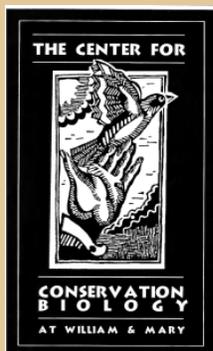


**SYNTHESIZING INFORMATION RESOURCES FOR
THE VIRGINIA IMPORTANT BIRD AREA PROGRAM:
PHASE 1 DELMARVA PENINSULA AND TIDEWATER**



**CENTER FOR CONSERVATION BIOLOGY
COLLEGE OF WILLIAM AND MARY**



SYNTHESIZING INFORMATION RESOURCES FOR THE VIRGINIA IMPORTANT BIRD AREA PROGRAM: PHASE 1 DELMARVA PENINSULA AND TIDEWATER

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The Center for Conservation Biology
College of William and Mary

Cover Photo: King Rail by *Bryan Watts*



The Center for Conservation Biology is an organization dedicated to discovering innovative solutions to environmental problems that are both scientifically sound and practical within today's social context. Our philosophy has been to use a general systems approach to locate critical information needs and to plot a deliberate course of action to reach what we believe are essential information endpoints.

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BACKGROUND

Context

The Important Bird Areas (IBA) program is a science-based initiative to identify, conserve, and monitor sites that provide essential habitat for bird populations. Developed in Europe, the program has expanded to become an international network of conservation sites. Under this initiative, sites that are critical for the long-term survival of bird populations have been identified across the globe using internationally agreed upon criteria. The quality and effectiveness of this conservation network depends directly on the information resources and expertise used in its development.

The National Audubon Society with funding from the Virginia Department of Game & Inland Fisheries and other groups has recently established an IBA program in Virginia. The purpose of this program is to identify, establish, and work toward the conservation of locations of importance to birds in Virginia.

Objectives

The primary objective of this project is to utilize existing information resources to delineate important bird areas in coastal Virginia. Information resources will be identified, compiled, and synthesized in order to place geographic locations within the appropriate local, regional, and national context in terms of their importance to bird species of conservation concern. Specific objectives include:

- 1) to delineate boundaries of IBAs based on available information resources.
- 2) to nominate areas determined to meet biological criteria to the IBA technical committee for consideration/approval as IBAs.

Virginia Barrier Island/Lagoon Important Bird Area Fact Sheet

Location: Accomack and Northampton Counties

Total Size : 105,249 ha (259,965 acres)

Elevation: 0-15 m (0-49 feet)

Site Description: The Virginia Barrier Island/Lagoon system includes the seaward margin of the lower Delmarva Peninsula from the mouth of the Chesapeake Bay to the MD-VA border. This location is the most important bird are in Virginia and one of the most important bird areas along the Atlantic Coast of North America. The area has been designated as a UNESCO Biosphere Reserve, a Western Hemisphere Shorebird Reserve Site with international status and is the site of a National Science Foundation Long-term Ecological Research site and the focus of a multi-organizational partnership dedicated to bird conservation. The area includes the most pristine chain of barrier islands along the Atlantic Coast, maritime forests, extensive salt marshes, inter-tidal mudflats, and open water. Although much of the system is currently owned by government agencies and conservation organizations, numerous conservation challenges remain.

Protection: A significant portion of the Virginia Barrier Island/Lagoon Important Bird Area is owned and protected to meet conservation objectives. Most of the habitat contained within the 14 barrier islands is owned by The Nature Conservancy, the U.S. Fish and Wildlife Service, NASA, and the Virginia Department of Conservation and Recreation, Division of Natural Heritage with relatively few private holdings. Much of the extensive tidal marsh within the site is owned by the Virginia Marine Resources Commission, The Nature Conservancy, the U.S. Fish and Wildlife Service, NASA, and the Virginia Department of Game and Inland Fisheries.

Royal Tern

Birds: The Virginia Barrier Island/Lagoon System supports the highest diversity and density of birds of conservation concern within Virginia. Several beach-nesting species such as the Piping Plover, Wilson's Plover, American Oystercatcher, Gull-billed Tern, Least Tern, and Black Skimmer that are of high regional or national concern nest exclusively or nearly so within this system. The area supports the most significant breeding populations in the state of waders such as the Little Blue Heron, Tricolored Heron, Snowy Egret, Glossy Ibis, and Black-crowned Night Heron. Marsh-nesting species such as the Forster's Tern, Seaside Sparrow, and Saltmarsh Sharp-tailed Sparrow, also have their center of abundance here. During migration the area is of international significance as a stopover area for Whimbrel, Short-billed Dowitcher, and Red Knot. In addition, the area supports significant wintering populations of Nelson's Sharp-tailed Sparrow, Atlantic Brant, and Dunlin.



Conservation and Threats: Four primary threats are currently of concern including 1) predator impacts on nesting species, 2) loss of habitat to invasion by Phragmites, 3)

human disturbance during the nesting season, and 4) loss of habitat to sea level rise. Colonization of most islands by raccoon and red fox are believed to be at least partially responsible for documented population declines and low reproductive rates for some species. Current research and management programs are addressing this threat. Predation by Herring and Great Black-backed Gulls are also of concern, as is, predation by the introduced population of Peregrine Falcons. Phragmites has spread rapidly throughout this system and is displacing several critical habitats. Strategic research and management is beginning to address this threat though the eventual outcome is uncertain. The increase in human visitation to portions of this system during the breeding season is an ongoing concern. Management activities and ongoing educational programs are designed to reduce this impact. Like in many coastal systems, the loss of habitat to sea-level rise is a long-term concern.

Important Bird Areas of Virginia

IBA Nomination Form

The Important Bird Area (IBA) program is an international effort to identify, conserve, and monitor a network of sites that provide essential habitat for bird populations. BirdLife International began the IBA program in Europe in 1985. Since that time, BirdLife partners in more than 100 countries have joined together to build the global IBA network. Audubon, the BirdLife Partner in the U.S. has been working since 1995 to identify and conserve hundreds of IBAs all across the United States.

For more information, visit: <http://www.audubon.org/bird/iba/index.html>

Or contact Aimee Weldon, the Virginia IBA Coordinator

P.O. Box 1089, Ashland, VA 23005 aweldon@audubon.org 804-370-3528

Additional copies of the Nomination Form may be downloaded from www.virginia-iba.org

Thank you for your interest in the Important Bird Areas Program. Please tell us about the areas that you think may meet the criteria by completing as much of this form as possible. Detailed instructions for fields requiring clarification may be found in the **INSTRUCTIONS FOR COMPLETION OF IBA NOMINATION FORM**. It is important that the data and information about the sites are recorded in a standard format, so that they may be accurately evaluated.

I. Nominator Information	
YOUR NAME: Bryan D. Watts	PHONE: (757) 221-2247
AFFILIATION(if any) Center for Conservation Biology College of William and Mary	EMAIL: bdwatt@wm.edu
ADDRESS: PO Box 8795	
ZIP CITY, STATE, Williamsburg, VA 23187-8795	DATE: 11/2/05

II. Site Details	
SITE NAME: Virginia Barrier Island/Lagoon	
CITY,TOWN,COUNTY: Accomack, Northampton Counties	AREA: 105249 (circle one) acres, sq. miles., hectares
ELEVATION: Minimum 0 (circle one) feet, meters	ELEVATION: Maximum 15 feet, meters
COORDINATES (at site center) Latitude 37° 31' 47"	Longitude: -75° 40' 58"

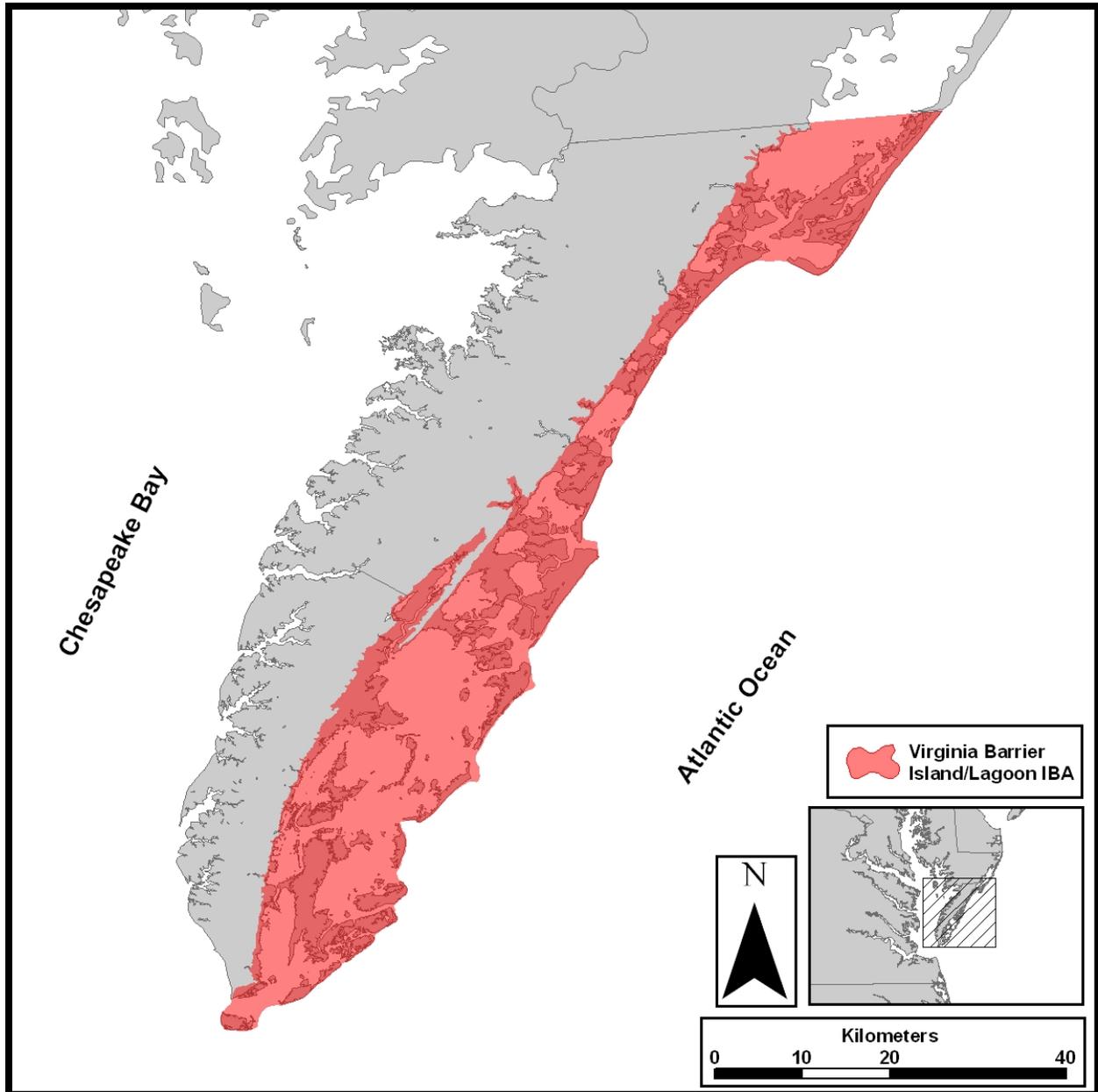
Ownership: (Circle One) **federal, state, private**, international waters, communal, religious group, mixed, other

Ownership Details: (List owners. If "other" ownership, please describe. If the property is privately owned, please provide contact information and specify if owner is aware of nomination)

**United States Fish and Wildlife Service
The Nature Conservancy**

Virginia Department of Game and Inland Fisheries
Virginia Department of Conservation and Recreation
Virginia Marine Resources Commission
National Aeronautics and Space Administration
Northampton County
Many private holdings

Road Directions to site (or location /distance to nearest town) Please include a map if convenient.



III A. Species List and Population Data

List the species of significance. Provide all other information at your disposal (note: Types of Birds Counted is required). Each record should represent a count at the site in a given year. **Please use the following codes when completing this chart.**

1. **Relative Abundance:** Abundant = A, Common = C, Frequent = F, Uncommon = U, Rare = R, Not available = NA
2. **Count:** For all species, enter either **Density** (# per unit of area), please specify ha, acres, sq. mi. or **Max #**. **Max #** is the highest # observed on one visit in a given season. Total season counts may be entered for migrating raptors only.
3. **Types of Birds Counted:** Individuals = I, Breeding Pairs = B, Adults only = A, Males only = M, Females only = F, Nests = N
4. **Reliability/Data quality:** Good = G, Medium = M, Poor = P, Unknown = Un
5. **Source:** Enter the number of the source in this box, and list corresponding details of the sources in Source Details (IIIB) section. Sources may include published reports, surveys, personal observations or field notes.

() values represent population thresholds per the Virginia IBA instructions.

Species Name	Season Month/Day of Observation	Year of Observation	Relative Abundance	Counts		Types of Birds Counted	Reliability /Data Quality	Source
				All Groups	Migrating Raptors Only			
				Density # / ___ area or Max # / visit	Total Season Count			
Wilson's Plover	June	2005			24 ^a (all)	B	G	1
Piping Plover	June	2005			151 ^b (all)	B	G	1
Peregrine Falcon	Spring	2005			8 ^c	B	G	2
Gull-billed Tern	Summer	2003			304 ^d (10)	B	G	3
Saltmarsh Sharp-tailed Sparrow	Summer	1999			1 ^e (5)	M	P	4
Nelson's Sharp-tailed Sparrow	Winter				110 ^f (100)	I	P	5
Little Blue Heron	Summer	2003			249 ^g (10)	B	G	3
American Black Duck	Summer	2005			10,20 ^h (5)	B	M	6, 7
Bald Eagle	Summer	2005			3 ⁱ (30)	B	G	8
American Oystercatcher	Summer	2003			525 ^j (15)	B	G	9
Least Tern	Summer	2003			703 ^k (50)	B	G	3
Royal Tern	Summer	2003			2058 ^l (300)	B	G	3

Black Skimmer	Summer	2003				1679 ^m (100)	B	G	3
Yellow-crowned Night Heron	Summer	2003				2 ⁿ (40)	B	G	3
Tricolored Heron	Summer	2003				456 ^o (30)	B	G	3
Black-crowned Night Heron	Summer	2003				590 ^p (30)	B	G	3
Glossy Ibis	Summer	2003				669 ^q (30)	B	G	3
Brant (winter)	Winter	2004				17,000 ^r (240)	I	G	10
Northern Harrier	Summer	1991				8 ^s	B	G	11
Common Tern	Summer	2003				843 ^t (200)	B	G	3
Barn Owl	Summer	1999				2 ^u (5)	B	P	12
Forster's Tern	Summer	2003				1521 ^v (50)	B	G	3
Marbled Godwit	Winter	2001				71 ^w (60)	I	P	13
Red Knot	Spring	2005				9,356 ^x (240)	I	G	14,15
Short-billed Dowitcher	Spring	1995				46,000 ^y (480)	I	M	16
Seaside Sparrow	Summer	NA				122,000 ^z (500)	B	M	17
Rusty Blackbird	Winter	2001				8 ^{aa} (200)	I	M	13
Whimbrel	Spring	1995				40,000 ^{bb} (720)	I	M	16
Chuck-will's-widow	Summer				C ^{cc}				
Wood Thrush	Summer				R ^{dd}				
Prairie Warbler	Summer				C ^{ee}				
Eastern Meadowlark	Summer				U ^{ff}				
Field Sparrow	Summer				U ^{gg}				

^aNorthern range limit for species. Area accounts for 100% of Virginia breeding population. Population is in decline.

^bNear southern range limit for species. Area accounts for 100% of Virginia population and approximately 15% of Atlantic Coast population. Some overwintering individuals identified as from federally endangered western population.

^cArea accounts for 40% of Virginia breeding population. Area represents significant migration and wintering site for birds of eastern North America and for *tundrius* subspecies.

^dArea accounts for 95% of Virginia breeding population. Species is in steep decline.

^eSpecies breeds throughout this area in Accomack County to just below county line. No attempt has been made to survey the population. Based on known sites and available habitat, population likely exceeds 100 breeding pairs.

^fNo systematic survey of species complex. Christmas Bird Counts cover small portion of this system. This area is likely to support a winter population in the thousands.

^gArea accounts for 80% of Virginia breeding population.

^hPopulation has experienced dramatic decline due to mammalian predation. Bydrowski and Costanzo documented 10 nests in 2003. Arquilla documented 20 in 2005. Neither effort covered entire system.

ⁱArea is not significant for breeding population, representing less than 1% of state population. Recent indication of the formation of a winter concentration area in northern portion.

^jArea supports 90% of Virginia breeding population. Area supports largest and most productive breeding population throughout the species range. Area supports the second highest winter population known throughout range.

^kArea supports 83% of Virginia breeding population. Population has experienced long-term decline.

^lArea supports 72% of Virginia breeding population. Population has experienced local decline but moves over large geographic areas.

^mArea supports 92% of Virginia breeding population. Population has experienced significant decline.

ⁿSurveys throughout the 1990s placed the population within the area around 50 breeding pairs. Species is difficult to survey. Population within the area is more likely 50-100 pairs.

^oArea supports 90% of Virginia breeding population.

^pArea supports 92% of Virginia breeding population.

^qArea supports 82% of Virginia breeding population.

^rArea represents one of the most significant wintering areas for this species along Atlantic Coast.

^sArea is very near the southern range limit for the species. Area supports approximately 30% of known Virginia breeding population.

^tArea supports 45% of Virginia breeding population.

^uNo systematic data available for this species within the area. Collective observations over the years suggest a decline in the population but that the population still likely exceeds 20 pairs.

^vArea supports 61% of Virginia breeding population.

^wNo systematic survey for this species. Number derived from Chincoteague, Wachapreague, and Cape Charles Christmas Bird Counts. Combined these counts typically account for 50-100 individuals. However, these counts cover a relatively small portion of the overall system suggesting that these numbers are substantial underestimates.

^xAerial survey estimate consistent with peak counts from aerial surveys in the 1990s. This estimate now appears to account for 30% of population moving along the Atlantic Coast.

^yLagoon system is an important staging area for this species. Number is a projection based on 10 aerial transects flown weekly in the springs of 1994-1996.

^zArea supports significant breeding population. Number is a projection based on density estimate and available habitat.

^{aa} No systematic survey for this species. Number derived from Chincoteague, Wachapreague, and Cape Charles Christmas Bird Counts. As recently as 1998-99 these counts had 336. These counts cover a relatively small portion of the overall system suggesting that these numbers are substantial underestimates.

^{bb} Lagoon system is a hemispherically important staging area for this species. Number is a projection based on 10 aerial transects flown weekly in the springs of 1994-1996. It is believed that this site supports virtually all individuals moving along the Atlantic Coast in spring. Continental estimate for this species was derived from this set of aerial surveys.

^{cc} No systematic survey for this species. The species is common within the pine hummocks and stands where high ground is available.

Breeding population likely well over 100 pairs in this area.

^{dd} No systematic survey for this species. Appears to be a rare breeder with very little habitat available. Area not significant for this species
^{ee} No systematic survey for this species. Common breeder within most islands and high areas with suitable vegetation. Population likely well over 100 pairs.

^{ff} No systematic survey for this species. Species does breed throughout the area but habitat is limited. Area not significant for this species.

^{gg} No systematic survey for this species. Species does breed throughout the area but habitat is limited. Area not significant for this species.

III B. Source Details

Detail the sources of data noted in the “Species List and Population Data” (III A) Section. If additional space is needed, you may attach copies of this form to the nomination.

1. Boettcher, R. 2005. Virginia survey of Piping and Wilson’s Plovers: 2005 breeding season. Virginia Department of Game and Inland Fisheries, Unpublished report.
2. Watts, B. D., Padgett, S. M., M. A. Byrd, and E. C. Long. 2005. Virginia Peregrine Falcon monitoring and management program: Year 2005 report. Center for Conservation Biology Technical Report Series, CCBTR-05-09. College of William and Mary, Williamsburg, VA. 12 pp.
3. Watts, B. D. 2004. Status and distribution of colonial waterbirds in coastal Virginia: 2003 breeding season. CCBTR-04-06. Center for Conservation Biology, College of William and Mary, Williamsburg, VA 25 pp
4. Brinkley, E. S. 2000. The 1999 Northampton County foray (Part 2). The Raven 71:48-70.
5. Kain, T. 2001. Virginia Christmas Bird Counts 2000-2001 season. The Raven 72:17-51.
6. Bydrowski, T. and G. Costanzo. 2003. Progress report: Survey of breeding Black Ducks on the Virginia Barrier Islands, Spring 2003. Unpublished Report, Virginia Department of Game and Inland Fisheries. Richmond, VA.
7. Arquilla, B. 2005. The impact of predator reduction on the productivity of American black ducks and other ground nesting avifauna on the Virginia Coast Reserve. Unpublished Data.
8. Watts, B. D. and M. A. Byrd 2005. Virginia bald eagle nest and productivity survey: Year 2005 report. Center for Conservation Biology Technical Report Series, CCBTR-05-05. College of William and Mary, Williamsburg, VA. 27 pp.
9. Wilke, A. L., B. D. Watts, B. R. Truitt, and R. Boettcher. 2005. Breeding season status of the American Oystercatcher in Virginia, USA. *Waterbirds* 28:308-315.
10. USFWS 2004 Mid-Winter Waterfowl Survey Report.
11. Watts, B. D. and S. J. Rottenborn. 2001. Breeding status of Northern Harriers in coastal Virginia. *The Raven* 72:153-157.
12. Brinkley, E. S. 2000. The 1999 Northampton County Foray (Part 1). The Raven 71:3-21.
13. Kain, T. 2002. Virginia Christmas Bird Counts 2001-2002 season. The Raven 73:17-54.
14. Watts, B. D. and B. R. Truitt. 2005. Aerial survey of Virginia Barrier Islands, Unpublished data

15. Watts, B. D. and B. R. Truitt. 2001. Abundance of shorebirds along the Virginia Barrier Islands during spring migration. *The Raven*. 71:1-12.

16. Watts, B. D. and B. R. Truitt. Abundance of migrant shorebirds within the barrier island/lagoon system of the lower Delmarva Peninsula. Unpublished Manuscript.

17. Wilson, M. D. and B. D. Watts. Population projection of Seaside Sparrows within the lower Delmarva lagoon system. Unpublished analysis.

Site Name: Virginia Barrier Island/Lagoon

IV. IBA Criteria

Proposed State Level Criteria – Mark all that apply
See Instruction IV for **Explanations of Criteria**.

Code	State Definition	Mark all criteria that apply
D 1.	Endangered, threatened, or vulnerable species: The site sustains a breeding or non-breeding population of one or more bird species, subspecies, or isolated populations that is/are endangered, threatened or vulnerable to extirpation.	Yes
D 3.	The site contains a significant suite of species associated with a habitat type that is representative, rare, or threatened in Virginia.	Yes
D 4.	The site contains a significant concentration of one or more species during the breeding season, winter, or during migration.	Yes

V. Habitat Details

See Instruction V for **List of Habitats** at both levels below.

	Major vegetation community types	Predominant plant species	Cover %
1.	Barrier/Bay Island	Open beach	
		Dune Grassland	
		Wax myrtle	
		Loblolly pine	
2.	Saltmarsh	Spartinal alterniflora	
		Spartina patens	

3.	Inter-tidal mudflat		
4.			

Site Name: Virginia Barrier Island/Lagoon

VI. Land Use

See Instruction VI for description of **Land Uses**. Mark each land use at the site, circle its predominance, and (if known) provide an estimate of the percent cover at the site currently devoted to the land use. You may enter brief notes to clarify some land uses. Detailed explanations of land uses should be reported in Text Summary, section IX.

Check Here	Land Use	Predominance			Cover %	Notes
X	Agriculture 1. Row crops, small grains	Major	Minor	Unknown		
	Agriculture 2. Grasslands (pasture, hay)	Major	Minor	Unknown		
X	Fisheries/aquaculture	Major	Minor	Unknown		
X	Forestry	Major	Minor	Unknown		
X	Hunting	Major	Minor	Unknown		
	Military	Major	Minor	Unknown		
X	Nature Conservation / research	Major	Minor	Unknown		
	Not utilized	Major	Minor	Unknown		
	Other	Major	Minor	Unknown		
X	Tourism / recreation	Major	Minor	Unknown		
	Unknown	Major	Minor	Unknown		
	Urban / industrial / transport	Major	Minor	Unknown		
	Water management	Major	Minor	Unknown		

VII. Threats

See Instruction VII for description of **Threat Codes**. Indicate all threats and the relative level of the threat by entering (L) Low, (M) Medium, (H) high, (U) Unknown in front of all that apply. You may enter notes to clarify some threats. However, detailed explanations of threats should be reported in Text Summary, section IX.

Enter L,M,H,U	Threat	Notes
L	Abandonment/land management reduction	
L	Agricultural expansion/intensification	
M	Aquaculture/fisheries	Aquaculture industry
L	Burning of vegetation	
L	Dam/dyke/barrage construction/operations	
M	Disturbance to birds	Human visitation
L	Draining wetlands	

L	Dredging/canal building (irrigation)	
L	Filling wetlands	
L	Forest grazing (by native or domestic herbivores)	
L	Groundwater extraction	
L	Industrialization/urbanization	
L	Infrastructure (roads, power lines, cell towers, etc.)	
L	Intensified forest management (please elaborate)	
L	Isolation/fragmentation	
L	Mineral/oil/peat extraction	
H	Natural events	Loss of marsh to sea level rise
H	Nonnative (exotic) animal/plant introduction	Loss of habitat to Phragmites
H	Other	Loss of habitat to mammalian predators
L	Pesticide application (non-agricultural)	
L	Plantation forestry (Afforestation) on previously open land	
L	Recreation/tourism	
L	Unsustainable exploitation of birds	

Site Name: Virginia Barrier Island/Lagoon

VIII. Protected Areas

Complete only if this site contains or abuts protected area(s)!

Enter name and descriptions of protected areas contained within or adjacent to this site.
See **Instruction VIII**

1. Name of protected area: Virginia Coast Reserve – The Nature Conservancy		
Designation:	Area: miles	circle one: hectares, acres, sq.
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA, Unknown	Overlap: miles	circle one: hectares, acres, sq. 8658.3

2. Name of protected area: Chincoteague National Wildlife Refuge – U.S. Fish and Wildlife Service		
Designation:	Area: miles	circle one: hectares, acres, sq.
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA, Unknown	Overlap: miles	circle one: hectares, acres, sq. 5121.2

3. Name of protected area: Wallops Island - NASA		
Designation:	Area: miles	circle one: hectares, acres, sq.
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA,	Overlap: miles	circle one: hectares, acres, sq.

Unknown	1810.4
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4. Name of protected area: Wreck Island Natural Area Preserve – Virginia Department of Conservation and Recreation	
Designation:	Area: circle one: hectares , acres, sq. miles 345.9
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 345.9

5. Name of protected area: Mockhorn Island, Wildlife Management Area – Virginia Department of Game and Inland Fisheries	
Designation:	Area: circle one: hectares , acres, sq. miles 3072.6
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 3072.6

6. Name of protected area: Fisherman Island, National Wildlife Refuge – U.S. Fish and Wildlife Service	
Designation:	Area: circle one: hectares , acres, sq. miles 659.1
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 659.1

7. Name of protected area: Eastern Shore of Virginia, National Wildlife Refuge – U.S. Fish and Wildlife Service	
Designation:	Area: circle one: hectares , acres, sq. miles
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA , Unknown	Overlap: circle one: hectares , acres, sq. miles 344.0

8. Name of protected area: Virginia Common Lands – Virginia Marine Resources Commission	
Designation:	Area: circle one: hectares , acres, sq. miles 10402.5
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 10402.5

8. Name of protected area:	
-----------------------------------	--

Indiantown Recreation Park – Northampton County		
Designation:	Area:	circle one: hectares, acres, sq. miles
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA, Unknown	Overlap:	circle one: hectares, acres, sq. miles
	4.9	

IX. Text Summary

Use the following space for additional descriptions of site details.

General Site Description: The Virginia Barrier Island/Lagoon system includes the seaward margin of the lower Delmarva Peninsula from the mouth of the Chesapeake Bay to the MD-VA border. This location is the most important bird are in Virginia and one of the most important bird areas along the Atlantic Coast of North America. The area has been designated as a UNESCO Biosphere Reserve, a Western Hemisphere Shorebird Reserve Site with international status and is the site of a National Science Foundation Long-term Ecological Research site and the focus of a multi-organizational partnership dedicated to bird conservation. The area includes the most pristine chain of barrier islands along the Atlantic Coast, extensive salt marshes, inter-tidal mudflats, and open water. Although much of the system is currently owned by government agencies and conservation organizations, numerous conservation challenges remain.

General Ornithological Information: The Virginia barrier islands have been the focus of ornithological interest since the 1850s and conservation efforts since the early 1900s. A very large number of surveys and research projects have been conducted throughout the 1900s. Work within this system has intensified since the mid-1970s. Of particular note is the 30-year, Williams et al. data set of colonial waterbird and beach-nesting birds along the barrier islands from Assawoman Island south to Fisherman Island. Tow benchmark colonial waterbird surveys (1993 and 2003) have placed the area into context with the rest of coastal Virginia and the broader physiographic region. Also of note is the 20-year, Virginia Department of Game and Inland Fisheries data set of Piping and Wilson’s Plovers along the entire island chain. Since 2000, a systematic survey has also been conducted for American Oystercatchers. Comprehensive monitoring of reproductive rates is available for the past several years for Wilson’s and Piping Plovers, as well as, American Oystercatchers. Extensive work has been conducted with long-legged waders during various periods over the past 30 years. Aerial surveys along all of the barrier islands and including 10 transects through the lagoon system were conducted weekly for shorebirds during spring migration for the 3 years 1994-1996. Numerous shorter-term data sets dealing with a diverse range of questions are also available.

Research / conservation projects: A large number of research and conservation projects have been conducted within this area over the past few decades involving a large number of federal and state agencies, as well, as NGOs and academic institutions.

Habitat / Land Use: The system is comprised primarily of pristine barrier island habitats, extensive salt marshes, inter-tidal mudflats, and open water.

Other Flora / Fauna:

Protected Areas: A significant percentage of the system is owned and protected to meet conservation objectives. Holders include the U.S. Fish and Wildlife Service, The Nature Conservancy, NASA, the Virginia Department of Game and Inland Fisheries, and the Virginia Department of Conservation and Recreation, Division of Natural Heritage.

Threats: Four primary threats are currently of concern including 1) predator impacts on nesting species, 2) loss of habitat to invasion by Phragmites, 3) human disturbance during the nesting season, and 4) loss of habitat to sea level rise. Colonization of most islands by raccoon and red fox are believed to be at least partially responsible for documented population declines and low reproductive rates for some species. Current research and management programs are addressing this threat. Predation by Herring and Great Black-backed Gulls are also of concern, as is, predation by the introduced population of Peregrine Falcons. Phragmites has spread rapidly throughout this system and is displacing several critical habitats. Strategic research and management is beginning to address this threat though the eventual outcome is uncertain. The increase in human visitation to portions of this system during the breeding season is an ongoing concern. Management activities and ongoing educational programs are designed to reduce this impact. Like in many coastal systems, the loss of habitat to sea-level rise is a long-term concern.

Chesapeake Islands Important Bird Area Fact Sheet

Location: Accomack County

Total Size: 1,706 ha (4,214 acres)

Elevation: 0-2.6 m (0-8.5 feet)

Site Description: The upper Chesapeake Bay supports more than 30 islands that are vestiges of an earlier era in the geological history of the Bay. In Virginia, the Chesapeake Bay Islands Important Bird Area includes 4 major island complexes including Tangier, the southern end of Smith, Great Fox, and Watts. The islands are primarily marsh with topographic highs or berms along the west-facing margins. They support barrier beaches and extensive tidal marshes. The islands also have both natural and dredge-spoil hummocks colonized by shrubs and loblolly pines. Tangier and Smith Islands support historic communities that depend on the water and tourism for their livelihoods.

Protection: Currently, a considerable portion of the area within the island complexes is privately owned. Watts Island has recently been annexed to the Blackwater National Wildlife Refuge. The Chesapeake Bay Foundation owns the educational facility on Great Fox Island and some additional land on both Tangier and Smith. The Virginia Marine Resources Commission has control over a small area of marsh designated as state common land.

Birds: These islands are isolated from the mainland by substantial distances and have generally been predator free making them attractive to nesting water birds. The barrier beaches and hummocks support significant colonies of colonial waterbirds including populations of species of concern such as Royal Tern, Common Tern, Black Skimmer, Little Blue Heron, and Glossy Ibis. The extensive marshes support significant populations of Seaside Sparrows and Forster's Terns. American Black Ducks and American Oystercatchers nest on berms and other topographic highs. These islands likely represent important stopover areas for shorebirds and marsh birds during spring and fall migration. Surrounding waters support large numbers of wintering waterfowl.

Brown Pelican



Conservation and Threats: The primary threat to this system is the loss of habitat due to erosion caused by rising sea levels. All of the islands have lost considerable surface area in recent memory. Given the important role that these islands play for sensitive bird species, efforts should be made to protect them from further erosion where possible. An additional threat is the colonization of the islands by ground predators such as raccoons, fox, feral cats, and Norway rats. These species are capable of rendering the islands unusable by ground nesters. In addition, continued expansion of

the Herring and Great Black-backed populations on these islands may be displacing other species or reducing reproductive rates. Threats from human disturbance seem to be limited at this time. With the exception of periodic population monitoring, very little management is being performed on behalf of birds or the habitats on which they depend.

Important Bird Areas of Virginia

IBA Nomination Form

The Important Bird Area (IBA) program is an international effort to identify, conserve, and monitor a network of sites that provide essential habitat for bird populations. BirdLife International began the IBA program in Europe in 1985. Since that time, BirdLife partners in more than 100 countries have joined together to build the global IBA network. Audubon, the BirdLife Partner in the U.S. has been working since 1995 to identify and conserve hundreds of IBAs all across the United States.

For more information, visit: <http://www.audubon.org/bird/iba/index.html>

Or contact Aimee Weldon, the Virginia IBA Coordinator

P.O. Box 1089, Ashland, VA 23005 aweldon@audubon.org 804-370-3528

Additional copies of the Nomination Form may be downloaded from www.virginia-iba.org

Thank you for your interest in the Important Bird Areas Program. Please tell us about the areas that you think may meet the criteria by completing as much of this form as possible. Detailed instructions for fields requiring clarification may be found in the **INSTRUCTIONS FOR COMPLETION OF IBA NOMINATION FORM**. It is important that the data and information about the sites are recorded in a standard format, so that they may be accurately evaluated.

I. Nominator Information	
YOUR NAME: Bryan D. Watts	PHONE: (757) 221-2247
AFFILIATION(if any) Center for Conservation Biology College of William and Mary	EMAIL: bdwatt@wm.edu
ADDRESS: PO Box 8795	
ZIP CITY, STATE, Williamsburg, VA 23187-8795	DATE: 11/8/05

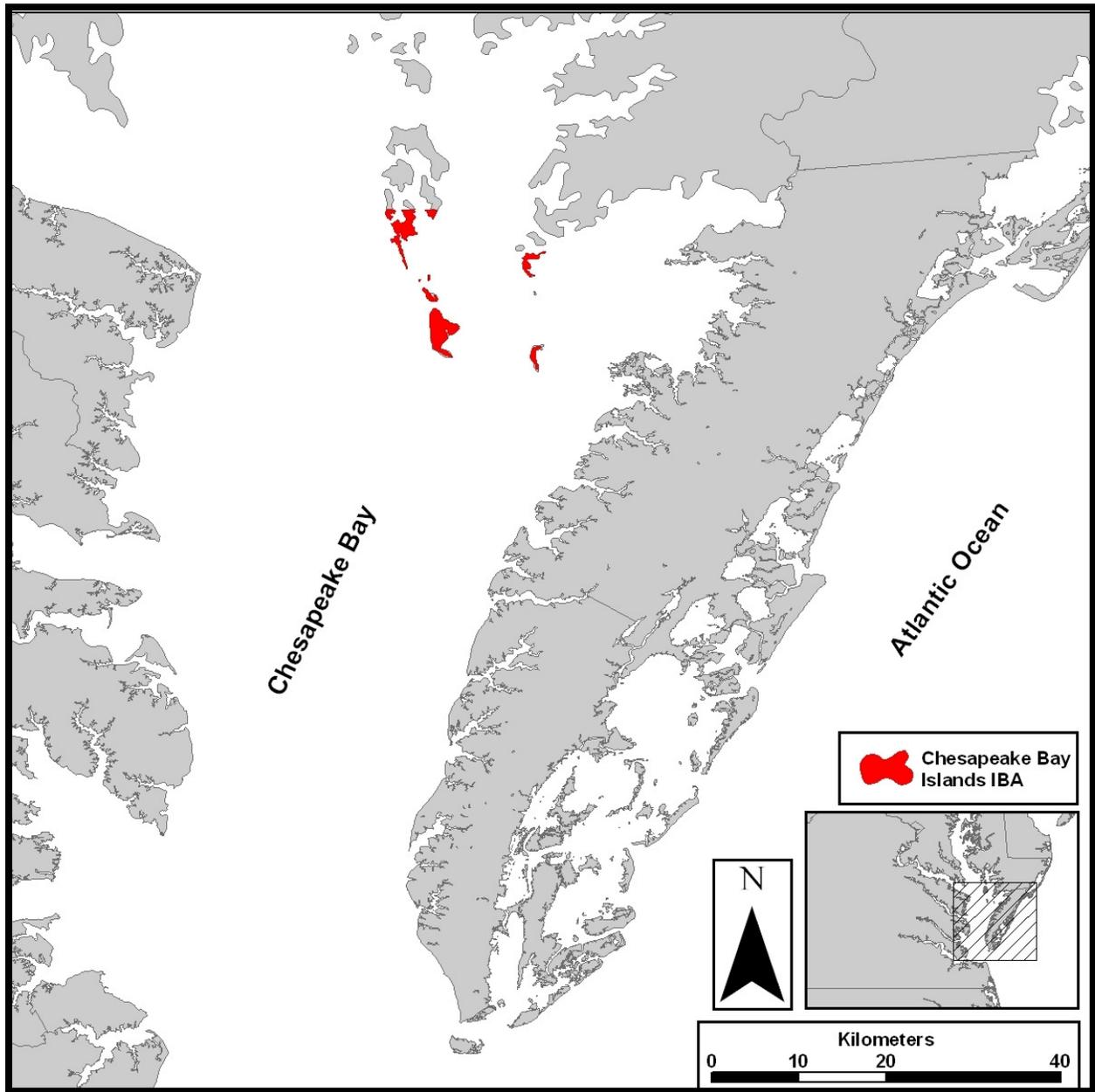
II. Site Details	
SITE NAME: Chesapeake Bay Islands	
CITY,TOWN,COUNTY: Accomack County	AREA: 1706 (circle one) acres, sq. miles., hectares
ELEVATION: Minimum 0 (circle one) feet, meters	ELEVATION: Maximum 2.6 feet, meters
COORDINATES (at site center) Latitude 37° 52' 19"	Longitude: -75° 57' 34"

Ownership: (Circle One) federal, state, private, international waters, communal, religious group, mixed, other

Ownership Details: (List owners. If "other" ownership, please describe. If the property is privately owned, please provide contact information and specify if owner is aware of nomination)

**U.S. Fish and Wildlife Service
Virginia Marine Resources Commission
Chesapeake Bay Foundation**

Road Directions to site (or location /distance to nearest town) Please include a map if convenient.



III A. Species List and Population Data

List the species of significance. Provide all other information at your disposal (note: Types of Birds Counted is required). Each record should represent a count at the site in a given year. **Please use the following codes when completing this chart.**

- 1. Relative Abundance:** Abundant = **A**, Common = **C**, Frequent = **F**, Uncommon = **U**, Rare = **R**, Not available = **NA**
- 2. Count:** For all species, enter either **Density** (# per unit of area), please specify ha, acres, sq. mi. or **Max #**. **Max #** is the highest # observed on one visit in a given season. Total season counts may be entered for migrating raptors only.
- 3. Types of Birds Counted:** Individuals = **I**, Breeding Pairs = **B**, Adults only = **A**, Males only = **M**, Females only = **F**, Nests = **N**
- 4. Reliability/Data quality:** Good = **G**, Medium = **M**, Poor = **P**, Unknown = **Un**
- 5. Source:** Enter the number of the source in this box, and list corresponding details of the sources in Source Details (IIIB) section. Sources may include published reports, surveys, personal observations or field notes.

Species Name	Season Month/Day of Observation	Year of Observation	¹ Relative Abundance	² Counts		³ Types of Birds Counted	⁴ Reliability /Data Quality	⁵ Source
				All Groups Density # / ___ area	Migrating Raptors Only Max # / visit			
Peregrine Falcon	Summer	2005			1^a	B	G	1
Black Rail	Summer		U^b		(all)			
Saltmarsh Sharp-tailed Sparrow	Summer		U^c		(5)			
Nelson's Sharp-tailed Sparrow	Winter		U^d		(100)			
Little Blue Heron	Summer	2003			61^e (10)	B	G	2
American Black Duck	Summer	2005			50^f (5)	B	G	3
Bald Eagle	Summer	2005			1^g (30)	B	G	4
American Oystercatcher	Summer	2003			13^h (15)	B	M	5
Royal Tern	Summer	2003			800ⁱ (300)	B	G	2
Black Skimmer	Summer	2003			65^j (100)	B	G	2
Yellow-crowned Night Heron	Summer	2003			4^k (40)	B	G	2
Glossy Ibis	Summer	2003			149^l (30)	B	G	2
Northern Harrier	Summer	2000			2^m	B	M	6

Common Tern	Summer	2003							
Barn Owl	Summer	2000					90 ⁿ (200)	B	G
Forster's Tern	Summer	2003					1 ^o (5)	B	P
							390 ^p (50)	B	G
Seaside Sparrow	Summer						2900 ^q (500)	B	M

^aArea supports 5% of Virginia breeding population. This value has fluctuated in recent past to as high as 20%. It is likely that this area supports a more substantial winter population.

^bStatus of this species is not known within the area. The species does not occur on Watts or Great Fox Island. However, limited suitable habitat is available in the complex between Tangier and Smith Island.

^cStatus of this species is not known within the area. The species does not occur on Watts Island and the species was not detected during extensive field work on Smith Island during the summer of 2000. However, limited, suitable habitat is available on Tangier and Great Fox Islands.

^dStatus of this species is not known within the area. Based on available habitat it seems likely that a winter population could be supported that would exceed the stated IBA threshold.

^eArea supports 20% of Virginia breeding population. In recent decades, this area has supported significant community of long-legged waders. ^fArea represents one of the few remaining strongholds for the Virginia breeding population.

^gArea supports a small fraction of the Virginia breeding population and is not important for this species during any season.

^hArea supports approximately 2% of the known Virginia breeding population. However, work in this area during the comprehensive survey of 2003 was limited. Based on the number of roosting birds late in the season, it seems highly likely that this area does exceed the stated IBA threshold.

ⁱArea supports 28% of Virginia breeding population. The distribution of this species is dynamic over time.

^jArea supports 4% of Virginia breeding population. The distribution of this species is dynamic over time such that numbers may vary within this location may vary over a wide range year to year.

^kArea supports approximately 2% of known Virginia breeding population. Pairs nest in mixed-species heronry and numbers have decreased in recent years.

^lArea supports 18% of Virginia breeding population. Overall state population in decline but sub-population in this location and in colonies to the north in MD appear to be doing well.

^mTwo pairs observed during summer of 2000 while conducting work on Smith Island with Brown Pelicans (Watts 2000). Population within this area may be as much as twice this size but not more. Species does not breed on Watts or Great Fox islands.

ⁿArea supports nearly 5% of Virginia breeding population.

^oOne pair observed during the summer of 2000 while conducting work on Smith Island with Brown Pelicans (Watts 2000). No systematic survey of this species within the area but based on available foraging habitat and structures for nesting it seems unlikely that the area will support the threshold population size.

^pArea supports 16% of Virginia breeding population. Breeding colonies have been relatively stable through time.
^qArea supports significant breeding population. Number is a projection based on density estimate and available habitat.

III B. Source Details

Detail the sources of data noted in the “Species List and Population Data” (III A) Section. If additional space is needed, you may attach copies of this form to the nomination.

1. Watts, B. D., Padgett, S. M., M. A. Byrd, and E. C. Long. 2005. Virginia Peregrine Falcon monitoring and management program: Year 2005 report. Center for Conservation Biology Technical Report Series, CCBTR-05-09. College of William and Mary, Williamsburg, VA. 12 pp.
2. Watts, B. D. 2004. Status and distribution of colonial waterbirds in coastal Virginia: 2003 breeding season. CCBTR-04-06. Center for Conservation Biology, College of William and Mary, Williamsburg, VA 25 pp
3. Bidrowski, T. and G. Costanzo. 2005. Survey of breeding Black Ducks on selected bay islands of Accomack County. Unpublished Data Virginia Department of Game and Inland Fisheries. Richmond, VA.
4. Watts, B. D. and M. A. Byrd 2005. Virginia bald eagle nest and productivity survey: Year 2005 report. Center for Conservation Biology Technical Report Series, CCBTR-05-05. College of William and Mary, Williamsburg, VA. 27 pp.
5. Wilke, A. L., B. D. Watts, B. R. Truitt, and R. Boettcher. 2005. Breeding season status of the American Oystercatcher in Virginia, USA. *Waterbirds* 28:308-315.
6. Watts, B. D. 2000. A study of waterbirds in Shanks Creek: An investigation on Smith Island, MD. Center for Conservation Biology Technical Report Series, CCBTR-00-12. College of William and Mary, Williamsburg, VA. 30 pp.
7. Wilson, M. D. and B. D. Watts. Population projection of Seaside Sparrows within the Delmarva bayside marshes. Unpublished analysis.

IV. IBA Criteria

Proposed State Level Criteria – Mark all that apply
See Instruction IV for **Explanations of Criteria**.

Code	State Definition	Mark all criteria that apply

D 1.	Endangered, threatened, or vulnerable species: The site sustains a breeding or non-breeding population of one or more bird species, subspecies, or isolated populations that is/are endangered, threatened or vulnerable to extirpation.	Yes
D 3.	The site contains a significant suite of species associated with a habitat type that is representative, rare, or threatened in Virginia.	
D 4.	The site contains a significant concentration of one or more species during the breeding season, winter, or during migration.	Yes

V. Habitat Details

See Instruction V for **List of Habitats** at both levels below.

	Major vegetation community types	Predominant plant species	Cover %
1.	Salt Marsh	Spartina alterniflora	
		Spartina patens	
		Distichlis spicata	
2.			
3.			
4.			

Site Name: Chesapeake Bay Islands

VI. Land Use

See Instruction VI for description of **Land Uses**. Mark each land use at the site, circle its predominance, and (if known) provide an estimate of the percent cover at the site currently devoted to the land use. You may enter brief notes to clarify some land uses. Detailed explanations of land uses should be reported in Text Summary, section IX.

Check	Land Use	Predominance	Cover %	Notes
-------	----------	--------------	---------	-------

Here						
	Agriculture 1. Row crops, small grains	Major	Minor	Unknown		
	Agriculture 2. Grasslands (pasture, hay)	Major	Minor	Unknown		
X	Fisheries/aquaculture	Major	Minor	Unknown		
	Forestry	Major	Minor	Unknown		
	Hunting	Major	Minor	Unknown		
	Military	Major	Minor	Unknown		
X	Nature Conservation / research	Major	Minor	Unknown		
	Not utilized	Major	Minor	Unknown		
	Other	Major	Minor	Unknown		
	Tourism / recreation	Major	Minor	Unknown		
	Unknown	Major	Minor	Unknown		
	Urban / industrial / transport	Major	Minor	Unknown		
	Water management	Major	Minor	Unknown		

VII. Threats

See Instruction VII for description of **Threat Codes**. Indicate all threats and the relative level of the threat by entering (L) Low, (M) Medium, (H) high, (U) Unknown in front of all that apply. You may enter notes to clarify some threats. However, detailed explanations of threats should be reported in Text Summary, section IX.

Enter L,M,H,U	Threat	Notes
L	Abandonment/land management reduction	
L	Agricultural expansion/intensification	
L	Aquaculture/fisheries	
L	Burning of vegetation	
L	Dam/dyke/barrage construction/operations	
L	Disturbance to birds	
L	Draining wetlands	
L	Dredging/canal building (irrigation)	
L	Filling wetlands	
L	Forest grazing (by native or domestic herbivores)	
L	Groundwater extraction	
L	Industrialization/urbanization	
L	Infrastructure (roads, power lines, cell towers, etc.)	
L	Intensified forest management (please elaborate)	
L	Isolation/fragmentation	
L	Mineral/oil/peat extraction	
H	Natural events	Loss of habitat to sea-level rise
H	Nonnative (exotic) animal/plant introduction	Loss of habitat to phragmites invasion
M	Colonization by ground predators	Islands must be kept predator free
L	Other	
L	Pesticide application (non-agricultural)	
L	Plantation forestry (Afforestation) on previously open land	
L	Recreation/tourism	
L	Unsustainable exploitation of birds	

Site Name: Chesapeake Bay Islands

VIII. Protected Areas

Complete only if this site contains or abuts protected area(s)!

Enter name and descriptions of protected areas contained within or adjacent to this site.
See **Instruction VIII**

1. Name of protected area: Chesapeake Bay Foundation	
Designation:	Area: circle one: hectares , acres, sq. miles 334.7
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 334.7

2. Name of protected area: State Common Lands – Virginia Marine Resources Commission	
Designation:	Area: circle one: hectares , acres, sq. miles 156.8
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 156.8

3. Name of protected area: Watts Island – U.S. Fish and Wildlife Service	
Designation:	Area: circle one: hectares , acres, sq. miles 100.2
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 100.2

IX. Text Summary

Use the following space for additional descriptions of site details.

General Site Description: The Chesapeake Bay Islands IBA includes 4 major island complexes including Tangier, the southern end of Smith, Great Fox, and Watts. Tangier and Smith are connected by a sandy ridge or barrier. These islands are isolated from the mainland by substantial distances and have generally been predator free making them attractive to nesting water birds. The islands are primarily marsh with topographic highs or berms along the west-facing margins. The islands also have both natural and dredge-spoil hummocks colonized by shrubs and loblolly pines.

General Ornithological Information: Two benchmark surveys of colonial waterbirds (1993 and 2003) have been conducted throughout the area to determine status and distribution and to place the area in context with other areas throughout coastal Virginia. Various portions of this area have been surveyed for breeding Black Ducks by Virginia Department of Game and Inland Fisheries biologists for several years. Peregrine Falcon pairs have been monitored within the area since the first nesting in 1983. Surrounding waters support exceptional numbers of

wintering seaducks. Shorebirds certainly migrate along these islands but no definitive information has been collected.

Research / conservation projects: Several projects have been conducted within this complex over the years. A banding and monitoring project has been ongoing with the Brown Pelican colony on Smith Island since the early 1990s. Great Fox Island was one of the early hack sites for Peregrine Falcons in Virginia. Some attempts to protect Tangier and Smith islands from erosion have been made. The tern and gull colony on Great Fox Island is generally observed and protected by the Chesapeake Bay Foundation. Osprey management has been ongoing on Smith Island since the late 1960s. The U.S. Fish and Wildlife Service has acted to reduce illegal waterfowl harvest in the area for years.

Habitat / Land Use: The dominant habitat type throughout the islands is tidal salt marsh. Interspersed within these marshes are vegetated hummocks. Watts Island is primarily a high ridge of loblolly forest with some surrounding marsh. Great Fox Island is almost entirely marsh with a high sand berm along the margin. Tangier Island has extensive marsh habitat but also has considerable high ground where the town, airport, and harbor are located. The southern end of Smith Island is marsh with a long, narrow barrier island extending south. Fishing and crabbing are the basis of the island economies so waterman work the areas around all of the islands.

Other Flora / Fauna:

Protected Areas: A considerable portion of the area within the islands is privately owned. Watts Island has recently been acquired by the U.S. Fish and Wildlife Service and annexed to the Blackwater National Wildlife Refuge. The Chesapeake Bay Foundation owns the educational facility on Great Fox Island and some additional land on both Tangier and Smith. The Virginia Marine Resources Commission has control over a small area of state common lands.

Threats: The primary threat to this system is the loss of habitat due to erosion. All of the islands have lost considerable area in recent memory. The Bay has lost many islands over the past several decades to erosion and this process is continuing. Given the important role that these islands play for sensitive bird species, efforts should be made to protect them from further losses where possible. An additional threat is the colonization of the islands by predators. Ground predators such as raccoons, fox, feral cats, and Norway rats are capable of rendering these islands unusable by ground nesters. In addition, continued expansion of the Herring and Great Black-backed populations on these islands may be displacing other species or reducing reproductive rates. The gull colony formed on Watts Island in 2002 and has grown dramatically since that time. Threats from human disturbance seem to be limited at this time.

Delmarva Bayside Marshes Important Bird Area Fact Sheet

Location: Accomack County

Total Size: 9,174 ha (22,660 acres)

Elevation: 0-3.2 m (0-10.5 feet)

Site Description: The lower Delmarva Peninsula rises in elevation from south to north such that extensive marshes have formed along the bayside north of the Accomack-Northampton County border. These marshes are the best examples of high-marsh habitat in Virginia. The system includes high-marsh habitat, low-marsh habitat, an extensive network of sandy berms, and scattered pine hummocks. Marshes are bordered along the mainland by some of the most extensive maritime forests in Virginia. Although there is considerable agency and NGO ownership within this area, much of the habitat remains in private ownership. Much of the habitat is remote due to the limited number of access points from land and the shallow depth of surrounding waters.

Bayside marshes



Protection: Although a considerable portion of this system is owned outright or under easement to government agencies and NGOs, much of it remains under private ownership. Saxis Wildlife Management Area is the largest agency-owned marsh complex within the system and is managed by the Virginia Department of Game and Inland Fisheries. Mark's and Jack's Island Natural Area Preserve is under the ownership and management of the Nature Conservancy while Parkers Marsh Natural Area Preserve is owned by the Virginia Department of Conservation and Recreation. Scattered holdings are also controlled by the Virginia Marine Resources Commission and the Virginia Outdoors Foundation.

Birds: Because access into this system is limited and difficult the avifauna is not well documented. Until recently, the system was known to support the entire suite of sensitive high-marsh species including Black Rail, Northern Harrier, Henslow's Sparrow, Saltmarsh Sharp-tailed Sparrow, and Sedge Wren. The known population of Henslow's Sparrow has been lost in recent years likely due to degradation of habitat by common reed. The area supports what may be the last remaining breeding population of Black Rails and the largest population of Saltmarsh Sharp-tailed Sparrows in Virginia. The sizes of these breeding populations have not been assessed. Marshes also support a significant breeding population of Seaside Sparrows. The fringing berms along extensive marshes support a significant but poorly documented population of American Oystercatcher. Small marsh islands support populations of American Black Duck, Forster's Terns, and Common Terns. The system likely supports a significant population of Nelson's Sharp-tailed Sparrows in the winter months. Very little is known about the use of this system by shorebirds and marsh birds during the migration periods.

Conservation and Threats: Primary threats to bird populations within this system include 1) loss of habitat to the invasion by common reed, 2) loss of habitat to sea-level rise, and 3) increases in mammal populations and associated predation. The aggressive invasive plant common reed is spreading rapidly throughout this system from a substantial source population that has formed at Saxis Wildlife Management Area. This species invades along the marsh-upland ecotone and eliminates habitat required by the Henslow's Sparrow. This is likely the primary cause of the loss of this species from this habitat along the Atlantic Coast. Habitat continues to be at risk in the long term to rising sea levels. The increase in mammal predators (raccoon and both fox species) over the past 30 years on the Delmarva mainland has almost certainly had a detrimental effect on reproductive rates of marsh-bird populations. To date, this area has received very little attention from the conservation community.

Important Bird Areas of Virginia

IBA Nomination Form

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For more information, visit: <http://www.audubon.org/bird/iba/index.html>

Or contact Aimee Weldon, the Virginia IBA Coordinator

P.O. Box 1089, Ashland, VA 23005 aweldon@audubon.org 804-370-3528

Additional copies of the Nomination Form may be downloaded from www.virginia-iba.org

Thank you for your interest in the Important Bird Areas Program. Please tell us about the areas that you think may meet the criteria by completing as much of this form as possible. Detailed instructions for fields requiring clarification may be found in the **INSTRUCTIONS FOR COMPLETION OF IBA NOMINATION FORM**. It is important that the data and information about the sites are recorded in a standard format, so that they may be accurately evaluated.

I. Nominator Information	
YOUR NAME: Bryan D. Watts	PHONE: (757) 221-2247
AFFILIATION(if any) Center for Conservation Biology College of William and Mary	EMAIL: bdwatt@wm.edu
ADDRESS: PO Box 8795	
ZIP CITY, STATE, Williamsburg, VA 23187-8795	DATE: 11/8/05

II. Site Details	
SITE NAME: Delmarva Bayside Marshes	
CITY,TOWN,COUNTY: Accomack	AREA: 9174.3 (circle one) acres, sq. miles., hectares
ELEVATION: Minimum 0 (circle one) feet, meters	ELEVATION: Maximum 3.2 feet, meters
COORDINATES (at site center) Latitude 37° 52' 19"	Longitude: -75 ° 44' 58"

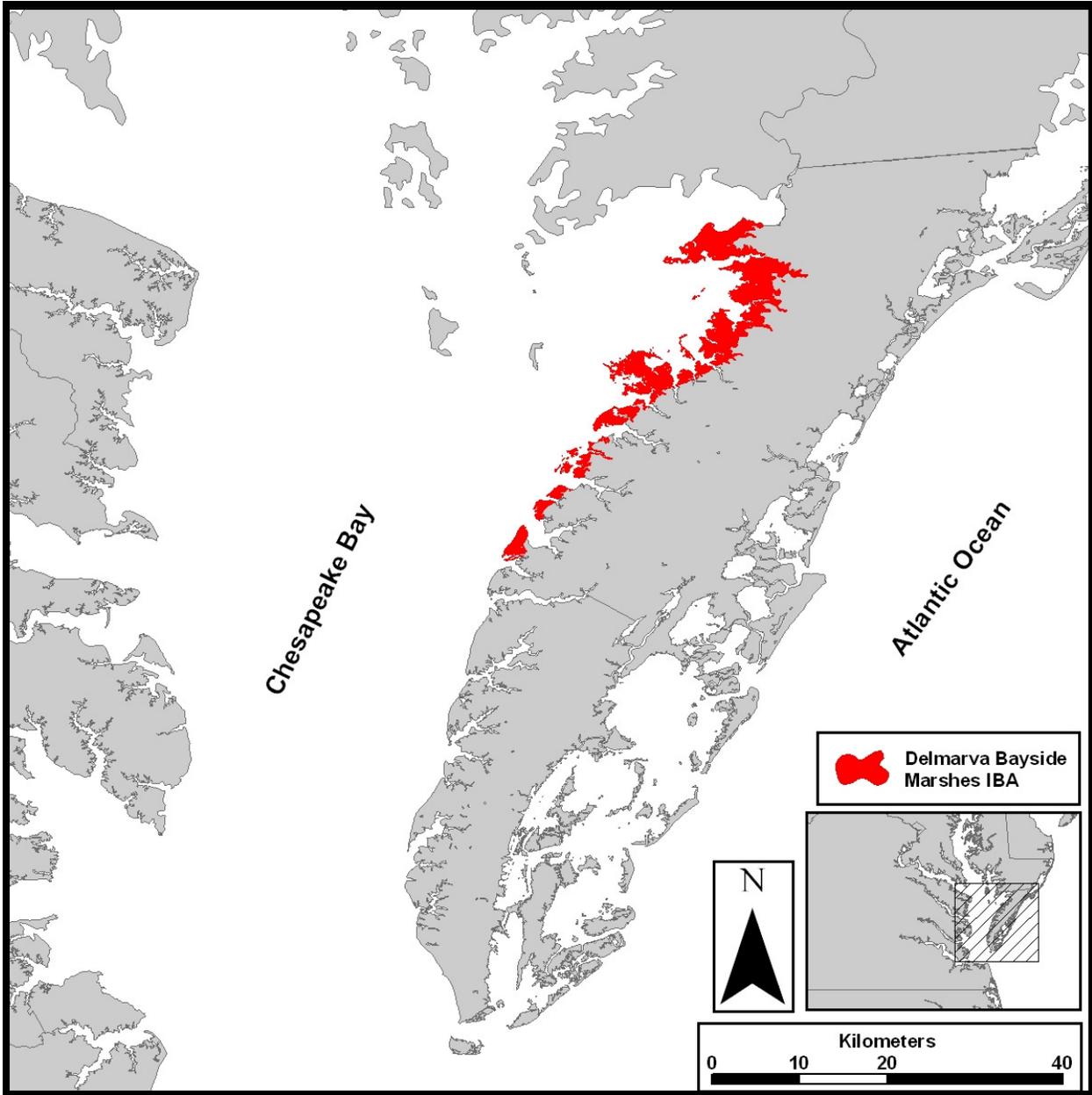
Ownership: (Circle One) federal, state, private, international waters, communal, religious group, mixed, other

Ownership Details: (List owners. If "other" ownership, please describe. If the property is privately owned, please provide contact information and specify if owner is aware of nomination)

**Virginia Department of Game and Inland Fisheries
Virginia Department of Conservation and Recreation**

Virginia Marine Resources Commission
Virginia Outdoors Foundation
The Nature Conservancy

Road Directions to site (or location /distance to nearest town) Please include a map if convenient.



III A. Species List and Population Data

List the species of significance. Provide all other information at your disposal (note: Types of Birds Counted is required). Each record should represent a count at the site in a given year. **Please use the following codes when completing this chart.**

1. **Relative Abundance:** Abundant = A, Common = C, Frequent = F, Uncommon = U, Rare = R, Not available = NA
2. **Count:** For all species, enter either **Density** (# per unit of area), please specify ha, acres, sq. mi. or **Max #**. **Max #** is the highest # observed on one visit in a given season. Total season counts may be entered for migrating raptors only.
3. **Types of Birds Counted:** Individuals = I, Breeding Pairs = B, Adults only = A, Males only = M, Females only = F, Nests = N
4. **Reliability/Data quality:** Good = G, Medium = M, Poor = P, Unknown = Un
5. **Source:** Enter the number of the source in this box, and list corresponding details of the sources in Source Details (IIIB) section. Sources may include published reports, surveys, personal observations or field notes.

() values represent population thresholds per the Virginia IBA instructions.

Species Name	Season Month/Day of Observati on	Year of Observation	¹ Relative Abundance	² Counts		³ Types of Birds Counted	⁴ Reliability /Data Quality	⁵ Source
				All Groups	Migrating Raptors Only			
				Density # / ___ area	Max # / visit			
Peregrine Falcon	Summer	2005			1^a	B	G	1
Black Rail	Summer	2001			5^b(all)	B	P	2
Saltmarsh Sharp-tailed Sparrow	Summer	2001			40^c(5)	B	P	2
Henslow's Sparrow	Summer	1999			2^d(all)	B	P	3
Nelson's Shp-t Sparrow	Winter		C ^e					
American Black Duck	Summer	2005			50^f(5)	B	M	4
Bald Eagle	Summer	2005			5^g(30)	B	G	5
American Oystercatcher	Summer	2003			29^h(15)	B	M	6
Northern Harrier	Summer	1995			4ⁱ	B	M	7
Common Tern					158^j(200)			
Barn Owl	Summer	2002			3^k(5)	B	P	8
Sedge Wren	Summer	1981			1^l(5)	B	P	9
Forster's Tern	Summer	2003			566^m(50)	B	G	10

Seaside Sparrow		NA		29,000 ⁿ (500)		11
Chuck-will' s-widow	Summer		C ^o			
Prairie Warbler	Summer		C ^p			
Eastern Meadowlark	Summer		C ^q			

^aArea contains 10% of Virginia breeding population. Area likely supports significant wintering area for tundra population though definitive information is not available.

^bArea contains the last stronghold for this species in Virginia. No systematic survey has been conducted to determine population size and extent. Available information includes only those portions of the area accessible to the birding public. These areas represent a small fraction of the available habitat. Based on scattered reports and available habitat, it is likely that this area supports in the range of 50 breeding pairs.

^cArea contains one of two strongholds for this species in Virginia and the southern range limit for breeding. No systematic survey has been conducted throughout available habitat to determine population size and extent. For the most part, available information includes only those portions of the area accessible to the birding public. These areas represent a small fraction of the available habitat. Based on available habitat and the density of birds within examined areas, it is likely that this area supports a population in the range of hundreds of breeding pairs.

^dArea represents the last known breeding site for the saltmarsh population along the entire Atlantic Coast. No records since approximately 2000. However, no systematic survey has been conducted throughout available habitat. Available information is from locations accessible to birding public. Extensive habitat south of Saxis Wildlife Management Area may still support birds.

^eNo systematic information available for this species within this location. Based on extent of appropriate habitat, this area may support a winter population in the thousands.

^fArea represents one of the remaining strong holds for the breeding population in Virginia. Predator-free, offshore marsh islands continue to support significant populations.

^gArea supports approximately 1% of Virginia breeding population.

^hArea supports approximately 5% of Virginia breeding population. Comprehensive survey conducted in 2003 did not completely cover extensive sand berm network within this area. Population within this area is likely larger than currently known.

ⁱArea supports approximately 20% of known Virginia breeding population. Area represents one of 3 strongholds for this species in coastal Virginia.

^jArea supports approximately 8% of Virginia breeding population. Breeding colonies occur on isolated marsh islands.

^kNo systematic survey of area has been conducted for this species. Available marsh habitat is extensive and population likely limited by nesting substrate. Based on known nesting pairs around the Saxis area and available habitat to the south, breeding population could be in the range of 30 pairs.

^lNo systematic surveys available for this species. There is historical evidence of breeding but no information on population status or distribution. Area contains extensive habitat that appears suitable.

^mArea supports 23% of the Virginia breeding population. Breeding colonies occur on isolated marsh islands.

- ⁿ Area supports significant breeding population. Number is a projection based on density estimate and available habitat.
- ^o No systematic survey for this species. The species is common within the pine hummocks and stands where high ground is available.
- ^p No systematic survey for this species. Common breeder within most patches of high marsh. Population is likely in the range of several hundred pairs.
- ^q No systematic survey for this species. Common breeding species within most patches of high marsh.

III B. Source Details

Detail the sources of data noted in the “Species List and Population Data” (III A) Section. If additional space is needed, you may attach copies of this form to the nomination.

1. Watts, B. D., Padgett, S. M., M. A. Byrd, and E. C. Long. 2005. Virginia Peregrine Falcon monitoring and management program: Year 2005 report. Center for Conservation Biology Technical Report Series, CCBTR-05-09. College of William and Mary, Williamsburg, VA. 12 pp.
2. Watts, B. D. and B. J. Paxton. 2001. Observations in two marsh patches on the bayside of Accomack County in preparation for marsh fragmentation study. Unpublished Data.
3. Watts, B. D. 2000. Observations within switch grass along the marsh-upland ecotone in Saxis Marsh.
4. Bidrowski, T. and G. Costanzo. 2005. Survey of breeding Black Ducks on selected bay islands of Accomack County. Unpublished Data Virginia Department of Game and Inland Fisheries. Richmond, VA.
5. Watts, B. D. and M. A. Byrd 2005. Virginia bald eagle nest and productivity survey: Year 2005 report. Center for Conservation Biology Technical Report Series, CCBTR-05-05. College of William and Mary, Williamsburg, VA. 27 pp.
6. Wilke, A. L., B. D. Watts, B. R. Truitt, and R. Boettcher. 2005. Breeding season status of the American Oystercatcher in Virginia, USA. *Waterbirds* 28:308-315.
7. Watts, B. D. and S. J. Rottenborn. 2001. Breeding status of Northern Harriers in coastal Virginia. *The Raven* 72:153-157.
8. Watts, B. D. 2002. Field observations of barn owls in duck blind, Peregrine tower, and Barn Owl box in the Saxis area. Unpublished Data.
9. Kinzie, B. L. and F. R. Scott. 1983. The Accomack County Breeding-Bird Foray of 1981. *The Raven* 54:3-18.
10. Watts, B. D. 2004. Status and distribution of colonial waterbirds in coastal Virginia: 2003 breeding season. CCBTR-04-06. Center for Conservation Biology, College of William and Mary, Williamsburg, VA 25 pp
11. Wilson, M. D. and B. D. Watts. Population projection of Seaside Sparrows within the Delmarva bayside marshes. Unpublished analysis.

IV. IBA Criteria

Proposed State Level Criteria – Mark all that apply
 See Instruction IV for **Explanations of Criteria**.

Code	State Definition	Mark all criteria that apply
D 1.	Endangered, threatened, or vulnerable species: The site sustains a breeding or non-breeding population of one or more bird species, subspecies, or isolated populations that is/are endangered, threatened or vulnerable to extirpation.	Yes
D 3.	The site contains a significant suite of species associated with a habitat type that is representative, rare, or threatened in Virginia.	Yes
D 4.	The site contains a significant concentration of one or more species during the breeding season, winter, or during migration.	

V. Habitat Details

See Instruction V for **List of Habitats** at both levels below.

	Major vegetation community types	Predominant plant species	Cover %
1.	Salt Marsh	Spartina alterniflora	
		Spartina patens	
		Distichlis spicata	
2.	Pine Savannah Hummocks	Loblolly Pine	
		Wax Myrtle	
3.			
4.			

VI. Land Use

See Instruction VI for description of **Land Uses**. Mark each land use at the site, circle its predominance, and (if known) provide an estimate of the percent cover at the site currently devoted to the land use. You may enter brief notes to clarify some land uses. Detailed explanations of land uses should be reported in Text Summary, section IX.

Check Here	Land Use	Predominance			Cover %	Notes
		Major	Minor	Unknown		
	Agriculture 1. Row crops, small grains	Major	Minor	Unknown		
	Agriculture 2. Grasslands (pasture, hay)	Major	Minor	Unknown		
X	Fisheries/aquaculture	Major	Minor	Unknown		
	Forestry	Major	Minor	Unknown		
X	Hunting	Major	Minor	Unknown		
	Military	Major	Minor	Unknown		
X	Nature Conservation / research	Major	Minor	Unknown		
	Not utilized	Major	Minor	Unknown		
	Other	Major	Minor	Unknown		
	Tourism / recreation	Major	Minor	Unknown		
	Unknown	Major	Minor	Unknown		
	Urban / industrial / transport	Major	Minor	Unknown		
	Water management	Major	Minor	Unknown		

VII. Threats

See Instruction VII for description of **Threat Codes**. Indicate all threats and the relative level of the threat by entering (L) Low, (M) Medium, (H) high, (U) Unknown in front of all that apply. You may enter notes to clarify some threats. However, detailed explanations of threats should be reported in Text Summary, section IX.

Enter L,M,H,U	Threat	Notes
L	Abandonment/land management reduction	
L	Agricultural expansion/intensification	
L	Aquaculture/fisheries	
L	Burning of vegetation	
L	Dam/dyke/barrage construction/operations	
L	Disturbance to birds	
L	Draining wetlands	
L	Dredging/canal building (irrigation)	
L	Filling wetlands	
L	Forest grazing (by native or domestic herbivores)	
L	Groundwater extraction	
L	Industrialization/urbanization	
L	Infrastructure (roads, power lines, cell towers, etc.)	
L	Intensified forest management (please elaborate)	
L	Isolation/fragmentation	
L	Mineral/oil/peat extraction	
H	Natural events	Habitat loss due to sea-level rise
H	Nonnative (exotic) animal/plant introduction	Loss of high-marsh habitat due to Phrag
H	Other	Predation by mammals
L	Pesticide application (non-agricultural)	
L	Plantation forestry (Afforestation) on previously open land	
L	Recreation/tourism	

L	Unsustainable exploitation of birds	
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VIII. Protected Areas

Complete only if this site contains or abuts protected area(s)!

Enter name and descriptions of protected areas contained within or adjacent to this site.
See **Instruction VIII**

1. Name of protected area: Saxis Wildlife Management Area – Virginia Department of Game and Inland Fisheries	
Designation:	Area: circle one: hectares , acres, sq. miles 2256.7
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 2256.7

2. Name of protected area: Parkers Marsh Natural Area Preserve – Virginia Department of Conservation and Recreation	
Designation:	Area: circle one: hectares , acres, sq. miles 307.3
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 307.3

3. Name of protected area: Mark’s and Jack’s Island Natural Area Preserve – The Nature Conservancy	
Designation:	Area: circle one: hectares , acres, sq. miles 809.7
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 809.7

4. Name of protected area: Virginia Common Lands – Virginia Marine Resources Commission	
Designation:	Area: circle one: hectares , acres, sq. miles 92.3
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 92.3

5. Name of protected area: Easements – Virginia Outdoors Foundation	
Designation:	Area: circle one: hectares , acres, sq. miles

	11.7
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA, Unknown	Overlap: circle one: hectares , acres, sq. miles 11.7

IX. Text Summary

Use the following space for additional descriptions of site details.

General Site Description: The extensive marshes of the Delmarva bayside are the best examples of high-marsh habitat in Virginia and until recently were known to support the entire suite of sensitive high-marsh species including Black Rail, Northern Harrier, Henslow’s Sparrow, Saltmarsh Sharp-tailed Sparrow, and Sedge Wren. The system includes high-marsh habitat, low-marsh habitat, an extensive network of sandy berms, and scattered pine hummocks. Although there is considerable agency and NGO ownership within this area, much of the habitat remains in private ownership. Much of the habitat is remote and not easily accessible to humans.

General Ornithological Information: This area is one of the last frontiers for ornithological exploration in the coastal plain of Virginia. Due to the low number of upland access points and the shallow waters surrounding many patches, definitive information on some of the species of highest conservation concern is very limited. No definitive work on the high-marsh community has been conducted. Information on this community is available for the few locations with road access which represent a small fraction of the area. The site supported the last known breeding location for Henslow’s Sparrows in traditional marsh habitat along the Atlantic Coast. Of note is the long-term (30 years) data set on breeding Bald Eagles, two benchmark surveys of colonial waterbirds (1993 and 2003), monitoring of Black Duck populations on selected marsh islands, and an attempt to survey American Oystercatchers in 2003. Much work is needed to clarify population status and distribution of marsh-nesting species and the use of the area by migrant shorebirds.

Research / conservation projects: Comparatively little work is being or has been conducted within this system. Black Duck breeding work continues to be conducted by Virginia Department of Game and Inland Fisheries biologists. The Center for Conservation Biology along with the Virginia Department of Game and Inland Fisheries established several nest boxes for Barn Owls to encourage breeding. The Center for Conservation Biology recently completed a study of the response of high-marsh species to patch size. Easement and acquisition efforts are progressing.

Habitat / Land Use: The dominant habitat type within this area is salt marsh with high and low components. The area also contains an extensive network of sandy berms along the Bay margin and scattered pine and shrub hummocks. Very significant for the breeding bird community are the small, marsh islets in the nearshore areas.

Other Flora / Fauna:

Protected Areas: Although a considerable portion of this system is owned outright or under easement to government agencies and NGOs, much of it remains under private ownership.

Holders include the Virginia Department of Game and Inland Fisheries, The Virginia Department of Conservation and Recreation, the Virginia Marine Resources Commission, The Nature Conservancy, and the Virginia Outdoors Foundation.

Threats: Primary threats relevant to bird population include 1) loss of habitat to the invasion by common reed, 2) loss of habitat to sea-level rise, and 3) increases in mammal populations and associated predation. The aggressive invasive plant common reed is spreading rapidly throughout this system from a substantial source population that has formed at Saxis Wildlife Management Area. This species invades along the marsh-upland ecotone and eliminates habitat required by the Henslow's Sparrow. This is likely the primary cause of the loss of this species from this habitat along the Atlantic Coast. Habitat continues to be at risk in the long term to rising sea levels. The increase in mammal predators (raccoon and both fox species) over the past 30 years on the Delmarva mainland has almost certainly had a detrimental effect on reproductive rates of marsh-bird populations.

Lower Delmarva Important Bird Area Fact Sheet

Location: Northampton County
Total Size: 9,997 ha (24,693 acres)
Elevation: 0-19.5 m (0-64.0feet)

Site Description: The Delmarva Peninsula separates the Atlantic Ocean and the Chesapeake Bay. The last 100 km of the peninsula form a narrow land mass averaging 10 km in width but narrowing toward the southern tip where it forms the mouth of the Chesapeake Bay. The lower Delmarva landscape is highly dissected and dominated by agricultural fields. Forest tracts are generally small and isolated with mixed vegetation. The exceptions to this pattern are the forested corridors along the bayside and seaside margins. Although the Delmarva landscape was stable for more than a century, demand for land has greatly increased in the last decade leading to a rapid shift toward residential development.

Protection: A modest but strategic percentage of the lower Delmarva is owned and protected to meet various conservation objectives including providing habitat for migrant birds. The Eastern Shore of Virginia National Wildlife Refuge is strategically positioned at the tip of the peninsula and includes significant maritime forest and open habitats. Kiptopeke State Park is strategically located along the Bay-side edge of the peninsula and includes the most significant stopover habitat for passerines known on the peninsula. The Nature Conservancy and the Virginia Department of Game and Inland Fisheries hold several key parcels of land within the area. Acquisition of parcels demonstrated to be important to migrants is a continuing goal of a consortium of land-based agencies and conservation organizations.

Birds: Due to its orientation and geographic position, the lower Delmarva Peninsula represents a significant bottleneck for birds migrating along the Atlantic Coast during the fall months. Large numbers of migrants that reach the mouth of the Chesapeake Bay in the early morning hours “fall out” and utilize habitats near the southern tip of the peninsula. The area is particularly important for passerines that breed in northeastern North America and winter in the Caribbean but also important for temperate migrants that winter in the southeastern United States. An estimated 10 million passerines and 80,000 diurnal raptors migrate through this area between August and December including many species of conservation concern.

Black-throated Blue Warbler



Conservation and Threats: The single greatest threat to this area is the ongoing conversion of habitat to residential and commercial development. In the past decade, interest in the area from developers and potential homeowners has greatly increased, leading to a sharp rise in land valuations. Most of the privately owned land along the bayside has been subdivided for development for a period of 15 years or more. Much of the inland parcels have been subdivided in more recent years. Recent investments in residential development suggest that the area is nearing a sea change in habitat loss.

Other significant threats include the various factors (deer overpopulation, clearing for land sale or development, overstocked pine plantations that lead to canopy closure) that contribute to understory loss. Several research projects over the past 20 years have focused on the distribution and habitat needs of migrants within this area. Current conservation efforts are focused on acquisition of strategic parcels and subsequent habitat improvement.

Important Bird Areas of Virginia

IBA Nomination Form

The Important Bird Area (IBA) program is an international effort to identify, conserve, and monitor a network of sites that provide essential habitat for bird populations. BirdLife International began the IBA program in Europe in 1985. Since that time, BirdLife partners in more than 100 countries have joined together to build the global IBA network. Audubon, the BirdLife Partner in the U.S. has been working since 1995 to identify and conserve hundreds of IBAs all across the United States.

For more information, visit: <http://www.audubon.org/bird/iba/index.html>

Or contact Aimee Weldon, the Virginia IBA Coordinator

P.O. Box 1089, Ashland, VA 23005 aweldon@audubon.org 804-370-3528

Additional copies of the Nomination Form may be downloaded from www.virginia-iba.org

Thank you for your interest in the Important Bird Areas Program. Please tell us about the areas that you think may meet the criteria by completing as much of this form as possible. Detailed instructions for fields requiring clarification may be found in the **INSTRUCTIONS FOR COMPLETION OF IBA NOMINATION FORM**. It is important that the data and information about the sites are recorded in a standard format, so that they may be accurately evaluated.

I. Nominator Information	
YOUR NAME: Bryan D. Watts	PHONE: (757) 221-2247
AFFILIATION(if any) Center for Conservation Biology College of William and Mary	EMAIL: bdwatt@wm.edu
ADDRESS: PO Box 8795	
ZIP CITY, STATE, Williamsburg, VA 23187-8795	DATE: 3/18/06

II. Site Details	
SITE NAME: Lower Delmarva	
CITY,TOWN,COUNTY: Northampton County	AREA: 9,997 (circle one) acres, sq. miles., hectares
ELEVATION: Minimum 0 (circle one) feet, meters	ELEVATION: Maximum 19.5 feet, meters
COORDINATES (at site center) Latitude 37° 15' 35"	Longitude: -75° 58' 50"

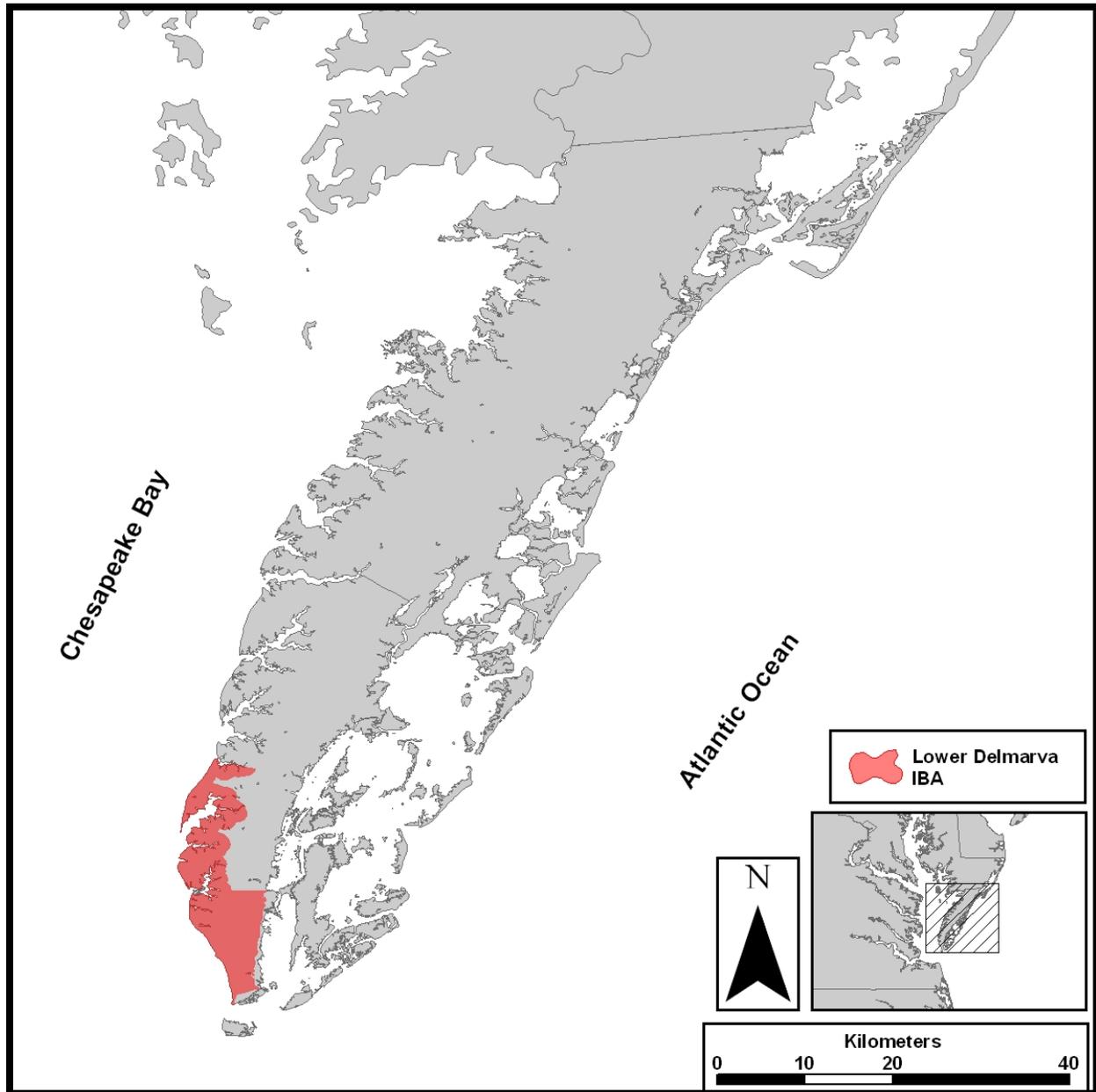
Ownership: (Circle One) **federal, state, private**, international waters, communal, religious group, mixed, other

Ownership Details: (List owners. If "other" ownership, please describe. If the property is privately owned, please provide contact information and specify if owner is aware of nomination)

**United States Fish and Wildlife Service
The Nature Conservancy**

Virginia Department of Game and Inland Fisheries
Virginia Department of Conservation and Recreation
Northampton County
Many private holdings

Road Directions to site (or location /distance to nearest town) Please include a map if convenient.



III A. Species List and Population Data

List the species of significance. Provide all other information at your disposal (note: Types of Birds Counted is required). Each record should represent a count at the site in a given year. **Please use the following codes when completing this chart.**

1. **Relative Abundance:** Abundant = A, Common = C, Frequent = F, Uncommon = U, Rare = R, Not available = NA
2. **Count:** For all species, enter either **Density** (# per unit of area), please specify ha, acres, sq. mi. or **Max #.** **Max #** is the highest # observed on one visit in a given season. Total season counts may be entered for migrating raptors only.
3. **Types of Birds Counted:** Individuals = I, Breeding Pairs = B, Adults only = A, Males only = M, Females only = F, Nests = N
4. **Reliability/Data quality:** Good = G, Medium = M, Poor = P, Unknown = Un
5. **Source:** Enter the number of the source in this box, and list corresponding details of the sources in Source Details (IIIB) section. Sources may include published reports, surveys, personal observations or field notes.

() values represent population thresholds per the Virginia IBA instructions.

Species Name	Season Month/Day of Observation	Year of Observation	Relative Abundance	Counts		Types of Birds Counted	Reliability /Data Quality	Source
				All Groups Density # / ___ area or Max # / visit	Migrating Raptors Only Total Season Count			
Bald Eagle	Summer	2005		6 ^a (30)		B	G	1
Northern Harrier	Summer	1996		1 ^b (?)		B	G	2
Barn Owl	Summer	1990		3 ^c (5)		B	M	3
American Woodcock	Winter	1993		570 ^d (500)		I	M	4
Brn-headed Nuthatch	Summer		U ^e	(40)				
Northern Bobwhite	Summer		C ^f	(300)				5
Chuck-will' s-widow	Summer		U ^g	(50)				
Wood Thrush	Summer		C ^h	(1000)				
Prairie Warbler	Summer		C ⁱ	(500)				
Eastern Meadowlark	Summer		C ^j	(200)				5
Grasshopper Sparrow	Summer		C ^k	(200)				5
Field Sparrow	Summer		C ^l	(200)				5
Bicknell's Thrush	Fall		R ^m	(?)				6
Migrant Passerines	Fall	1992-93	A ⁿ		10 million		M	7, 8

Migrant Raptors	Fall	1995-2005	C ^o	20-80,000	M	9, 10
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^aArea is not significant for breeding population, representing less than 2% of the state population. This area will never reach the IBA threshold.

^bA single breeding pair has been documented within the area, representing 4% of the known Coastal Plain breeding population.

^cThree breeding pairs were known for the study area in the early 1990s. The area has the potential to support more than 5 pairs but there has been no recent work or management.

^dThe lower Delmarva is an important winter trap for this species. Over-wintering numbers seem to vary widely. Winter transect surveys within the Eastern Shore of Virginia NWR have recorded numbers of >200 suggesting that the threshold is likely exceeded throughout the entire area during some years. A high count of 570 was recorded during the Cape Charles Christmas Bird Count in 1993.

^eThis species is a fairly common resident particularly within the maritime pine forests that line the mainland/marsh edge (Watts, pers. Obs.). There have been no systematic surveys within the area. However, based on densities within visited areas and the extensive habitat, it is likely that the population is several times the 40-pair threshold.

^fThe Delmarva Peninsula represents a stronghold for this species in coastal Virginia. No systematic surveys of this species have been conducted throughout the area. However, based on densities within selected survey areas, the population likely exceeds the listed threshold.

^gThe maritime pine forests that line the Delmarva Peninsula and Chesapeake Bay support some of the highest breeding densities of this species throughout its range. No systematic survey of this species has been conducted within the area. However, based on densities within selected survey areas and the extensive habitat supported, the population likely exceeds the listed threshold.

^hThis species occurs throughout the mixed forest patches within the area. No systematic survey of this species has been conducted within the area. However, the forests of the lower Delmarva are not of the highest quality for this species and the population within the area does not meet the threshold.

ⁱThis species is common where suitable habitat exists. No systematic survey of this species has been conducted within the area. It is not clear whether or not this area meets the population threshold for this species. Compared to other locations within the Coastal Plain, this area is not particularly important.

^jThis species is common wherever fallow fields are present. No systematic surveys of this species have been conducted throughout the area. However, based on densities within selected survey areas, the population likely exceeds the listed threshold

^kThe Delmarva Peninsula represents a stronghold for this species throughout the northeast. No systematic surveys of this species have been conducted throughout the area. However, based on densities within selected survey areas and the current availability of habitat, the population exceeds the listed threshold.

^lThis species is common where suitable habitat exists. No systematic survey of this species has been conducted within the area. It is not clear whether or not this area meets the population threshold for this species. Compared to other locations within the Coastal Plain, this area is not particularly important.

^mEvidence from the Kiptopeke Banding Station and other stations in eastern North America suggest that virtually 100% of the world's population of this species migrates through coastal Virginia with a portion stopping over on the lower Delmarva. Captures have declined from

several dozen in the late 1960s to approximately 1/yr currently. The relative significance of this stopover area within their annual cycle is not known.

^aThe lower Delmarva Peninsula is a geographic trap for passerines migrating along the Atlantic Coast in the fall months. A study conducted in the early 1990s documented a density gradient in stopover density with the highest densities occurring near the tip and along the bayside margin. These areas support large numbers of neotropical and temperate migrants.

^oDue to its geographic position and shape, the lower Delmarva Peninsula has a funneling effect on raptors (both diurnal and nocturnal) migrating along the Atlantic Coast. Large numbers of birds of several species both migrate through the area and stopover to prey on available birds and small mammals.

III B. Source Details

Detail the sources of data noted in the “Species List and Population Data” (III A) Section. If additional space is needed, you may attach copies of this form to the nomination.

1. Watts, B. D. and M. A. Byrd 2005. Virginia bald eagle nest and productivity survey: Year 2005 report. Center for Conservation Biology Technical Report Series, CCBTR-05-05. College of William and Mary, Williamsburg, VA. 27 pp.
2. Watts, B. D. and S. J. Rottenborn. 2001. Breeding status of Northern Harriers in coastal Virginia. *The Raven* 72:153-157.
3. Watts, B. D. and D. M. Whalen. 2004. An evaluation of nest box use by Common Barn Owls in Virginia. *The Raven* 75:71-77.
4. Kain, T. 1995. Virginia Christmas Bird Counts--1993-94 Season. *Raven*, 66(1)45-80.
5. Watts, B. D., M. D. Wilson, and D. S. Bradshaw. 1997. Habitat requirements of early successional bird communities: Management implications for mid-Atlantic region. Center for Conservation Biology Technical Report Series, CCBTR-97-03. College of William and Mary, Williamsburg, VA. 62pp.
6. Wilson, M. D. and B. D. Watts. 1997. Autumn migration of Gray-cheeked and Bicknell's Thrushes at Kiptopeke, Virginia, USA. *Journal of Field Ornithology* 68:519-525.
7. Watts, B. D. and S. E. Mabey. 1993. Spatio-temporal patterns of landbird migration on the lower Delmarva Peninsula. Center for Conservation Biology Technical Report Series, CCBTR-93-01. College of William and Mary, Williamsburg, VA. 57pp.
8. Watts, B. D. and S. E. Mabey. 1994. Migratory landbirds of the lower Delmarva: habitat selection and geographic distribution. Center for Conservation Biology Technical Report Series, CCBTR-94-05. College of William and Mary, Williamsburg, 101pp.
9. CVWO. 2002. Field Research Report 1995-2002. Coastal Virginia Wildlife Observatory, Eastville.
10. Whalen, D. M. and B. D. Watts. 2002. Annual migration density and stopover patterns of Northern Saw-whet Owls (*Aegolius acadicus*). *Auk* 119:1161-2002.

IV. IBA Criteria

Proposed State Level Criteria – Mark all that apply
 See Instruction IV for **Explanations of Criteria**.

Code	State Definition	Mark all criteria that apply
D 1.	Endangered, threatened, or vulnerable species: The site sustains a breeding or non-breeding population of one or more bird species, subspecies, or isolated populations that is/are endangered, threatened or vulnerable to extirpation.	Yes
D 3.	The site contains a significant suite of species associated with a habitat type that is representative, rare, or threatened in Virginia.	No
D 4.	The site contains a significant concentration of one or more species during the breeding season, winter, or during migration.	Yes

V. Habitat Details

See Instruction V for **List of Habitats** at both levels below.

	Major vegetation community types	Predominant plant species	Cover %
1.	Mixed forest		3,000 ha
2.	Fallow farmland		170 ha
3.	Active agriculture		5,600 ha
4.			

VI. Land Use

See Instruction VI for description of **Land Uses**. Mark each land use at the site, circle its predominance, and (if known) provide an estimate of the percent cover at the site currently devoted to the land use. You may enter brief notes to clarify some land uses. Detailed explanations of land uses should be reported in Text Summary, section IX.

Check Here	Land Use	Predominance			Cover %	Notes
		Major	Minor	Unknown		
X	Agriculture 1. Row crops, small grains	Major	Minor	Unknown		
X	Agriculture 2. Grasslands (pasture, hay)	Major	Minor	Unknown		
X	Fisheries/aquaculture	Major	Minor	Unknown		
X	Forestry	Major	Minor	Unknown		
X	Hunting	Major	Minor	Unknown		
	Military	Major	Minor	Unknown		
X	Nature Conservation / research	Major	Minor	Unknown		
	Not utilized	Major	Minor	Unknown		
	Other	Major	Minor	Unknown		
X	Tourism / recreation	Major	Minor	Unknown		
	Unknown	Major	Minor	Unknown		
X	Urban / industrial / transport	Major	Minor	Unknown		
	Water management	Major	Minor	Unknown		

VII. Threats

See Instruction VII for description of **Threat Codes**. Indicate all threats and the relative level of the threat by entering (L) Low, (M) Medium, (H) high, (U) Unknown in front of all that apply. You may enter notes to clarify some threats. However, detailed explanations of threats should be reported in Text Summary, section IX.

Enter L,M,H,U	Threat	Notes
L	Abandonment/land management reduction	
M	Agricultural expansion/intensification	Conversion from row crop to plasticulture
	Aquaculture/fisheries	
L	Burning of vegetation	
	Dam/dyke/barrage construction/operations	
L	Disturbance to birds	
L	Draining wetlands	
	Dredging/canal building (irrigation)	
L	Filling wetlands	
H	Forest grazing (by native or domestic herbivores)	Overpopulated deer impacts to understory
L	Groundwater extraction	
M	Industrialization/urbanization	Conversion of forests to residential
L	Infrastructure (roads, power lines, cell towers, etc.)	
L	Intensified forest management (please elaborate)	
L	Isolation/fragmentation	
	Mineral/oil/peat extraction	
L	Natural events	
H	Nonnative (exotic) animal/plant introduction	High density of exotic plants

	Other	
L	Pesticide application (non-agricultural)	
L	Plantation forestry (Afforestation) on previously open land	
L	Recreation/tourism	
L	Unsustainable exploitation of birds	

Site Name: Lower Delmarva

VIII. Protected Areas

Complete only if this site contains or abuts protected area(s)!

Enter name and descriptions of protected areas contained within or adjacent to this site.

See **Instruction VIII**

1. Name of protected area: Eastern Shore of Virginia National Wildlife Refuge		
Designation:	Area: miles	circle one: hectares, acres, sq.
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA, Unknown	Overlap: miles 222.7	circle one: hectares , acres, sq.

2. Name of protected area: Kiptopeke State Park		
Designation:	Area: miles 199.9	circle one: hectares , acres, sq.
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA, Unknown	Overlap: miles	circle one: hectares, acres, sq.

3. Name of protected area: Savage Neck State Natural Area Preserve		
Designation:	Area: miles 120.7	circle one: hectares , acres, sq.
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA, Unknown	Overlap: miles	circle one: hectares, acres, sq.

4. Name of protected area: GATR Tract Wildlife Management Area		
Designation:	Area: miles	circle one: hectares, acres, sq.
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA,	Overlap: miles	circle one: hectares , acres, sq.

Is contained by IBA, Overlaps with IBA , Unknown	64.2
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5. Name of protected area: Magothy Bay Preserve	
Designation:	Area: circle one: hectares , acres, sq. miles 23.0
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares, acres, sq. miles

6. Name of protected area: Wm. B. Trower Bayshore State Natural Area Preserve	
Designation:	Area: circle one: hectares , acres, sq. miles 13.9
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares, acres, sq. miles

7. Name of protected area: Cape Charles Coastal Habitat State Natural Area Preserve	
Designation:	Area: circle one: hectares , acres, sq. miles 11.0
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares, acres, sq. miles

IX. Text Summary

Use the following space for additional descriptions of site details.

General Site Description: The Delmarva Peninsula separates the Atlantic Ocean and the Chesapeake Bay. The last 100 km of the peninsula form a narrow land mass averaging 10 km in width. The lower Delmarva landscape is highly dissected and dominated by agricultural fields. Forest tracts are generally small and isolated with mixed vegetation. The exceptions to this pattern are the forested corridors along the bayside and seaside margins. Canopy trees are dominated by loblolly pine (*Pinus taeda*), Virginia pine (*P. virginiana*), red maple (*Acer rubrum*), and various oaks (*Quercus spp.*), and hickories (*Carya spp.*). Understory trees are dominated by flowering dogwood (*Cornus florida*), black cherry (*Prunus serotina*), and American holly (*Ilex opaca*). Although the Delmarva landscape was stable for more than a century, demand for land has greatly increased in the last decade leading to a rapid shift toward residential development.

General Ornithological Information: The spectacle of bird migration during the fall months on the lower Delmarva has been observed by residents for generations and has been of interest to the ornithological community since at least the late 1800s. Consistent efforts to document various aspects of migration through the area began with the establishment of the Kiptopeke Banding Station in 1963. A very large number of research and monitoring projects have been conducted since that time. Of particular note is the 42-year passerine banding data set that includes records of more than 300,000 birds, the nearly 30-year hawkwatch that includes more than 650,000 records, and the raptor trapping banding data set that includes more than 25,000 records. Benchmark studies that have examined geographic distribution and habitat use have been conducted in 1992-1993, and 2001-2005. The recent use of NPOL radar in conjunction with ground surveys is focused on further highlighting important stopover areas within the area.

Research / conservation projects: A large number of research and conservation projects have been conducted within this area over the past few decades involving a large number of federal and state agencies, as well, as NGOs and academic institutions.

Habitat / Land Use: The system is comprised primarily of upland agricultural fields and patches of mixed forest.

Other Flora / Fauna:

Protected Areas: A modest percentage of the system is owned and protected to meet various conservation objectives including providing habitat for migrants. Holders include the U.S. Fish and Wildlife Service, The Nature Conservancy, the Virginia Department of Game and Inland Fisheries, and the Virginia Department of Conservation and Recreation, Division of Natural Heritage. Acquisition of parcels demonstrated to be important to migrants is a continuing goal of a consortium of land-based agencies and conservation organizations.

Threats: The single greatest threat to this area is the ongoing conversion of habitat to residential and commercial development. In the past decade, interest in the area from developers and potential homeowners has greatly increased, leading to an incredible rise in land valuations. Further increases may price the conservation community out of the market. Most of the privately owned land along the bayside has been subdivided for development for a period of 15 years or more. Much of the inland parcels have been subdivided in more recent years. Recent investments in residential developments suggest that the area is nearing a sea change in habitat loss. Other significant threats include the various factors (deer overpopulation, clearing for land sale or development, overstocked pine plantations that lead to canopy closure) that contribute to understory loss.

Back Bay Important Bird Area Fact Sheet

Location: Virginia Beach

Total Size: 16,079 ha (39,715 acres)

Elevation: 0-15.7 m (0-51.9feet)

Site Description: Back Bay is a coastal bay that forms the northern extent and headwaters of Currituck Sound. The salinity conditions within this system have led to the formation of extensive big cordgrass marshes within the bay, many of which are island patches isolated from the mainland. The active beach and dunes on the ocean fringe represent the upper end of the barrier network forming the Outer Banks. Landward of the dunes is a system of impoundments and a maritime forest dominated by loblolly pines and wax myrtle.

Protection: A considerable portion of this system is owned by government agencies and is operated under a specific mandate for wildlife management. Back Bay National Wildlife Refuge contains active beach, dunes, maritime forest, limited open uplands, and extensive areas of big cordgrass marsh. False Cape State Park includes large tracks of maritime forest, as well as, beach and dune habitats. Princess Anne Wildlife Management Area supports large tracks of big cordgrass marsh along the western boundary of the important bird area. The boundary of Mackay Island National Wildlife Refuge extends into the area and contains big cordgrass marsh and limited upland habitats.

Birds: Back Bay supports the full suite of bird species associated with big cordgrass habitat during both the summer and winter periods. The area likely supports the largest population of King Rails in Virginia. Due to its geographic position and habitat, the area represents the normal, northern range limit for Sedge Wren, American Bittern, and Yellow Rail during winter. The outer beaches support significant numbers of migrant shorebirds dominated by Sanderlings but including Red Knots. Historically, the area has been a focal area for waterfowl during winter. A systematic effort is needed to better quantify the use of the system by overwintering species such as the Yellow Rail and migrant species such as the Least Bittern.

King Rail



Conservation and Threats: Primary threats to bird population include 1) loss of habitat to the invasion by common reed, 2) loss of habitat to sea-level rise, and 3) system perturbations related to major storm events. The aggressive invasive plant common reed is spreading rapidly throughout this system particularly along the western shoreline where it has invaded along artificial canals. Big cordgrass islands are particularly vulnerable to rising sea levels. Continued rises in sea level may lead to a shift in species composition or ultimately to the loss of some islands altogether. Monitoring programs have been ongoing for wintering waterfowl, migrant shorebirds, marsh birds, colonial waterbirds, Bald Eagles, and Osprey. The U.S. Fish and Wildlife

Service performs regular conservation activities including impoundment management and marsh burning.

Important Bird Areas of Virginia

IBA Nomination Form

The Important Bird Area (IBA) program is an international effort to identify, conserve, and monitor a network of sites that provide essential habitat for bird populations. BirdLife International began the IBA program in Europe in 1985. Since that time, BirdLife partners in more than 100 countries have joined together to build the global IBA network. Audubon, the BirdLife Partner in the U.S. has been working since 1995 to identify and conserve hundreds of IBAs all across the United States.

For more information, visit: <http://www.audubon.org/bird/iba/index.html>

Or contact Aimee Weldon, the Virginia IBA Coordinator

P.O. Box 1089, Ashland, VA 23005 aweldon@audubon.org 804-370-3528

Additional copies of the Nomination Form may be downloaded from www.virginia-iba.org

Thank you for your interest in the Important Bird Areas Program. Please tell us about the areas that you think may meet the criteria by completing as much of this form as possible. Detailed instructions for fields requiring clarification may be found in the **INSTRUCTIONS FOR COMPLETION OF IBA NOMINATION FORM**. It is important that the data and information about the sites are recorded in a standard format, so that they may be accurately evaluated.

I. Nominator Information	
YOUR NAME: Bryan D. Watts	PHONE: (757) 221-2247
AFFILIATION(if any) Center for Conservation Biology College of William and Mary	EMAIL: bdwatt@wm.edu
ADDRESS: PO Box 8795	
ZIP CITY, STATE, Williamsburg, VA 23187-8795	DATE: 3/18/06

II. Site Details	
SITE NAME: Back Bay	
CITY,TOWN,COUNTY: Virginia Beach	AREA: 16,079 (circle one) acres, sq. miles., hectares
ELEVATION: Minimum 0 (circle one) feet, meters	ELEVATION: Maximum 15.7 feet, meters
COORDINATES (at site center) Latitude 36° 37' 34"	Longitude: -75 ° 56' 29"

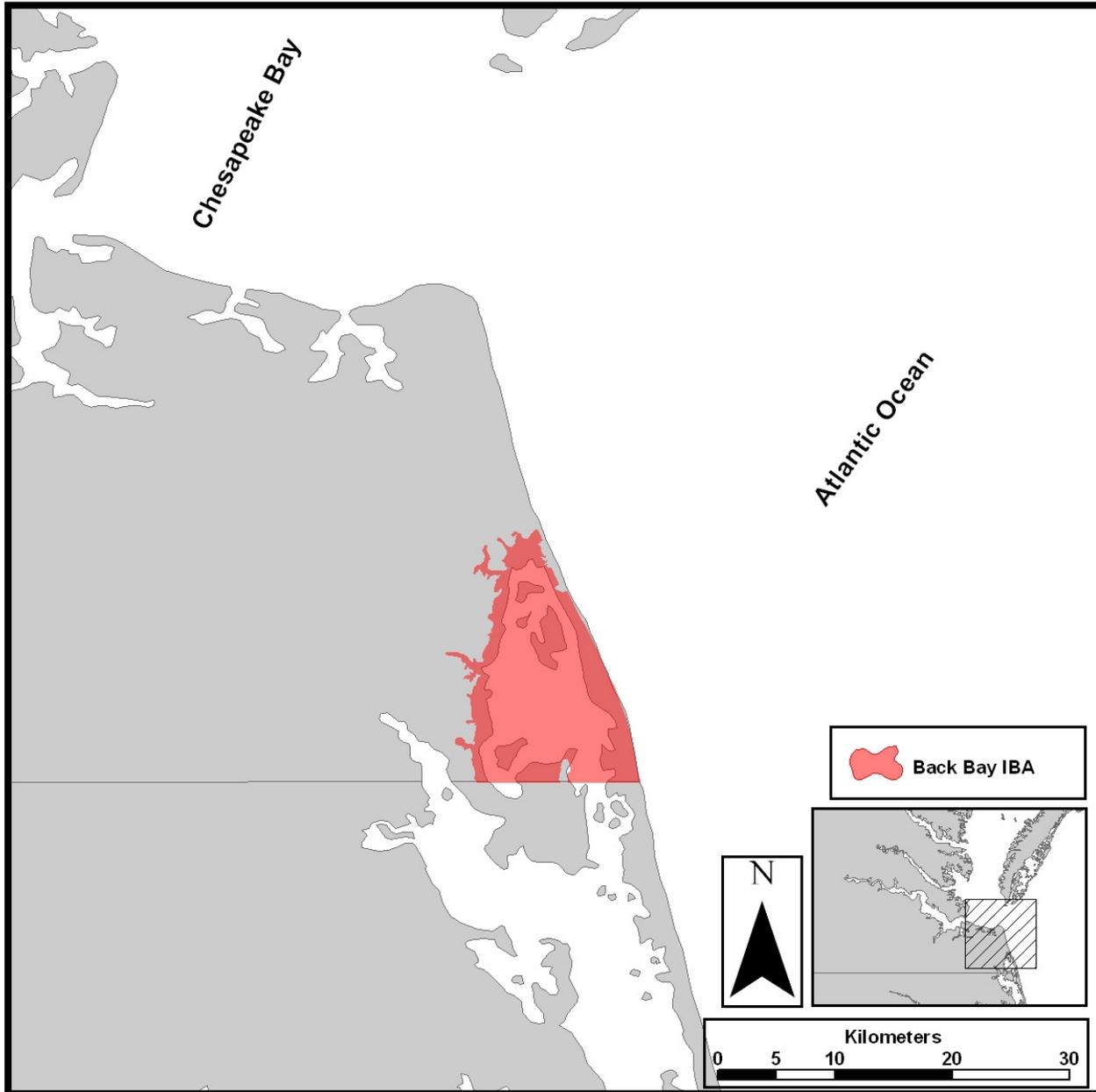
Ownership: (Circle One) federal, state, private, international waters, communal, religious group, mixed, other

Ownership Details: (List owners. If "other" ownership, please describe. If the property is privately owned, please provide contact information and specify if owner is aware of nomination)

**Virginia Department of Game and Inland Fisheries
Virginia Department of Conservation and Recreation**

**Virginia Marine Resources Commission
Virginia Outdoors Foundation
The Nature Conservancy**

Road Directions to site (or location /distance to nearest town) Please include a map if convenient.



III A. Species List and Population Data

List the species of significance. Provide all other information at your disposal (note: Types of Birds Counted is required). Each record should represent a count at the site in a given year. **Please use the following codes when completing this chart.**

1. **Relative Abundance:** Abundant = A, Common = C, Frequent = F, Uncommon = U, Rare = R, Not available = NA
2. **Count:** For all species, enter either **Density** (# per unit of area), please specify ha, acres, sq. mi. or **Max #**. **Max #** is the highest # observed on one visit in a given season. Total season counts may be entered for migrating raptors only.
3. **Types of Birds Counted:** Individuals = I, Breeding Pairs = B, Adults only = A, Males only = M, Females only = F, Nests = N
4. **Reliability/Data quality:** Good = G, Medium = M, Poor = P, Unknown = Un
5. **Source:** Enter the number of the source in this box, and list corresponding details of the sources in Source Details (IIIB) section. Sources may include published reports, surveys, personal observations or field notes.

() values represent population thresholds per the Virginia IBA instructions.

Species Name	Season Month/Day of Observati on	Year of Observation	Relative Abundance	2Counts		3Types of Birds Counted	4Reliability /Data Quality	5Source
				All Groups	Migrating Raptors Only			
				Density # / ___ area	Max # / visit			
Piping Plover				Hist Rec^a (all)				
Nelson's Sh-t Sparrow	Winter	2001		2^b (100)		I	P	1
American Bittern	Winter	1999		11^c (5)		I	P	2
Bald Eagle	Summer	2005		2^d (30)		B	G	3
King Rail	Summer			60^e (30)		B	M	4
Least Bittern	Summer		U ^f	(50)				
Northern Harrier	Winter	2000		37^g (?)		I	M	5
Barn Owl	Summer	2000		3^h (5)		B	M	6
Sedge Wren	Winter	1999		37ⁱ (5)		I	P	2
Yellow Rail	Winter	1999		1^j (all)		I	P	2
Red Knot	Spring	2005		55^k (240)		I	G	7
Brn-headed Nuthatch	Winter	2001		59^l (40)		I	P	1
Short-eared Owl	Summer	2000		1^m (10)		I	M	8
Chuck-will's-widow	Summer		C ⁿ	(50)				

Prairie Warbler	Summer	C ^o	(500)		
Eastern Meadowlark	Summer	C ^p	(200)		

- ^aThe area contains suitable active beach to support this species. Despite monitoring, there are no recent records for this location.
- ^bAlthough the area likely gets regular use during winter, the habitat is not particularly suitable and the area is not important for this species.
- ^cThe species is observed regularly here and the area represents the northern edge of a fairly significant wintering area for this species. There are no breeding records since 1970.
- ^dArea supports less than 1% of the state's know population.
- ^eHabitat is ideal for this species and the area represents one of less than 5 strongholds for this species in the state. Estimate is a population projection based on density estimate and available habitat.
- ^fNo systematic surveys have been conducted for this species in the area. Habitat is ideal for this species and the area represents one of only a few strongholds in the state. Population within the area likely exceeds IBA threshold.
- ^gArea supports a regular and fairly substantial wintering population.
- ^hNo systematic surveys for this species has been conducted. Three pairs were known in the area when 6 nest boxes were being installed.
- ⁱThe species is observed regularly here and the area represents the northern edge of a fairly significant wintering area for this species. There are no recent breeding records.
- ^jThis species is very secretive and not detected with standard survey techniques. Based on few observations during management activities it is likely that the area represents a significant wintering area.
- ^kArea gets consistent use during both spring and fall migration but level of use does not indicate that the site is particularly significant.
- ^lNo systematic surveys have been conducted for this species in the area. However, the area appears to be a stronghold for this species and the population easily exceeds the IBA threshold.
- ^mThis species may be a sporadic or regular breeder but no systematic survey has been conducted.
- ⁿHabitat is ideal for this species. No systematic surveys have been conducted within the area but the population likely exceeds the IBA threshold by a considerable margin.
- ^oNo systematic survey has been conducted for this species. The species is a regular and common breeder but the area does not have enough habitat to reach the IBA threshold.
- ^pNo systematic survey has been conducted for this species. The species is a regular breeder but the population is small and does not reach the IBA threshold.

III B. Source Details

Detail the sources of data noted in the “Species List and Population Data” (III A) Section. If additional space is needed, you may attach copies of this form to the nomination.

1. Kain, T. 2002. Virginia Christmas Bird Counts: 2001-2002 season. Raven 73:17-54.
2. Kain, T. 2000. Virginia Christmas Bird Counts: 1999-2000 season. Raven 71:71-104.
3. Watts, B. D. and M. A. Byrd 2005. Virginia bald eagle nest and productivity survey: Year 2005 report. Center for Conservation Biology Technical Report Series, CCBTR-05-05. College of William and Mary, Williamsburg, VA. 27 pp.
4. Watts, B. D. Projection of breeding King Rail population within Back Bay. Unpublished analysis.
5. Kain, T. 2001. Virginia Christmas Bird Counts: 2000-2001 season. Raven 72:17-51.
6. Watts, B. D. 2003. An evaluation of nest box use by Barn Owls and the initiation of a new box program on coastal marshlands in Virginia. Center for Conservation Biology Technical Report Series, CCBTR-03-09. College of William and Mary, Williamsburg, VA. 16 pp.
7. USGS ground survey data for Back Bay, NWR and False Cape State Park, unpublished data.
8. Watts, B. D. Observation of bird on 12 July, 2000 on Cedar Island, unpublished observation.

IV. IBA Criteria

Proposed State Level Criteria – Mark all that apply
 See Instruction IV for **Explanations of Criteria**.

Code	State Definition	Mark all criteria that apply
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D 1.	Endangered, threatened, or vulnerable species: The site sustains a breeding or non-breeding population of one or more bird species, sub-species, or isolated populations that is/are endangered, threatened or vulnerable to extirpation.	Yes
D 3.	The site contains a significant suite of species associated with a habitat type that is representative, rare, or threatened in Virginia.	Yes
D 4.	The site contains a significant concentration of one or more species during the breeding season, winter, or during migration.	No

V. Habitat Details

See Instruction V for **List of Habitats** at both levels below.

	Major vegetation community types	Predominant plant species	Cover %
1.	Brackish Marsh	Big Cordgrass	2817.6 ha
2.	Maritime Pine Forest	Loblolly Pine	362.1 ha
		Wax Myrtle	
3.	Active Beach		386.6 ha
4.			

Site Name: Back Bay

VI. Land Use

See Instruction VI for description of **Land Uses**. Mark each land use at the site, circle its predominance, and (if known) provide an estimate of the percent cover at the site currently devoted to the land use. You may enter brief notes to clarify some land uses. Detailed explanations of land uses should be reported in Text Summary, section IX.

Check Here	Land Use	Predominance	Cover %	Notes
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	Agriculture 1. Row crops, small grains	Major	Minor	Unknown		
	Agriculture 2. Grasslands (pasture, hay)	Major	Minor	Unknown		
X	Fisheries/aquaculture	Major	Minor	Unknown		
	Forestry	Major	Minor	Unknown		
X	Hunting	Major	Minor	Unknown		
	Military	Major	Minor	Unknown		
X	Nature Conservation / research	Major	Minor	Unknown		
X	Not utilized	Major	Minor	Unknown		
	Other	Major	Minor	Unknown		
	Tourism / recreation	Major	Minor	Unknown		
	Unknown	Major	Minor	Unknown		
	Urban / industrial / transport	Major	Minor	Unknown		
	Water management	Major	Minor	Unknown		

VII. Threats

See Instruction VII for description of **Threat Codes**. Indicate all threats and the relative level of the threat by entering (L) Low, (M) Medium, (H) high, (U) Unknown in front of all that apply. You may enter notes to clarify some threats. However, detailed explanations of threats should be reported in Text Summary, section IX.

Enter L,M,H,U	Threat	Notes
	Abandonment/land management reduction	
L	Agricultural expansion/intensification	
L	Aquaculture/fisheries	
L	Burning of vegetation	Burning of the marsh is done regularly
	Dam/dyke/barrage construction/operations	
L	Disturbance to birds	
L	Draining wetlands	
	Dredging/canal building (irrigation)	
	Filling wetlands	
L	Forest grazing (by native or domestic herbivores)	
	Groundwater extraction	
	Industrialization/urbanization	
L	Infrastructure (roads, power lines, cell towers, etc.)	
	Intensified forest management (please elaborate)	
L	Isolation/fragmentation	
	Mineral/oil/peat extraction	
H	Natural events	Hurricanes, sea-level rise, saltwater intrusion
H	Nonnative (exotic) animal/plant introduction	Loss of high-marsh habitat due to Phrag
	Other	
L	Pesticide application (non-agricultural)	
	Plantation forestry (Afforestation) on previously open land	
M	Recreation/tourism	
	Unsustainable exploitation of birds	

VIII. Protected Areas

Complete only if this site contains or abuts protected area(s)!

Enter name and descriptions of protected areas contained within or adjacent to this site.

See **Instruction VIII**

1. Name of protected area: Back Bay National Wildlife Refuge	
Designation:	Area: circle one: hectares , acres, sq. miles 2540.4
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares, acres, sq. miles

2. Name of protected area: False Cape State Park	
Designation:	Area: circle one: hectares , acres, sq. miles 1567.7
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares, acres, sq. miles

3. Name of protected area: Princess Anne, Wildlife Management Area	
Designation:	Area: circle one: hectares, acres, sq. miles
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA , Unknown	Overlap: circle one: hectares , acres, sq. miles 459.2

4. Name of protected area: Mackey Island National Wildlife Refuge	
Designation:	Area: circle one: hectares, acres, sq. miles
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA, Overlaps with IBA , Unknown	Overlap: circle one: hectares , acres, sq. miles 286.6

5. Name of protected area: Little Island Park	
Designation:	Area: circle one: hectares , acres, sq. miles 9.0
Relationship: Circle one Protected area contains IBA, Is adjacent to IBA, Is contained by IBA , Overlaps with IBA, Unknown	Overlap: circle one: hectares, acres, sq. miles

IX. Text Summary

Use the following space for additional descriptions of site details.

General Site Description: Back Bay is a coastal bay that forms the northern extent and headwaters of Currituck Sound. The salinity conditions have led to the formation of extensive big cordgrass marshes within the bay, many of which are isolated from the mainland. The active beach and dunes on the ocean fringe represent the upper end of the barrier network forming the Outer Banks. Landward of the dunes is a system of impoundments and a maritime forest dominated by loblolly pines and wax myrtle. Much of the outer beach and marsh islands are owned by resource agencies. However, a considerable portion of the western edge of the system remains in private ownership.

General Ornithological Information: Back Bay has a long history of waterfowl monitoring and management. Aerial and ground surveys of waterfowl are continuing. More recently, shorebird surveys have been conducted along the outer beaches and within impoundments. Of note is a 10-year dataset of monthly shorebird surveys of the outer beaches conducted by Don Schwab. The Center for Conservation Biology has conducted aerial surveys of the Bald Eagle and colonial waterbird colonies for 30 years. Breeding Osprey have been monitored and banded for many years. A spring passerine banding program has also been conducted for many years. The Back Bay Christmas Bird Count dates back to the 1920s and has been run consistently since the early 1940s.

Research / conservation projects: A considerable amount of monitoring work has been conducted within portions of this area. U.S. Fish and Wildlife Service conducts winter waterfowl surveys in the area and joint shorebird surveys along the active beach zone. The U.S. Fish and Wildlife service performs habitat management where needed including regular burning of bird cordgrass marshes. The Center for Conservation Biology has established a small network of Barn Owl boxes within the marshes. Osprey platforms have been established along the eastern edge of the Bay. Impoundments are managed for waterfowl and migrant shorebirds. Research is needed to formally evaluate the big cordgrass bird community during both summer and winter.

Habitat / Land Use: The dominant habitat types within this area are the extensive big cordgrass marshes, maritime pine stands, and the beach/dune system along the ocean edge. Additional habitats include the managed impoundments and limited grasslands on the bay islands.

Other Flora / Fauna:

Protected Areas: A considerable portion of this system is owned outright by government agencies and is managed for wildlife. Primary holders include the U.S. Fish and Wildlife Service and the Virginia Department of Game and Inland Fisheries. Much of the extensive fringing marshes along the western shoreline of Back Bay is privately owned.

Threats: Primary threats relevant to bird population include 1) loss of habitat to the invasion by common reed, 2) loss of habitat to sea-level rise, and 3) system perturbations related to major storm events. The aggressive invasive plant common reed is spreading rapidly throughout this system particularly along the western shoreline where it has invaded along artificial canals. Big cordgrass islands are particularly vulnerable to rising sea levels. Such changes may lead to a shift in species composition or ultimately to the loss of some islands altogether.

ACKNOWLEDGMENTS

Many individuals and organizations have contributed to our understanding of birds within the region over several decades. Bart Paxton produced GIS coverages of IBAs, evaluated protected lands, and assessed habitat breakdowns. Mitchell Byrd, Josh LeClerc, Bart Paxton, Fletcher Smith, Marian Watts, Bill Williams, and Mike Wilson provided insights into various aspects of the assessments. Aimee Weldon the Virginia IBA coordinator provided procedural assistance. Laura McKay and Rachel Bullene provided administrative oversight. This report was funded by the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NA04NOS4190060 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended. The views expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Department of Commerce, NOAA, or any of its subagencies.