware Department of Natural Resources and Environmental Control (DNREC) through the combined efforts of the Divisions of Fish and Wildlife, Soil and Water Conservation, and Parks and Recreation. The management plan included a detailed acquisition agenda and site information for the two Reserve components: sites at the Lower St. Jones River and Upper Blackbird Creek. Plans for facilities and staffing detailed the sites' needs for full implementation of the Reserve's intended programs. Plans for education/interpretation, research, and resource protection were established to guide the major functions of these programs.

The objectives of the original plan and the Implementation Plan were established with the intent of guiding the Reserve through its first 5 years of operations. Many of the original plan's general objectives for research and education are presently ongoing. Although a great deal has been accomplished by the DNERR since 1993, some achievements and improvements are not reflected in the outdated plan. This update reflects the new achievements and improvements. The basic structure of Reserve administration and management has been considerably altered, as the DNERR is now administered at the State level by the DNREC's Division of Soil and Water Conservation in the Delaware Coastal Programs (DCP) Section. The Reserve's St. Jones Center does not, as was originally conceived, house DNREC offices for the Division of Fish and Wildlife. The original plan was set with high expectations for numerous State-funded positions; although NERRS appropriations have steadily increased, allowing for increased efforts at each site, State matching funds have become increasingly difficult to attain (especially for staff positions).

This second edition of the management plan describes the mission, goals, and objectives of the NERRS and the DNERR, and describes the accomplishments of the DNERR since the publication of the 1993 plan. In addition, action plans reflect current circumstances and are presented for the Reserve's administration; facilities and construction; public access; education, interpretation, and outreach; environmental research and monitoring; and stewardship. Over the next 5 years, as funding permits, it is the overarching goal of the DNERR to increase its efforts in all aspects of Reserve operations. For example:

- State funding for several positions will be explored.
- Volunteers will be recruited to assist with numerous Reserve activities.
- A Proposed Facility Expansion Plan will be implemented to meet needs for space and other resources.
- Public access to the St. Jones Reserve component will be promoted, while the integrity of both Reserve sites will be maintained.

- Public educational programs, school programs, outreach programs, Coastal Decision-Maker Workshops, and exhibit construction will continue and expand.
- Prescribed tasks will be fulfilled in order for the Coastal Training Program (CTP) to become operational.
- The Research and Monitoring Program will focus on habitat characterization and anthropogenic impacts at both sites, in cooperation with the Delaware Coastal Management Program (DCMP), other coastal research agencies, and universities, and will continue to participate in System-wide research initiatives.
- The adoption of conservation practices and monitoring at both sites will further the Reserve's resource protection objectives.
- Aggressive efforts will be taken to identify funds for land acquisition to protect essential habitat within the Reserve's boundaries and watersheds.

This next phase of development and expansion will be largely dependent upon future grant allocations. Throughout its administrative and programmatic efforts, the DNERR will continue to be directed toward providing focused, integrated research and education to foster the wise use and management of estuarine and coastal ecosystems.

This revised management plan has been developed by the DNERR in accordance with NOAA regulations and Section 315 of the Coastal Zone Management Act (CZMA). This plan is intended to guide the future direction and accomplishments of the DNERR, and its implementation will be subject to evaluation as required by Federal regulation (15 CFR Part 921.40).

B. Brief Introduction to the Delaware National Estuarine Research Reserve

During the early 1980s, the DNREC examined the precursor to the NERRS, the National Estuarine Sanctuary Program, which had been established by Section 315 of the CZMA in 1972. Although that program had several desirable attributes, it did not have enough flexibility or utility within the context of Delaware's resource needs to warrant the State's support. However, when the CZMA was reauthorized in 1986 and Section 315 was amended, the National Estuarine Sanctuary Program evolved into today's NERRS, which has a greater emphasis on applied research and environmental education while allowing more flexibility in the administration of reserve components to accommodate multiple uses and respond to management needs. Given this new direction for estuarine reserves, the State of Delaware began in 1988 to identify potential sites. The intensive site-selection criteria that were used assessed ecological representation, values for environmental research and education, and acquisition and management considerations. Two sites were selected and nominated to then-Governor Michael Castle to be a multiple-site Reserve. In 1993, following NOAA's approval of the submitted management plan, the DNERR became the 22nd Reserve in the System.

The DNERR consists of two Reserve components, the Upper Blackbird Creek and Lower St. Jones River sites, which are about 30 miles apart. These components include both brackish and freshwater estuaries, and represent the diverse estuarine ecosystems found throughout the Mid-Atlantic states. The more landward Blackbird Creek Reserve component, located in southern New Castle County, is 1,180 acres in designated size. It represents a low-salinity brackish or freshwater tidal estuarine ecosystem. The more seaward St. Jones Reserve component, located just south of the State capital of

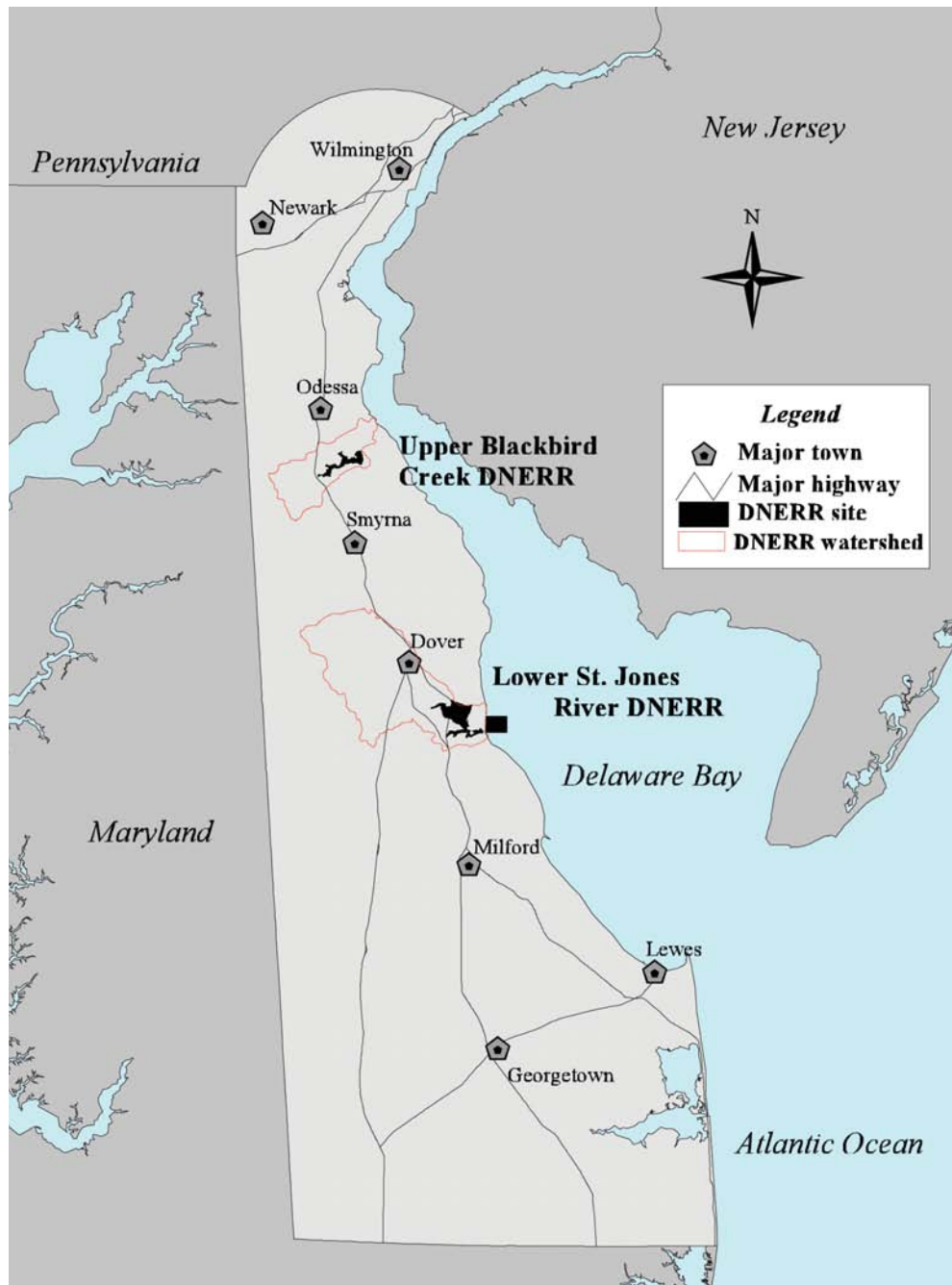


Figure I-1. Map showing the location of the two DNERR components in Delaware.

Dover, is about 3,750 acres in designated size. It represents a medium-salinity tidal river estuarine ecosystem; 2,560 acres of the site consist of Delaware Bay bottom and near-shore waters, running for 2.0 miles along the Ted Harvey Conservation Area's bay shoreline and extending outward 2.0 miles into the open bay. Both Reserve components include tidal marsh, upland field, woodland, and cropland habitats.

Approximately 5,000 people visit the Reserve annually as part of school programs, seasonal public programs, volunteer projects, and other activities. The St. Jones Reserve component is home to the

DNERR St. Jones Center, an education and research facility that opened in May of 1999. The building houses offices, laboratories, and conference space, along with numerous exhibits. A boardwalk for interpretive and research activities is constructed through part of the marsh at the St. Jones site and, along with the Center, is open to the public Monday through Friday from 8:00 a.m. to 4:30 p.m. and during specially scheduled events. The Blackbird Creek Component is primarily protected for research use. Public access is currently conducted in close coordination with the Reserve Manager to reduce the potential for human impact on this fragile ecological system. For research and special education events, the Reserve Manager is willing to accommodate requests for guidance and access.

Environmental research and monitoring efforts, including the gathering of meteorological and water quality data, take place at both Reserve components. The DNERR also conducts research projects throughout Delaware and nationally, involving numerous professional collaborations with universities, environmental agencies, and nonprofit organizations.

The DNERR is a partnership program between the DNREC and NOAA. At the State level, the Reserve is administered through the DNREC's Division of Soil and Water Conservation within the Delaware Coastal Programs (DCP). Currently, the full-time DNERR staff consists of a Reserve Manager, Education Coordinator, Research Coordinator, Research Technician, and Conservationist. In addition, the Reserve employs a part-time Estuarine Educator. Seasonal interns also assist the staff when funding permits.

