

MARYLAND DEPARTMENT OF NATURAL RESOURCES

WILDLIFE AND HERITAGE SERVICE

WILDLIFE MANAGEMENT PLAN

For

CEDAR ISLAND WILDLIFE MANAGEMENT AREA

15 YEAR VISION PLAN

Location

Crisfield, Maryland

In

Somerset County
Maryland

On Approximately

3081 acres

Prepared by:

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Introduction

The Maryland Department of Natural Resources, Wildlife and Heritage Service (WHS) is responsible for the management of approximately 111,000 acres of State property. These areas entitled “Wildlife Management Areas” (WMA) encompass 47 separate tracts of land and are located in 18 of the 23 counties in the State. These areas range in size from less than 20 acres to well over 29,000 acres, and support most, if not all, of the major habitat types found throughout Maryland. These properties make up a significant portion of the Department’s land holdings of approximately 474,348 acres.

In 1949, DNR first acquired a 2,880-acre property in southwestern Somerset County from Sifford Pearre. Subsequent purchases brought the total to its current 3,081 acres. The property was designated as a Wildlife Management Area and named after its geographic location. The Cedar Island WMA property was purchased with Pittman-Robertson Federal Aid in Wildlife Restoration (PR) funds. This 1937 federally enacted legislation provided reliable funding to then struggling State wildlife agencies. The ensuing proceeds from a Federal excise tax placed on sporting arms and ammunition were earmarked solely for wildlife conservation and protection. This funding source has provided the foundation upon which most modern wildlife agencies have been constructed.

In 1996, the General Assembly designated 2,880 acres of Cedar Island WMA as the Cedar Island Wildland due to their wild character, unique natural features (including rare species), and intact natural processes. In the Wildland, only passive recreation activities consistent with the wilderness character of the area, such as hunting, fishing, trapping, bird watching, canoeing, kayaking, and research, are permitted. DNR may also permit motorized boat access and use within the Wildland boundary (as described in 5-1203 of the Maryland Code). Activities that are not permitted include the use of motorized vehicles on land; commercial harvesting of timber; construction of new roads, buildings or other structures; manipulation of vegetation; commercial enterprises; and introduction of non-native species. Activities necessary to protect the area from fire, animals, insects, disease, and erosion may be carried out, but are evaluated on a case-by-case basis. Some additional activities may be allowed when public safety, private property, or a Wildland resource are threatened.

In 2013, a planning team of WHS staff was selected to establish long-term goals and vision for the management of this property. A planning process was initiated with the development of a 15-year Vision Plan as the outcome. Once the Vision Plan is approved, WHS will develop a five-year work plan that coincides with our five-year work plan for the Federal Aid Grant time period.

Specific goals and objectives for this WMA are consistent with the Statewide Mission and Goals Statement for Wildlife Management Areas. The mission of the WMA system is “to conserve and enhance diverse wildlife populations and associated habitats while providing opportunities for public enjoyment of the State’s wildlife resources through hunting and other wildlife-dependent recreation.”

The Goals of the WMA system are:

- To maintain, enhance or protect sustainable and diverse wildlife populations.

- Create, enhance or protect appropriate habitats, natural communities and ecologically sensitive areas.
- Conserve rare, threatened and endangered species by protecting the habitats that support them.
- With a focused emphasis on hunting, provide wildlife-dependent recreation on areas with minimal capital improvements or other development.
- Provide a venue to educate citizens on the value and needs of wildlife and plant communities through outreach, demonstration and sound management.

I. Physical Description

Cedar Island WMA is located in southwestern Somerset County south of Crisfield, Maryland. The surrounding landscape is a rural setting with tidal wetlands interspersed with forestlands. This 3,081 acre tract is approximately 98 percent dominated by tidal wetlands with a few scattered shrub/tree areas and a sand dune habitat community located along the Chesapeake Bay shoreline. The tidal wetlands are characterized by a mix of marsh vegetation comprised of salt grass (*Distichlis spicata*), salt hay (*Spartina patens*) and black needlerush (*Juncus roemerianus*). Common tree and shrub species include high tide bush (*Iva frutescens*), loblolly pine (*Pinus taeda*), Virginia pine (*P. virginiana*), and eastern red cedar (*Juniperus virginiana*).

Topography, Soils, Climate and Hydrology

Somerset County is located in the southwestern portion of the Eastern Shore of Maryland. The Wicomico River, Pocomoke River, Manokin River, Big Annemessex River, and Dividing Creek are the major waterways in the county. The county is bordered to the west by Tangier Sound and to the south by Pocomoke Sound. Somerset County covers 206,988 acres of land and 145,592 acres of open water. Sixty-four percent or 132,515 acres is devoted to agricultural and forestry activities (49,693 acres are agricultural, 82,822 acres are forested). Wetlands in the county account for 55,572 acres or twenty-seven percent of the counties land area. Info in this paragraph is according to land use statistics compiled in 2010 by Maryland Department of Planning.

The general topography of Somerset County is low and nearly level to gently undulating. The increasing elevation found in northeastern Somerset County produces a maximum elevation of 46 feet above sea level while western and southwestern Somerset is very flat, generally at, or slightly above, sea level and subject to considerable flooding from high tides.

Somerset County has a humid climate with mild winters and hot summers. Spring and fall are usually the most pleasant seasons. The hotter months of July and August reach temperatures between 80 and 90 degrees. The cooler months of January and February reach temperatures around 35 or 45 degrees. Spring and fall temperatures linger around 55-65 degrees. Precipitation is fairly evenly distributed throughout the County and averages about 39 inches per year. July and August are the wettest months with averages of 4 or more inches. Droughts are frequent due to unequal amounts of

rainfall so summer irrigation is necessary for maximum crop yields. Average annual snowfall is about 15 inches. This can vary with some years recording no snowfalls and others recording blizzards. Snowfalls are heavier in the northern part of the County. Thunderstorms, tornadoes and hurricanes do occur in the County. Thunderstorms with lightning, hail and high winds occur on the average of 30-35 days during the summer. Hurricanes can appear during the fall months but only average about one per year. During most of the year prevailing winds are from the west. During the winter easterly winds are frequent and moisture-laden, tending to keep temperatures relatively mild. The average wind velocity is 8-10 mph.

Soils associated with Cedar Island WMA consist of Transquaking soil series, which are very deep poorly drained and flooded by tidal waters with a 0 – 1 percent slope; the Udonthent soil series, which are well drained to excessively drained soils with a 0 – 6 percent slope and are usually from dredge spoil; and the Beach series, which are well drained to excessively drained soils consisting of sand and shells transported by wind and water.

II. Capital Improvements

None

III. Unique or Sensitive Areas

Cedar Island is an expansive marshland that generally sustains high quality natural habitats and native plant communities because of its location. The loss of species, degradation of natural communities, and interruption of natural ecological processes that have plagued natural areas in much of Maryland are nearly absent here. Relative isolation by water and subsequent remoteness of the area has protected it from damaging human disturbances and overuse. Natural ecological processes, especially sand transport and deposition, tidal storms, and repeated flooding events, continue much as they have for many thousands of years. The pristine sandy beaches at Cedar Island are one of the few areas remaining in Maryland that still support the Northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*), a species listed as Threatened by the U.S. Fish and Wildlife Service and as Endangered by the State of Maryland. The sandy dunes of Cedar Island also harbor a small population of the plant seaside knotweed (*Polygonum glaucum*), which is considered globally vulnerable and is listed as Endangered in Maryland. This is one of only four known locations where this plant can be found in the State. It is a low-growing annual with waxy leaves that may require the natural overwash of its beach habitat to spread its seeds.

The matrix of salt marsh habitat is dominated by black needlerush with saltmarsh cordgrass and higher fringes of saltmeadow hay and saltgrass. Scattered higher hummocks and fringes support communities of marsh elder bushes and stands of loblolly pines. Saltmarsh habitats support a marshbird community that may include state-listed species such as Black Rail (*Laterallus jamaicensis*, state Endangered). State rare Northern Harrier (*Circus cyaneus*) and Barn Owl (*Tyto alba*) hunt the marshes for small mammals and shorebirds use mudflats and beaches during migration and in the winter.

IV. Recreational Use

Public hunting will be the primary use of this property. The main wildlife species pursued is waterfowl and will provide the majority of hunter use days on the area. The trapping rights are bid out through an annual lottery held in October by a sealed bid process to the highest bidder. Management opportunities for a number of other popular recreational activities, such as bird watching, boating, kayaking, fishing, and outdoor photography will be available for the outdoor enthusiasts. There are currently no restrictions (e.g., permits or reservations) on any form of public recreation.

In accordance with Federal Aid in Wildlife Restoration Guidelines, only wildlife dependant recreation will be promoted or allowed on this particular area.

V. Long-Term Goals for this WMA

Historically, Cedar Island WMA's contribution to wildlife resources consisted of serving as a habitat area for waterfowl and wetland wildlife species as well as wildlife dependent recreation.

The long-term goals for this WMA include:

- Establish, maintain and manage public access for recreational use and resource protection.
- Conserve, restore and protect sensitive habitats, and rare, threatened and endangered species.
- Promote hunting opportunities for waterfowl.
- Protect and restore natural tidal marsh and coastal shoreline ecosystems and their native flora and fauna.

These goals provide long-term direction for the management of this property consistent with the Statewide Mission and Goal Statement for Wildlife Management Areas. Area specific goals and strategies have been developed for each Habitat Management Unit (HMU). The success of management activities and progress toward HMU goals will be evaluated periodically and activities adjusted as appropriate.

VI. Acquisition

Cedar Island WMA property currently encompasses approximately 3,081 acres and the first parcel was purchased in 1949 with Pittman-Robertson Federal Aid in Wildlife Restoration (PR) funds. The potential to increase this acreage is limited due to the property being an island and the Department's policy of working with willing sellers, available funding, and Program Open Space priorities. The planning team has made the recommendation to pursue the acquisition of parcels adjacent to Cedar Island WMA as they become available and if they provide wildlife habitat that supports the goals and objectives of the Vision Plan.

VII. Habitat Management Units

During September 2013 a Wildlife & Heritage Service Planning Team was formed to discuss the wildlife management area planning process for Cedar Island WMA. To assist with development of specific goals and objectives for the property, Habitat Management Units (HMU) were delineated based on factors including vegetative cover, sensitive species, present land use and other factors. The delineation of these HMUs was then used to facilitate development of site-specific habitat management objectives and strategies for each unit. Each HMU is titled according to a key wildlife habitat description from the 2005 Maryland Wildlife Diversity Conservation Plan. Descriptions of each key wildlife habitat type can be found at:

http://www.dnr.state.md.us/wildlife/divplan_wdcp.asp

Habitat Management Unit # 1 Tidal Wetland Habitat

HMU Description:

This HMU consists of nearly 3,000 acres of tidal wetlands bordering the Chesapeake Bay. These marshes have not been ditched and are relatively pristine, only affected by the natural processes of wind, waves, and tidal flooding. The tidal marshes are heavily used by many waterfowl, rails, bitterns, wading birds, saltmarsh songbirds, raptors and a variety of mammals including river otter (*Lontra canadensis*), red fox (*Vulpes vulpes*), and raccoon (*Procyon lotor*).

HMU Goal: The goal of this HMU is to maintain the natural hydrology and plant communities found in the tidal wetlands. Natural hydrology and the resulting plant communities will provide habitat for a wide variety of wildlife species

HMU Objective: Maintain natural hydrology and plant communities; prevent invasive species from degrading the quality of plant communities.

HMU Strategy:

- Monitor salt marshes for the presence of phragmites and other invasive plants. Control phragmites stands following recommended guidelines.
- Restrict mosquito control activities to avoid impacts to tidal wetland ecosystems and nontarget species including nearby populations of Northeastern Beach Tiger Beetle.

Habitat Management Unit #2

Coastal Beaches, Dunes, and Mudflat Habitat

HMU Description:

This HMU consists of a narrow band of Coastal Dune habitat located along the western portion of Cedar Island adjacent to the Chesapeake Bay. These dunes are concentrated more to the southern end of the island with beaches more to the north. These habitats are subject to extreme conditions associated with maritime environments such as salt spray, high winds, flooding, and shifting sands. Beaches are situated in front of primary dunes and tidal wetlands above the mean high tide line and composed of unconsolidated sands and shells, which are constantly being shifted by winds and floods of storm surges and spring high tides. Because of these disturbance regime conditions, vegetation is limited to plants that can survive in that harsh environment such as glassworts, beachgrasses, panic grasses, seabeach grasses, and sandburs. Overwashed flats may develop behind the dunes when breaching occurs during storm events. These areas can provide important stopover and wintering habitat for shorebirds. In addition, the pristine sandy beaches at Cedar Island are one of the few areas remaining in Maryland that still support the Northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*), a species listed as Threatened by the U.S. Fish and Wildlife Service and as Endangered by the State of Maryland. Among the many species that use or depend on coastal beach ecosystems, few serve as such effective indicators of wild, pristine beaches as this small insect predator. It once occurred in 'great swarms' along coastal beaches from Virginia to Massachusetts. Today, more than 90% of its population is gone, and most of the world's remaining locations are confined to remote, undisturbed beaches in the Chesapeake Bay, like those found on Cedar Island. In general, the main threats to the beetle include the loss of undisturbed beach habitat due to coastal development, shoreline stabilization, off-road vehicles, sea-level rise, and intensive human recreation. The beetle spends most of its two-year life cycle as young, or larvae, in untrampled sandy burrows in the beach intertidal zone. The adults live along the beach shoreline from June through August where they mate and hunt. Their prey includes a variety of insects, beach amphipods, and even the occasional dead fish that washes ashore.

The sandy dunes of Cedar Island also harbor a small population of the plant seaside knotweed (*Polygonum glaucum*), which is considered globally vulnerable and is listed as Endangered in Maryland. This is one of only four known locations where this plant can be found in the State. It is a low-growing annual with waxy leaves that may require the natural overwash of its beach habitat to spread its seeds.

HMU Goal: Maintain natural processes, native plant communities, rare species populations, and native wildlife.

HMU Objective: Maintain native plant communities, rare species, and native wildlife.

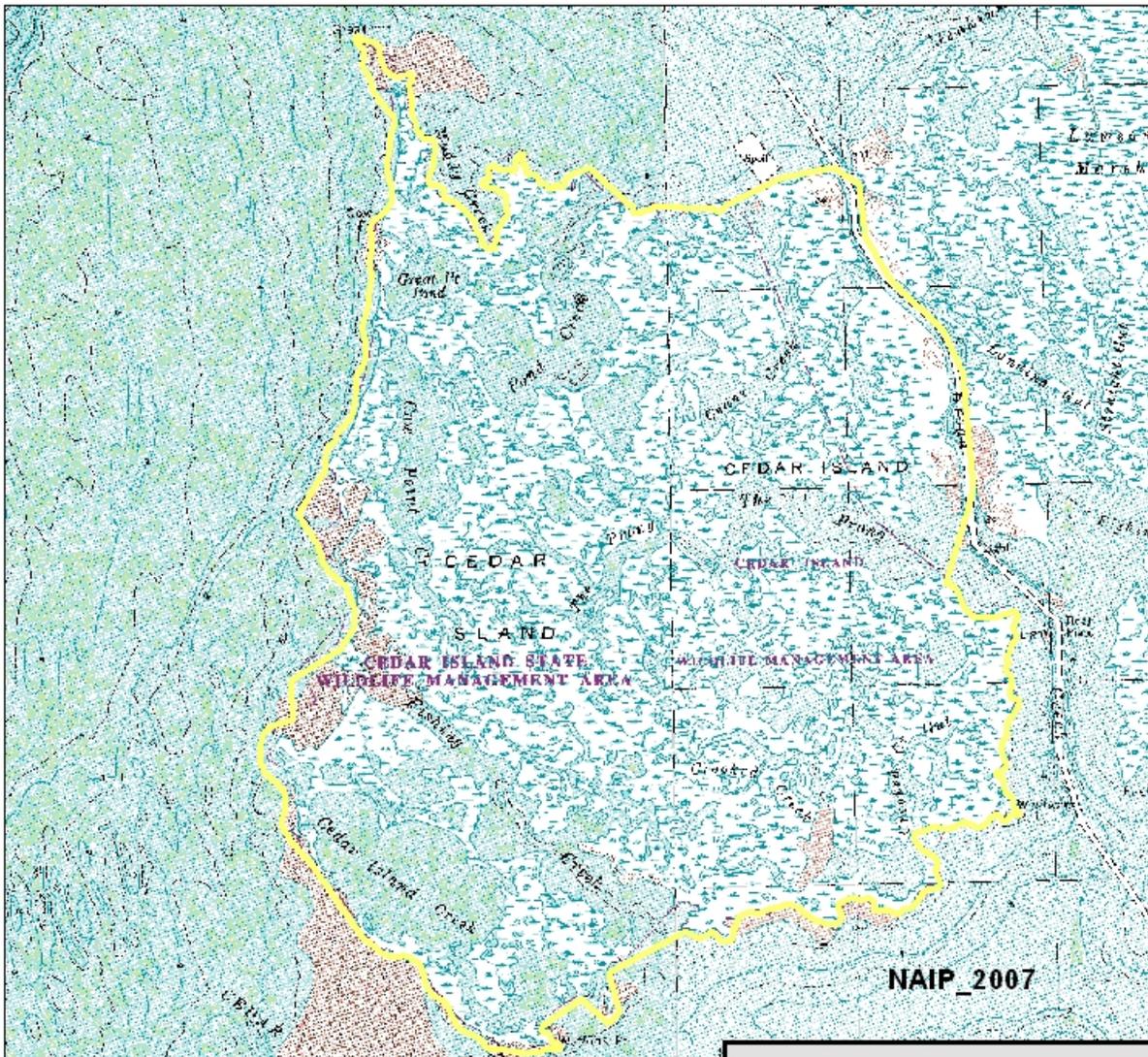
HMU Strategy:

- Limit access and educate the public about the value of these habitats to minimize human disturbance.
- Closely monitor for invasive species and conduct control efforts as needed.
- Restrict mosquito control activities to avoid impacts to coastal shoreline ecosystems including populations of Northeastern Beach Tiger Beetle.

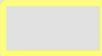
VIII. Appendix

1. Site Location and Boundary Map.
2. Topographic Map.
3. Soils Map.
4. Habitat Management Unit Map.

CEDAR ISLAND WMA TOPO MAP

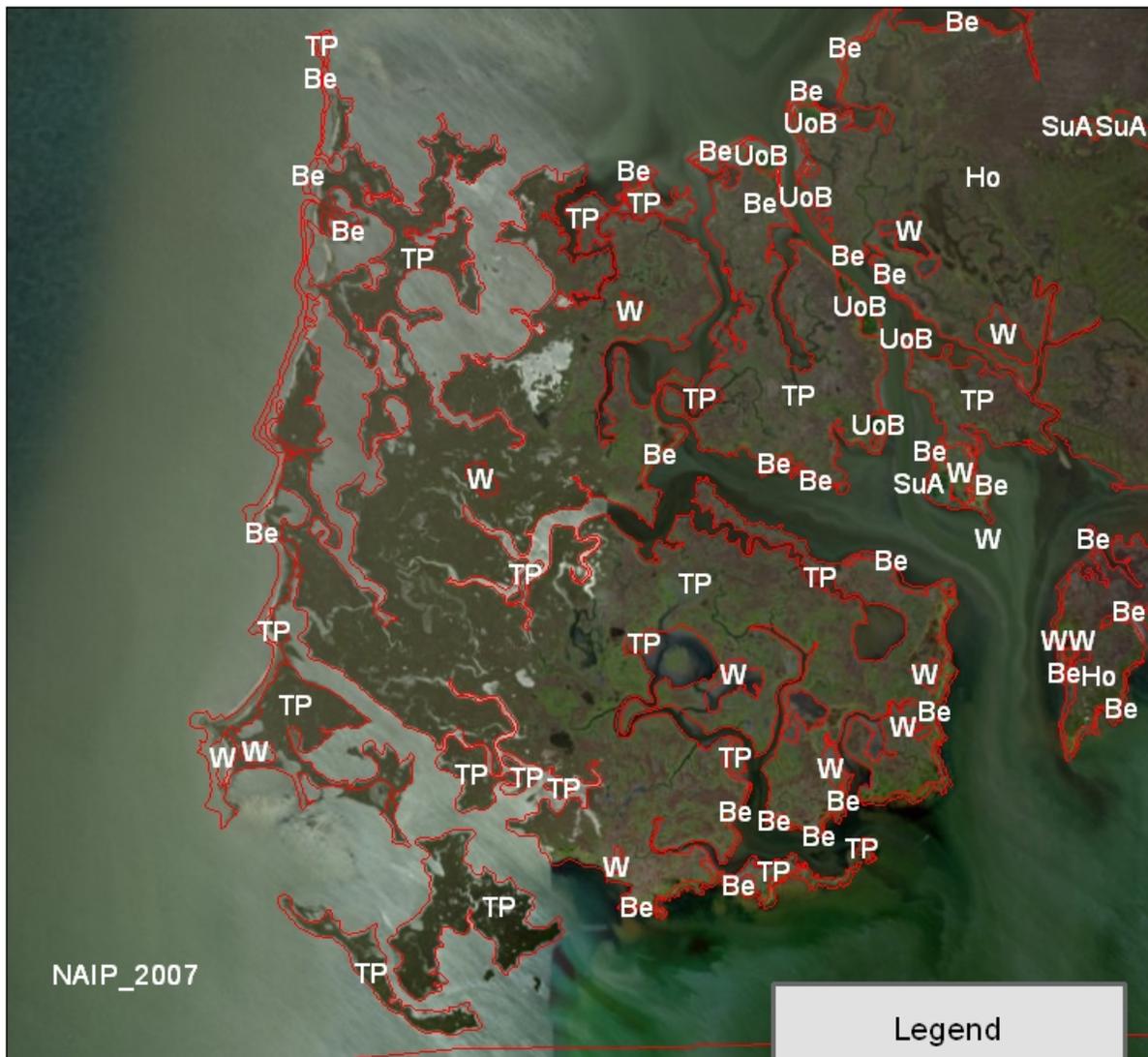


Legend

 Cedar Island WMA



CEDAR ISLAND WMA SOILS MAP



Legend	
Be	Beaches
TP	Transquaking
UoB	Udonthents
W	Water



CEDAR ISLAND WMA HABITAT MANAGEMENT UNIT MAP

