

Appendix I. Wilderness Review

Introduction

The purpose of a wilderness review is to identify and recommend to Congress lands and waters of the National Wildlife Refuge System (NWRS) that merit inclusion in the National Wilderness Preservation System (NWPS). Wilderness reviews are required elements of comprehensive conservation plans, are conducted in accordance with the refuge planning process outlined in the Fish and Wildlife Service Manual (602 FW 1 and 3), and include compliance with the National Environmental Policy Act and public involvement.

The wilderness review process has three phases: inventory; study; and, recommendation. In the inventory phase, we assess wilderness inventory areas (WIAs) under the minimum criteria for wilderness. Lands and waters that meet those criteria then are called wilderness study areas (WSAs). In the study phase, we evaluate a range of management alternatives to determine whether a WSA is suitable for wilderness designation or for management under an alternate set of goals and objectives that do not involve wilderness designation.

The recommendation phase consists of forwarding or reporting the suitable recommendations from the Director through the Secretary and the President to Congress in a wilderness study report. We prepare the wilderness study report after the record of decision for the final CCP has been signed. Areas recommended for designation are managed to maintain their wilderness character in accordance with management goals, objectives, and strategies outlined in the final CCP until Congress makes a decision or the CCP is amended to modify or remove the wilderness proposal.

Chesapeake Marshlands National Wildlife Refuge Complex (NWRC) personnel and Region 5 personnel, listed at the end of this appendix, met on September 2, 2004, to gather information and conduct an inventory of the refuge lands and waters. That process required combining site knowledge with existing land status maps, photographs, available land use information, and road inventory data to determine whether the refuge lands and waters met the minimum criteria for wilderness. Aerial photographs were used to document the imprint of human work, road locations, and other surface disturbances.

Phase I. Wilderness Inventory

Introduction

The wilderness inventory that follows is a broad look at each of eight WIAs to identify any WSAs (see figure 1, “Wilderness inventory areas in the Chesapeake Marshlands NWRC,” below). A WSA is an area of undeveloped Federal land that retains its primeval character and influence, without permanent improvements or human habitation, and further, meets the minimum criteria for wilderness identified in Section 2(c) of the Wilderness Act.



Figure 1. Wilderness inventory areas in the Chesapeake Marshlands NWRC

Minimum Wilderness Criteria

A WSA is required to be a roadless area or island, meet the size criteria, appear natural, and provide for solitude or primitive recreation.

Roadless.—Roadless refers to the absence of improved roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use. A route maintained solely by the passage of vehicles does not constitute a road. Only Federal lands are eligible to be considered for wilderness designation and inclusion within the NWPS.

The following factors were the primary considerations in evaluating the roadless criteria.

- A. The area does not contain improved roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use.
- B. The area is an island, or contains an island that does not have improved roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use.
- C. The area is in Federal fee title ownership.

Size.—The size criteria can be satisfied if an area has at least 5,000 acres of contiguous roadless public land, or is sufficiently large that its preservation and use in an unimpaired condition is practicable.

The following factors were the primary considerations in evaluating the size criteria.

- A. An area of more than 5,000 contiguous acres. State and private lands are not included in making this acreage determination.
- B. A roadless island of any size. A roadless island is defined as an area surrounded by permanent waters or that is markedly distinguished from the surrounding lands by topographical or ecological features.
- C. An area of less than 5,000 contiguous Federal acres that is of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management.
- D. An area of less than 5,000 contiguous acres that is contiguous with a designated wilderness, recommended wilderness, or area under wilderness review by another Federal wilderness managing agency such as the Forest Service, National Park Service, or Bureau of Land Management.

Naturalness.—The Wilderness Act, Section 2(c), defines wilderness as an area that “generally appears to have been affected primarily by the forces of nature with the imprint of human work

substantially unnoticeable.” The area must appear natural to the average visitor, rather than “pristine.” The presence of historic landscape conditions is not required.

An area may include some human impacts provided they are substantially unnoticeable in the unit as a whole. Significant hazards caused by humans, such as the presence of unexploded ordnance from military activity and the physical impacts of refuge management facilities and activities are also considered in evaluating the naturalness criteria.

An area may not be considered unnatural in appearance solely on the basis of the sights and sounds of human impacts and activities outside the boundary of the unit. The cumulative effects of these factors in conjunction with land base size, physiographic and vegetative characteristics were considered in the evaluation of naturalness.

The following factors were the primary considerations in evaluating naturalness.

- A. The area appears to have been affected primarily by the forces of nature with the imprint of human work substantially unnoticeable.
- B. The area may include some human impacts provided they are substantially unnoticeable in the unit as a whole.
- C. Does the area contain significant hazards caused by humans, such as the presence of unexploded ordnance from military activity?
- D. The presence of physical impacts of refuge management facilities and activities.

Solitude or Primitive and Unconfined Recreation.—A WSA must provide outstanding opportunities for solitude or primitive and unconfined recreation. The area does not have to possess outstanding opportunities for both solitude and primitive and unconfined recreation, and does not need to have outstanding opportunities on every acre. Further, an area does not have to be open to public use and access to qualify under this criteria; Congress has designated a number of wilderness areas in the Refuge System that are closed to public access to protect resource values.

Opportunities for solitude refer to the ability of a visitor to be alone and secluded from other visitors in the area. Primitive and unconfined recreation means non-motorized, dispersed outdoor recreation activities that are compatible and do not require developed facilities or mechanical transport. These primitive recreation activities may provide opportunities to experience challenge and risk; self reliance; and adventure. These two elements are not well defined by the Wilderness Act, but can be expected to occur together in most cases. However, an outstanding opportunity for solitude may be present in an area offering only limited primitive recreation potential. Conversely, an area may be so attractive for recreation use that experiencing solitude is not an option.

The following factors were the primary considerations in evaluating outstanding opportunities for solitude or primitive unconfined recreation.

- A. The area offers the opportunity to avoid the opportunity avoid the sights, sounds and evidence of other people. A visitor to the area should be able to feel alone or isolated.
- B. The area offers non-motorized, dispersed outdoor recreation activities that are compatible and do not require developed facilities or mechanical transport.

Supplemental Values.—The Wilderness Act states that an area of wilderness may contain ecological, geological, or other features of scientific, educational, scenic or historical value. Supplemental values of the area are optional, but the degree to which their presence enhances the area’s suitability for wilderness designation should be considered. The evaluation should be based on an assessment of the estimated abundance or importance of each of the features.

Summary of Wilderness Inventory Findings

The wilderness inventory team identified eight wilderness inventory areas in the Chesapeake Marshlands NWRC. The team’s findings for each WIA are summarized below. See also figure 1, “Wilderness inventory areas in the Chesapeake Marshlands NWRC,” above, and “table 1, “Tabular Summary of the Chesapeake Marshlands NWRC Wilderness Inventory Areas” at the end of this appendix.

The team eliminated from consideration a total of 12,000 acres of the Blackwater NWR, (the gold-colored areas in figure 2, “Jarrett Tract and East Shorters’ Wharf Marsh WIAs,” below), because they do not meet the roadless, naturalness, or solitude criteria, based on one or more of the following factors. The imprint of human work is obvious and prominent throughout those areas, which are divided by county and state roads, agricultural fields, impoundments, buildings, parking lots, utility rights-of-way, ditches, refuge roads, and levees. State and county roads and utility rights-of-way divide those areas of the refuge into numerous small parcels.

Ongoing refuge management activities there include agricultural planting, mowing, and managing impoundments. Numerous roads, ditches, and levees are present in the forested wetlands, as well as evidence of past logging operations, including logging roads, ditching, dozer piles, and push ponds. The 12,000 acres also contain developed areas for maintenance, visitor services, and administration, with all their associated parking areas, tour roads, and office and storage facilities. Traffic along state and county roads is constantly visible or within hearing of any location within this unit. Boat traffic is evident within much of the unit, as well.

One major goal of our CCP is the conversion and restoration of marsh habitat. Over the next 15 years, restoring the marsh habitat in those areas of Blackwater NWR will involve dredging, laying pipelines, constructing sedimentation barriers, and fencing. That marsh restoration will contribute in a major way to the purposes for which the refuge was established

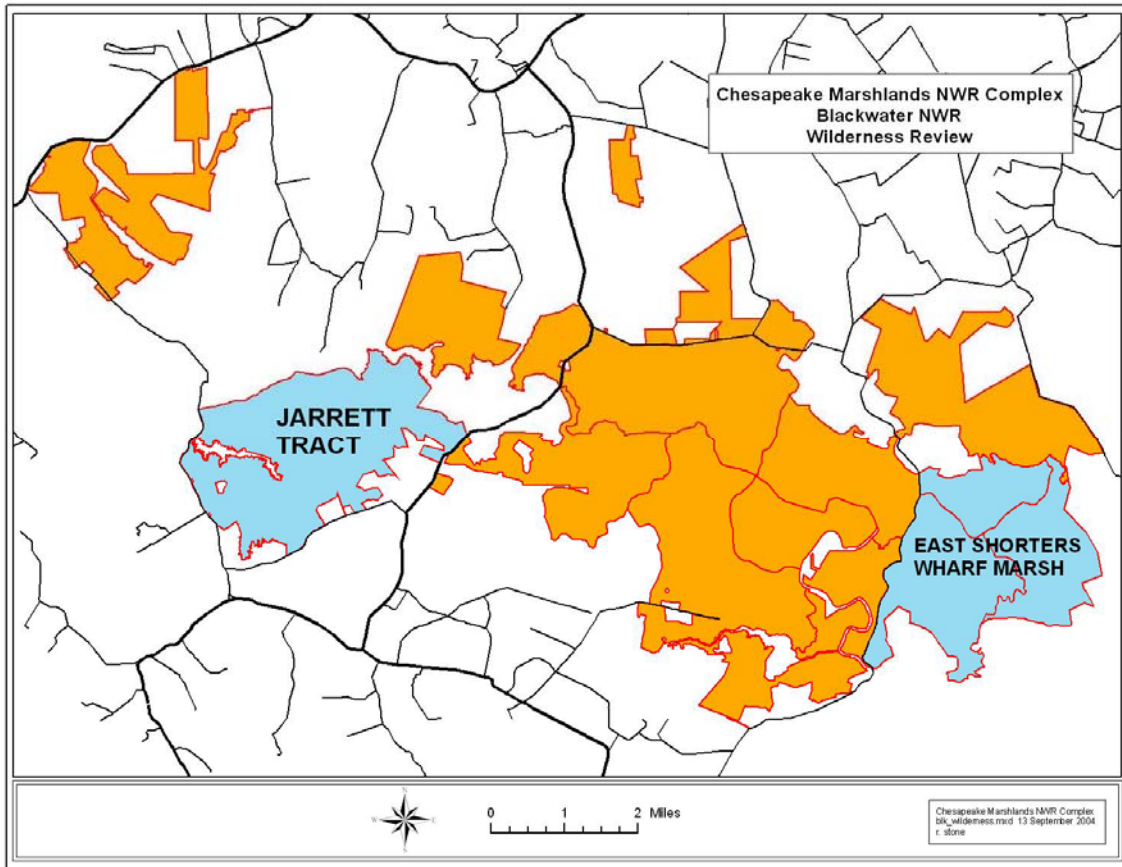


Figure 2. Jarrett Tract and East Shorters' Wharf Marsh WIAs

Watts Island

The Watts Island WIA does not meet the criteria for a WSA. Watts Island is approximately 125 acres in size, and comprises both marsh and forest habitats. The marsh and woodland fringe serve as prime nesting grounds for American black ducks, excellent wintering habitat for other migratory waterfowl, and foraging habitat for peregrine falcons and other raptors. The woodlands comprise mostly loblolly pines, which provide nest sites for a diversity of wading birds. Watts Island is the largest wading bird rookery in the state of Virginia. All of Watts Island is roadless, although it was inhabited at one time.

Evidence of the fact that humans once inhabited Watts Island can be found in the form of several old house foundations located on the higher elevations of the island. More recent imprints of human work include a small utility building, which houses phone cable that runs under the bay. Watts Island also contains peregrine falcon hacking towers, built and maintained by the refuge. Those towers have produced numerous falcons over the years. In fact, two falcons reared from those towers have been equipped with satellite transmitters, and are part of a large-scale telemetry study. Due to that success, we do not plan to do away with the peregrine towers on Watts Island. The peregrine towers have significant scientific and educational value.

The number one reason islands are so beneficial for nesting wading birds and waterfowl is the fact that they are isolated from the impacts of human and mammalian predators. Watts Island is closed to the public, due to the cumulative disturbance factors that will negatively impact all of

the wildlife species these islands protect. Opening the island to public recreation would significantly reduce its value as a wading bird rookery, because most activity will take place on the upland areas. Public recreation also would result in excessive disturbance to all nesting water birds, wintering waterfowl, endangered species and other trust resources. Also, opening these lands to the public would require a degree of law enforcement presence that is very difficult to provide on these remote lands.

Despite the fact that Watts Island is in the middle of the Chesapeake Bay, its relatively small size and very narrow shape would make it impossible to escape the frequent boat traffic from commercial and recreational crabbers and fishermen or the occasional wave runner. Also, due to inherent difficulties with providing law enforcement, it is possible that trespassing may occur on to the island. The Service frequently issues special use permits to other agencies to perform various surveys and research, which would also compromise a wilderness experience.

Martin NWR

The Martin NWR WIA does not meet the criteria for a WSA. A wilderness inventory was conducted for Martin NWR in 1971, at which time it was declared not suitable for inclusion within the National Wilderness Preservation System. Little has changed to improve its wilderness attributes such as roadlessness, naturalness, or solitude. In fact, the number of artificial nest structures for American osprey has increased to more than 75. Also, due to the accelerated rates of erosion and loss of habitat exhibited by all Bay islands, the need to protect those lands from human disturbances and predators has significantly increased. The island contains numerous imprints of humans, including a maintenance building, fire tower, two peregrine falcon hacking towers, and a dock and concrete bulkhead structure. The island does not meet the solitude criteria, due to its close proximity to frequent commercial and recreational crabbing and fishing boat traffic.

Spring Island

The Spring Island WIA does not meet the criteria for a WSA. Spring Island was 52 acres in size but, due to erosion, the island is now only about 34 acres in size. As with all of the unprotected or reinforced islands within the Chesapeake Bay, Spring Island is eroding at an alarming rate. As marsh and shrub vegetation are lost, the rate of erosion becomes more and more accelerated. Without human intervention, it is very likely that Spring Island will be gone within the next 10 years. Spring Island has been informally proposed as a disposal site for dredge material. The refuge will likely pursue the option to protect the island from future erosion by constructing offshore rock breakwaters.

The island is roadless. Its habitat consists of marsh, sandy shoreline and shrub-scrub. The marsh and sandy shore provide both nesting and foraging habitat for a variety of colonial nesting birds and shore birds, while the shrub-scrub habitat provides nesting habitat for smaller wading birds like black-crowned night-herons, green herons and, in more recent years, brown pelicans. Spring Island contains prime nesting habitat for brown pelicans and other colonial nesting birds.

Allowing public recreation will directly and significantly detract from the island's benefits to colonial nesting birds and shore birds. Public recreation would also result in excessive

disturbance to all nesting water birds, wintering waterfowl, endangered species, and other trust resources. The island's size and habitat types do not allow for quality recreation opportunities.

Spring Island does not meet the solitude criteria due to its small size, which also makes it impossible to escape the frequent commercial and recreational crabbing and fishing boat traffic. Also, due to its low-lying vegetation, any visitors would be noticeable from great distances. Due to its rate of erosion and its potential as a future disposal site for dredge material, Spring Island does not meet the naturalness criteria, and is not considered practicable for preservation and use in an unimpaired condition.

Bishop's Head Division

The Bishop's Head Division WIA does not meet the criteria for a WSA. Bishop's Head is 380 acres, and was purchased under the Migratory Bird Conservation Act "for use as an inviolate sanctuary, or for other management purposes, for migratory birds." Most of the habitat on the Bishop's Head division is salt marsh, with some wooded hammocks and some shrub-scrub. Bishop's Head does not meet the roadless criteria, and is joined to the mainland via a paved county road.

In addition to the paved access road and several associated drainage culverts, Bishop's Head Point is the location of the Chesapeake Bay Foundation's Karren Noonan Environmental Education Center. The center consists of a main education center, intern housing, sewage facilities, and an 80-foot dock. A 200-foot DOD military radio tower stands directly adjacent to the refuge.

The Bishop's Head Division is closed to most public recreation due to the potential disturbances to endangered species and nesting marsh and water birds. Also due to the lack of adequate law enforcement, we are not able to ensure resource protection and visitor safety.

This division does not meet the solitude criteria, due the frequent environmental education activities hosted by the Chesapeake Bay Foundation and easy access to most of the land along the unrestricted county road. The division is not of sufficient size to make practicable its preservation and use in an unimpaired condition, nor is it of a size suitable for wilderness management. It is less than 5,000 acres; its use in an unimpaired condition is not practical, and is contrary to refuge management objectives.

Barren Island Division

The Barren Island Division WIA does not meet the criteria for a WSA. Barren Island was 177 acres when purchased, and is now approximately 160 acres as a result of erosion. The island is roadless, but has evidence of ditching and a gravel airstrip. It was once inhabited, was farmed and burned, and contains many piles of debris. Its habitats consist of high marsh (*Spartina patens* and black needle-rush), low marsh (dominated by *S. alterniflora*), beach, and woodlands dominated by loblolly pine with a poison ivy and American holly understory. The island contains some stands of phragmites. Erosion recently cut the island into two distinct land masses.

During the past several years, the beneficial use of dredge material has created about 20 acres of tidal wetland. The initial phase of this project consisted of the creation of more than 10 acres of

wetlands and the placement of geo-tubes to provide shoreline erosion protection. The second phase of this project consisted of constructing several thousand feet of offshore rock breakwaters and repairing all failed geo-tubes by placing rock on top of them. An additional 10 acres of tidal wetlands were then created by depositing clean dredge material from local navigational channel maintenance projects.

Earlier evidence of human inhabitants consists of remnants of old hunting lodge, abandoned air strip, abandoned drag line machine, large ditches, dock pilings, old storage tanks and several debris piles created by early settlers. Also, large storms and tidal surges have scattered debris of human origin across much of the island. Several American osprey nest structures are on the island.

Given the lack of law enforcement and capabilities we cannot ensure visitor safety and solitude. Allowing public recreation will directly and significantly detract from the island's benefits to colonial nesting birds and shore birds. Public recreation would also result in excessive disturbance to all nesting water birds, wintering waterfowl, endangered species and other trust recourses. The island's size and habitat types do not allow for quality recreation opportunities.

The relatively small size and narrow shape of the island would make it impossible to escape the frequent boat traffic of commercial and recreational crabbers and fishermen or the occasional wave-runner. Also, due to inherent difficulties with providing law enforcement, it is possible that trespassing may occur on the island. The Service frequently issues special use permits to other agencies to perform various surveys and research, which would also compromise a wilderness experience.

The island contains a major wading bird rookery, including the only known nesting site for black skimmers in Maryland. It is also a nesting site for least terns, brown pelicans, American black ducks, American osprey, American bald eagles and diamond-back terrapins.

The unit is not of sufficient size to make practicable its preservation and use in an unimpaired condition, nor is it of a size suitable for wilderness management. It is less than 5,000 acres; its use in an unimpaired condition is not practical, and is contrary to refuge management objectives.

Susquehanna NWR

The Susquehanna NWR WIA does not meet the criteria for a WSA. Susquehanna NWR, also known as Battery Island, is only 1.5 acres in size, is completely protected by rock rip-rap, and has a small dock. Its habitat consists of shrubs and small trees. There are no roads on the island, nor any known archaeological sites.

The nationally registered Battery Lighthouse located on the refuge is owned by the U.S. Coast Guard, who have maintained the lighthouse since the 1920s. Executive Order No. 9185 reserves a 45'×45' area for the lighthouse and keeper's quarters. The newly formed Chesapeake Heritage Conservancy Battery Island Preservation Society is now trying to obtain the island through lease or transfer, so that they can properly protect and maintain its historic lighthouse and keeper's quarters.

The small size and narrow shape of the island would make it impossible to escape the frequent boat traffic of commercial and recreational crabbers and fishermen or the occasional wave-

runner. Also, due to the difficulties inherent in providing around-the-clock law enforcement, it is possible that unauthorized personnel may venture onto the island. The Service frequently issues special use permits to other agencies to perform various surveys and research, which would also compromise the wilderness experience.

Jarrett Tract—Blackwater NWR

This WIA, depicted in figure 2, above, does not meet the criteria for a WSA. This 3,674-acre unit lies in the western area of the main section of Blackwater NWR, and is roughly bounded by Route 335 on the east, Hip Roof Road on the south, and Smithville Road on the west. Most of its habitat consists of forested wetlands, but about 1,000 acres consists of open water and marsh. Fifty acres of agricultural fields lie to the north of Hip Roof Road.

The imprint of human work is clearly noticeable throughout the unit. Although it is considered roadless under the Wilderness Act definition, numerous roads, ditches, and levees lie within the unit, which also exhibits much evidence of past logging operations, including logging roads, ditching, bulldozer piles, and push ponds. Agricultural fields lie fallow in its southern section.

Due to the openness of the marsh habitats within the unit and the proximity of Hip Roof Road, Route 335, and Smithville Road, there is no seclusion or opportunity for primitive recreation. The boat traffic of fishermen and trappers on Beaver Dam Creek and frequent vehicle traffic along the west, south, and east boundaries of the unit preclude any possibility of solitude.

In addition to its being less than 5,000 acres in size, the use of this unit in an unimpaired condition is not practical, and is contrary to refuge management objectives.

East Shorters' Wharf Marsh—Blackwater NWR

This WIA, depicted in figure 2, above, does not meet the criteria for a WSA. The area east of Shorters' Wharf Road is bounded by the refuge on the east, the Kuehnle Tract on the north, and the Blackwater River on the south. Although it contains 3,638 acres, probably less than half of that is marsh, due to marsh loss and the ongoing trend toward more and more open water. There are no roads within the area, but it is used by trappers, researchers, and others with motor boats.

The conversion and restoration of marsh habitat within the refuge is a major goal of the CCP. Habitat restoration in this unit will involve dredging, pipelines, sedimentation barriers, and fencing. That ongoing restoration over at least the next 15 years will make major contributions to the purposes for which the refuge was established.

Due to the openness of its marsh habitat and the proximity of Shorters Wharf Road and the Blackwater River channel, the area offers no seclusion or opportunity for primitive recreation. Frequent boat traffic and nearly constant vehicle traffic along the west and south boundaries of the unit preclude any possibility of solitude.

The unit is not of sufficient size to make practicable its preservation and use in an unimpaired condition, nor is it of a size suitable for wilderness management. It is less than 5,000 acres; its use in an unimpaired condition is not practical, and is contrary to refuge management objectives.

Conclusion

The Service finds that none of the WIAs in the Chesapeake Marshlands NWRC, Cambridge, Maryland, meets the minimum criteria to qualify as a WSA as defined by the Wilderness Act (see table 1, “Tabular Summary of the Chesapeake Marshlands NWRC Wilderness Inventory Areas,” below). The refuge is not considered further for possible wilderness designation in its CCP.

Wilderness Review Team

Glenn Carowan, Refuge Manager, Chesapeake Marshlands NWRC, Cambridge, MD
Larry McGowan, Deputy Refuge Manager, Chesapeake Marshlands NWRC, Cambridge, MD
Steve Funderburk, Chief, Division of Conservation Planning and Policy, Hadley, MA.
Barry Brady, Regional Wilderness Coordinator, Hadley, MA.

This page unintentionally left blank

Table 1. Tabular Summary of the Chesapeake Marshlands NWR Wilderness Inventory Areas

Wilderness Inventory Area	Size	Roadless	Naturalness	Primitive Recreation or Solitude	Supplemental Values	Qualifies as WSA?
Watts Island	125 ac.	Yes	No. Numerous structures	PrimRec: Closed Solitude: No. Boat traffic	Largest wading bird rookery in VA	No
Martin NWR	5,500 ac.	Yes	No. Numerous structures	PrimRec: Closed Solitude: No. Town and vehicle traffic sights and sounds	Colonial nesting birds, American osprey nesting habitat	No
Spring Island	34 ac.	Yes	No. Severe erosion	PrimRec: Closed Solitude: No. Boat traffic	Nesting habitat for brown pelicans, other colonial nesting birds; peregrine falcons	No
Bishops Head Division	380 ac.	No	No. Numerous structures	PrimRec: No Solitude: No	Excellent education facility managed by cooperative agreement	No
Barren Island Division	177 ac.	No	No. Numerous structures	Prim. Recreation: No Solitude: No. Boat traffic	Major rookery for wading birds; only known black skimmer nesting site in MD; bald eagles, least terns, brown pelicans, osprey, etc.	No
Susquehanna NWR	1.5 ac.	Yes	No. Numerous structures	PrimRec: No Solitude: No	Historical and cultural values	No
East Shorters' Wharf Marsh BLK	3,638 ac.	Yes	Ongoing marsh habitat restoration	PrimRec: No Solitude: No	None	No
Jarrett Tract BLK	3,674 ac.	No	No. Evidence of logging, push ponds ditching, agricultural fields	PrimRec: No Solitude: No	None	No