

Chapter 1



John Hollingsworth Memorial Trail Shoreline, Petit Manan Point Division
USFWS photo

The Purpose of and Need for Action

- Introduction
- The Purpose of and Need for Plan
- Project Area
- Service Policies, Mandates, and National and Regional Conservation Plans Guiding the Project
- Refuge Purposes and Land Acquisition History
- Refuge Vision Statement
- Refuge Goals

Introduction

The Maine Coastal Islands National Wildlife Refuge (Refuge) is comprised of five individual refuge units which span the coast of Maine and support an incredible diversity of habitats including, coastal islands, forested headlands, estuaries and freshwater wetlands. The Comprehensive Conservation Plan (CCP) for this refuge was prepared pursuant to the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 6688dd et seq.). It is the culmination of a planning process that began in 1993. Meetings with the public, State agencies, commercial industry representatives, landowners, and conservation partners were held to identify and evaluate management alternatives. A draft and final Environmental Impact Statement (EIS) were previously distributed for public review and comment. These documents describe other management alternatives we considered for implementation.

This final CCP presents the combination of management goals, objectives, and strategies that we believe will best achieve our vision for the Refuge, contribute to the National Wildlife Refuge System (Refuge System) mission, achieve refuge purposes, fulfill legal mandates, and serve the American public. The CCP will guide management decisions and actions on the refuge over the next 15 years. It will also be used as a tool to help the State of Maine natural resource agencies, our conservation partners, Tribal governments, local communities, and the public understand our priorities.

This document has five chapters and six appendices. Chapter 1 is the “Purpose of and Need for Plan” and it sets the stage for Chapters 2 through 5. It...

- describes the purpose and need for a CCP for the refuge;
- identifies national and regional mandates and plans that influenced this document;
- highlights the purposes for which each of the five refuge units in this Refuge was established and presents their respective land acquisition histories; and,
- presents the vision and goals for the Refuge;

Chapter 2, “Planning Process”, describes the planning process we followed, including public and partner involvement, in the course of developing this final plan.

Chapter 3, “Refuge and Resource Description”, describes the existing physical, biological, and human environment.

Chapter 4, “Management Direction”, presents the goals, objectives and strategies that will guide decision-making and land management.

Chapter 5, “Implementation” outlines our staffing and funding needs to accomplish the management direction.

The Purpose of and Need for Plan

A CCP's *purpose* is to provide strategic management direction on a refuge for the next 15 years by:

- providing a clear statement of desired future conditions for habitat, wildlife, visitor services, staffing, and facilities;
- providing State agencies, Refuge neighbors, visitors, and partners with a clear explanation of the reasons for management actions;
- ensuring refuge management reflects the policies and goals of the Refuge System and legal mandates;
- ensuring the “compatibility” of current and future public use;
- providing long-term continuity and direction for refuge management; and,
- providing direction for staffing, operations, maintenance, and annual budget requests.

The present *need* to develop this CCP is many-fold. First, the 1997 National Wildlife Refuge System Improvement Act (Refuge Improvement Act) requires that all national wildlife refuges have CCPs in place by 2012 to help fulfill the mission of the Refuge System.

Second, this refuge lacks a master plan to accomplish the actions noted above in an environment that has changed dramatically since the refuge units were first established. For example, its island holdings have more than tripled, significant mainland acquisition has also occurred, staffing has increased, a second office has opened, pressures for increasing public access continue to grow, and new ecosystem and species plans have been developed with direct bearing on refuge management.

Third, we want to pursue a new Refuge Headquarters and Coastal Education Center. Proposed site criteria are presented in Chapter 3 under “Refuge Administration”.



Petit Manan Island
USFWS photo

Fourth, we have developed strong partnerships, vital to our continued successes. State agencies in Maine, Tribal governments, private landowners, the public, and our conservation partners were actively engaged in this plan's development. We feel it is our responsibility to clearly develop our priorities through this plan.

Finally, we need a CCP to guide us in future land protection that promotes the conservation of nationally significant coastal habitats and Federal trust species.

All of these reasons clearly underscore the need for the strategic direction provided in a CCP.

Project Area

The Refuge lies within the Gulf of Maine Watershed in the State of Maine (Map 1-1), and stretches along the entire 200 air-miles of the Maine coastline, from approximately the New Hampshire border, down east to Cobscook Bay (Refer to Maps 1-2 to 1-12 at end of chapter).

It is comprised of five separate refuge units: Cross Island, Petit Manan, Seal Island, Franklin Island, and Pond Island national wildlife refuges. Each has separate establishment histories and refuge purposes as described below, but they are referred to collectively as the “Maine Coastal Islands National Wildlife Refuge”. Seal, Franklin, and Pond islands are single-island refuges. Cross Island Refuge is a six-island complex, while Petit Manan Refuge includes 33 islands and 3 mainland divisions, including: Petit Manan Point (2,195 acres), Sawyers Marsh (933 acres), and Gouldsboro Bay (607 acres) divisions. One additional division, Corea Heath (400 acres), is a pending transfer from the U.S. Navy.

All totaled, the Refuge includes approximately 7,961 acres of diverse coastal Maine habitats including forested and non-forested offshore islands, coastal salt marsh, open field, and upland mature spruce-fir forest. The acreage is considered approximate because of the variability in the accuracy of our sources. We use surveyed acres, the most accurate, where available; otherwise, we may use less accurate deed acres or GIS-generated mapping acres. Also, it is important to note that Service acquisition of approved islands has been on-going during development of this final CCP. Refuge Headquarters should be contacted to obtain the most up-to-date ownership information.

Service Policies, Mandates, and National and Regional Conservation Plans Guiding the Project

This section presents hierarchically, from the national to the local level, highlights of Service policy, legal mandates and regulations, and existing resource plans and conservation initiatives which directly influenced development of this final CCP.

The U.S. Fish and Wildlife Service (Service) administers the Refuge System. The Service is part of the Department of Interior. Its mission is:

“Working with others, to conserve, protect, and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people.”

The U.S. Fish and Wildlife Service and its Mission

By law, Congress entrusts national resources to the Service for conservation and protection: migratory birds and fish, Federal-listed endangered and threatened species, inter-jurisdictional fishes, wetlands, certain marine mammals, and national wildlife refuges. The Service also enforces Federal wildlife laws and international treaties on importing and exporting wildlife, assists with state fish and wildlife programs, and helps other countries develop wildlife conservation programs.

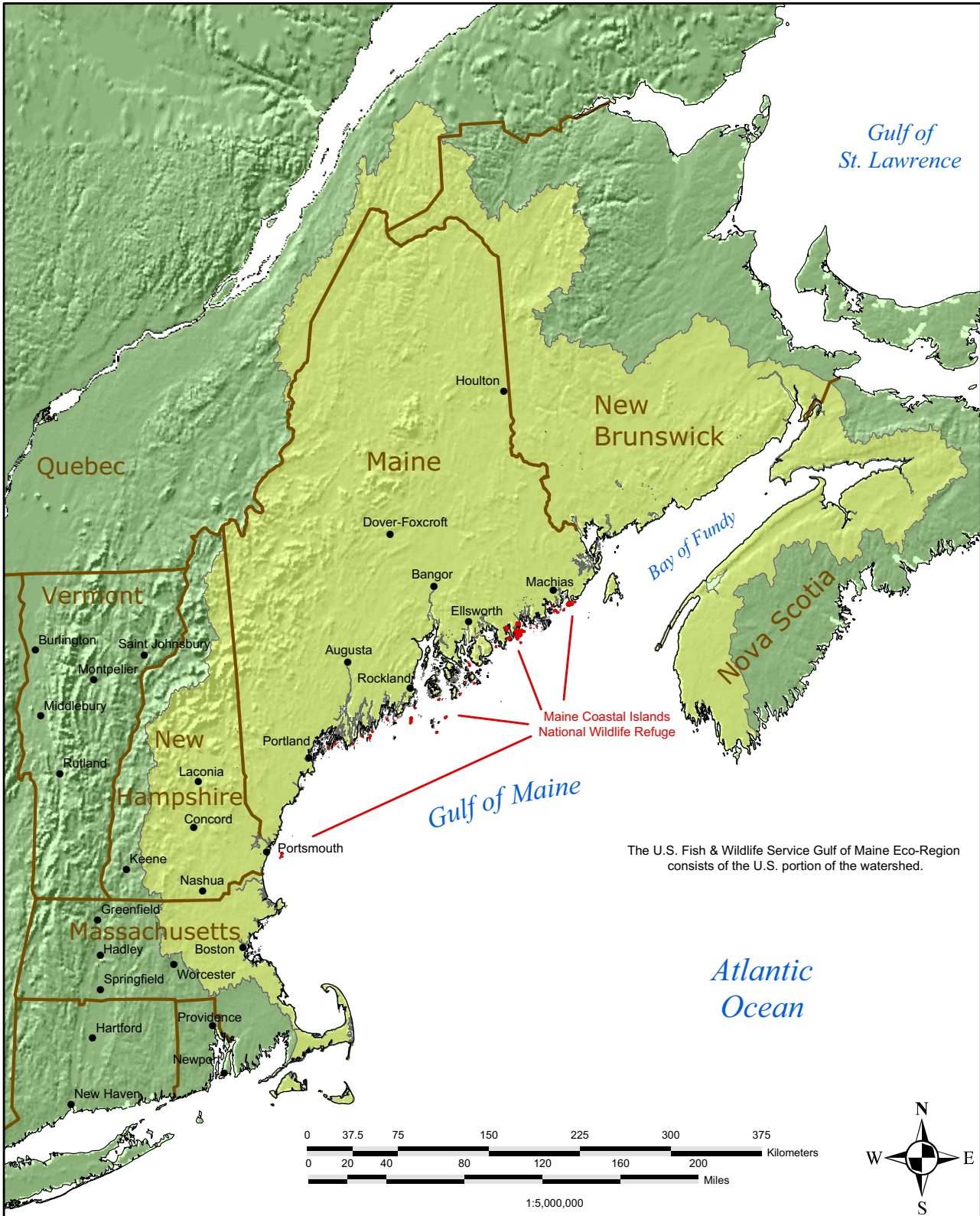
The Service manual contains the standing and continuing directives to implement its authorities, responsibilities, and activities. This manual can be accessed at:

<http://www.fws.gov.directives/direct.html>



MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT

Gulf of Maine Watershed



Special Service directives which affect the rights of citizens or the authorities of other agencies are published separately in the Code of Federal Regulations (CFR) and are not duplicated in the Service manual. Most of the current regulations that pertain to the Service are issued in 50 CFR parts 1-99. CFRs can be accessed at:

<http://www.access.gpo.gov/nara/cfr/index.html>

The National Wildlife Refuge System and Its Mission

The National Wildlife Refuge System (Refuge System) is the world's largest collection of lands and waters set aside specifically for the conservation of wildlife and ecosystem protection. Over 545 national wildlife refuges are part of the national network today. They encompass more than 95 million acres of lands and waters in all 50 states and several island territories. More than 40 million visitors hunt, fish, observe and photograph wildlife, or participate in environmental education and interpretive activities on refuges across the nation each year.

The 1997 Refuge Improvement Act established a unifying mission for the Refuge System; a new process for determining compatible public use activities on refuges; and, the requirement to prepare CCPs for each refuge. The Act states that first and foremost, the Refuge System must focus on wildlife conservation. It further states that the Refuge System mission, coupled with the purpose(s) for which each refuge was established, will provide the principal management direction on that refuge.

The mission of the Refuge System is:

“To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”
(Refuge Improvement Act; Public Law 105-57)

The Refuge Improvement Act declares that all existing or proposed refuge uses must be “compatible” with the refuge’s purpose and consistent with public safety. “Compatibility” is determined by the refuge manager after evaluating an activity’s potential effect on refuge resources and determining it supports the Refuge System mission and does not interfere with or detract from the refuge purposes and goals. Six wildlife-dependent public uses were designated in the legislation to receive enhanced consideration on refuges and in CCPs. The six priority uses are: hunting, fishing, environmental education and interpretation, and wildlife observation and photography.

The Refuge System manual provides a central reference for current policy governing the operation and management of the Refuge System not covered by the Service manual, including technical information on implementing refuge policies and guidelines. This manual can be reviewed at Refuge Headquarters.

Fulfilling the Promise

This report on the Refuge System is the culmination of a year-long process involving teams of Service employees who examined the Refuge System within the framework of Wildlife and Habitat, People and Leadership. The report was the result of the first-ever System Conference held in Keystone, Colorado in October 1998, attended by every refuge manager in the country, other Service employees, and scores of conservation organizations. The heart of the report is the collection of vision statements and 42 recommendations. Many “Promises Teams” have been formed to develop strategies for implementing the recommendations. We utilized information from such teams as Wildlife and Habitat, Goals and Objectives, Strategic Growth of the Refuge System, Invasive Species, and Inventory and Monitoring. Their recommendations helped guide the development of goals, strategies and actions in this CCP.

Other Mandates

While Service and Refuge System policy and each refuge’s purpose provide the foundation for management, national wildlife refuges are administered consistent with a variety of other Federal laws, executive orders, treaties, interstate compacts, and regulations pertaining to the conservation and protection of natural and cultural resources. The *Digest of Federal Resource Laws of Interest to the USFWS* lists them and can be accessed at:

<http://laws.fws.gov/lawsdigest/indx.html>

National and Regional Plans and Conservation Initiatives Guiding Project

As we describe in detail in the Final EIS, we utilized the following plans in developing our CCP goals and objectives:

- North American Waterfowl Management Plan (NAWMP; update 2004)
- The Black Duck Joint Venture Plan (Final Draft - Strategic Plan, April 1993)
- North American Waterbird Conservation Plan (Version 1, 2002)
- U.S. Shorebird Conservation Plan (2001 Update)
- Northern Atlantic Regional Shorebird Plan (Draft 2002)
- Regional Wetlands Concept Plan – Emergency Wetlands Resources Act (1990)
- Roseate Tern Recovery Plan, Northeastern Population (First Update 1998)
- Northern States Bald Eagle Recovery Plan (1983)
- Partners In Flight Landbird Conservation Plans
 - Physiographic Area 27 - Northern New England (Draft October 2000)
 - Physiographic Area 28 - Eastern Spruce-Hardwood Forest (Draft June 2000)
- Tern Management Plan (June 2002)
- Birds of Conservation Concern 2002 Report

- Bird Conservation Region Blueprint; BCR 14 - Atlantic Northern Forest (draft 2003)
- Gulf of Maine Rivers Ecosystem Plan (1994)
- Maine Coastal Nesting Islands Project (on-going)
- Maine Department of Inland Fisheries and Wildlife Species Assessments (on-going)

Refuge Purposes and Land Acquisition History

As described above under the section titled “Project Area,” the Refuge spans the entire Maine coastline. It includes lands in the towns of Cutler, Machiasport, Jonesport, Roque Bluffs, Addison, Milbridge, and Steuben in Washington County; the towns of Gouldsboro, Winter Harbor, Swan’s Island, Tremont in Hancock County; the towns of Vinalhaven, Saint George, and Friendship in Knox County; the towns of Boothbay, South Bristol, and Southport in Lincoln County; the town of Phippsburg in Sagadahoc County; the town of Harpswell in Cumberland County; and the town of Kittery in York County. The Refuge Headquarters is currently located in Milbridge, with a staffed, satellite office in Rockport.

The Service has acquired lands for the Refuge through a variety of acquisition methods. These include gifts from private individuals, land trusts, statewide and national conservation groups, and transfers of title from the U.S. Coast Guard and U.S. Navy. In addition, when funds are available, we have purchased through fee title acquisition or conservation easement, important mainland tracts and nationally significant coastal nesting islands.

All acquisitions have been from willing sellers or donors. With approval of this CCP, we obtained permission from our Director to expand the boundary of the Petit Manan Refuge. The former boundary and the new boundary are described in our Land Protection Plan (Appendix A).

Historically, our land acquisition funds come from two sources: the Land and Water Conservation Fund, appropriated annually by Congress, and the Migratory Bird Conservation Fund, which is replenished through the sale of Federal duck stamps. Annual expenditures for the Refuge land acquisition program have recently averaged approximately \$1 million/year.

The rate of our coastal island acquisition began a steady increase in 1993, and since that time, the Service has acquired an interest in 31 islands. All of these have become part of this Refuge, although they may lie closer to Rachel Carson or Moosehorn refuges. This allows us to concentrate our expertise and the logistical resources needed to manage seabirds on off-shore islands.



Cross Island with Double Head Shot islands in the background
USFWS photo

The purpose and land acquisition history for each of the five individual refuge units within the Refuge are presented below. All acreages presented are rounded to the nearest whole number and represent U.S. Geological Survey (USGS) land acres above the mean high water mark.

Seal Island National Wildlife Refuge

This refuge is 65 acres and was established in 1972 because of its “...particular value in carrying out the national migratory bird management program.” It was established under authority of 16 U.S.C. 667b, an Act Authorizing the Transfer of Certain Real Property for Wildlife or Other Purposes, 16 U.S.C.667b-667d, as amended. It was acquired in transfer from the U.S. Navy.

Franklin Island National Wildlife Refuge

This refuge is 12 acres and was established in 1973 because of its “...particular value in carrying out the national migratory bird management program.” It was established under authority of 16 U.S.C. 667b, an Act Authorizing the Transfer of Certain Real Property for Wildlife or Other Purposes, 16 U.S.C.667b-667b, as amended. It was acquired in transfer from the U.S. Coast Guard.

Pond Island National Wildlife Refuge

This refuge is 10 acres and was established in 1973 because of its “...particular value in carrying out the national migratory bird management program.” It was established under authority of 16 U.S.C. 667b, an Act Authorizing the Transfer of Certain Real Property for Wildlife or Other Purposes, 16 U.S.C.667b-667d, as amended. It was acquired in transfer from the U.S. Coast Guard.

Petit Manan National Wildlife Refuge

This refuge is currently 5,771 acres and consists of 33 islands and three mainland divisions. The fourth mainland division, Corea Heath, is a pending U.S. Department of Navy transfer. This Refuge was originally established in 1974 “...for use as an inviolate sanctuary, or any other management purposes, for migratory birds.” It was established under authority of the Migratory Bird Conservation Act, 16 U.S.C. 715d. In addition to the Migratory Bird Conservation Act, the succession of islands and mainland parcels acquired after 1974 were acquired with one or more of the following purposes:

“...suitable for - (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species” (Refuge Recreation Act, 16 U.S.C. 460k-1); or

“...particular value in carrying out the national migratory bird management program” (An Act Authorizing the Transfer of Certain Real Property for Wildlife, or other purposes, 16 U.S.C. 667b-667d)

“...the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (Emergency Wetlands Resource Act of 1986, 16 U.S.C. 3901(b), 100 Stat. 3583).

Its acquisition history is described in Table 1-1.

**Cross Island National
Wildlife Refuge**

This six-island refuge is 1,703 acres and was established in 1980 “...for use as an inviolate sanctuary, or any other management purposes, for migratory birds.” It was established under authority of the Migratory Bird Conservation Act, 16 U.S.C. 715d.

Its acquisition history is described in Table 1-2.

**Refuge Vision
Statement**

Very early in our planning process our team developed this vision statement to provide a guiding philosophy and sense of purpose for our planning effort.

“We envision the future Maine Coastal Islands National Wildlife Refuge epitomizing the mission of the National Wildlife Refuge System; conserving in perpetuity an incredibly rich tapestry of coastal islands, intertidal estuaries, freshwater wetlands, maritime forests and open fields; and, enabling nesting and migrating seabirds, and other wildlife of conservation concern in the Gulf of Maine, to thrive here.

With the help of our conservation partners, we will apply sound, scientific principles and adaptive management strategies to sustain the long-term health and integrity of coastal Maine habitats; expand community outreach and environmental education and interpretation programs; and, stimulate visitors to embrace stewardship of natural resources.”



Lighthouse on Libby Island
USFWS photo

Table 1-1 History of acquisition at Petit Manan Refuge

Calendar Year*	Acres**	Acquisition Method	Parcel Acquired
1974	10	transfer of island from Coast Guard	Petit Manan Is.
1976	2,166	3 donations, 2 fee purchases, and 1 transfer; includes both islands and mainland	Petit Manan Pt Div.
1978	5	1 island transfer from Coast Guard	Little Nash Is (portion of)
1979	1,130	1 donation of an island	Bois Bubert Is (portion of)
1987	25	1 land exchange for tract on mainland	Bois Bubert Is (portion of)
1992	13	1 donation of tract on mainland	Sawyers Marsh Division (portion of)
1993	33	2 fee purchases; 1 island, and one tract on mainland	Bois Bubert Is (portion of)
1994	252	3 donations and 3 fee purchase; includes both islands and mainland	Metinic (portion of), E&W Barge, Bar, Ship and Trumpet Is; Goulds. Bay Div (portion of)
1995	322	2 donations and 7 fee purchase; includes both islands and mainland	Metinic (portion of), Halifax, Outer White, Lt Roberts, Roberts, Lt Thrumcap Is; Goulds. Bay Div (portion of)
1996	31	2 donations and 1 fee purchase; includes both mainland and islands	Metinic (portions of), and Abbot, Sally Is
1997	12	2 fee purchases of islands	Bois Bubert Is (portion of); E Brothers Is
1998	1008	2 donations and 4 fee purchases; includes both islands and mainland, and 2 conservation easements	Upper Flag, John's Is; Sawyers Marsh Div (portion of), and Goulds. Bay Div (portion of); Inner White Is (easement) and Lower Mark Is (easement)
1999	187	4 islands transferred from Coast Guard, and 3 fee purchases of islands	Ram, Lt. Libby, Inner Sand, Matinicus Rock, Two Bush, Outer Heron Is, and Egg Rock
2000	39	3 fee purchases; includes both island and mainland	Schoppee and Lt Marshall Is; Goulds. Bay Div (portion of)
2001	366	2 fee purchases; includes both islands and mainland, and 1 conservation easement on an island	Crane Is (easement); Sawyers Marsh and Goulds. Bay Div (portions of)
2002	60	2 conservation easements on islands	Smuttynose and Malaga Is (easements)

* Acquisition is ongoing; check with the Refuge Headquarters for latest island purchases.

** Island acres are approximate, as many were not surveyed, but are based on original deed acres or GIS mapping.

Table 1-2 History of acquisition at Cross Island Refuge

Calendar Year	Acres*	Acquisition Method	Parcel Acquired
1980	1,538	donation of 6 islands	Cross Is (portion of); Old Man, Mink, Outer and Inner Double Head Shot, Scotch Is.
1986	165	land exchange for tract on island	Cross Is (portion of)

* Island acres are approximate, as many were not surveyed, but are based on original deed acres or GIS mapping.

Refuge Goals

These goals were developed after consideration of our refuge purposes, the Service and Refuge System missions, our vision, and the mandates, plans, and conservation initiatives described above. They are intentionally broad, descriptive statements of purpose. They highlight elements of our vision statement that are emphasized in future refuge management. The biological goals take precedence, in particular Goal 5, but otherwise, the goals are not presented in a particular order.

Goal 1: Perpetuate the biological diversity and integrity of upland communities on the Refuge's mainland properties to sustain high quality habitat for migratory birds.

Goal 2: Maintain high quality wetland communities on the Refuge's mainland properties, primarily to benefit migratory birds of high conservation priority, while also supporting other native, wetland-dependent species of concern.



Atlantic puffin
USFWS photo

Goal 3: Perpetuate the biological diversity and integrity of upland communities on the Refuge's islands to sustain high quality habitat for nesting bald eagles and migratory songbirds and raptors, and to protect rare plant sites.

Goal 4: Protect the high quality wetland communities on the Refuge's islands to benefit nesting and migrating shorebirds and waterfowl.

Goal 5: Protect and restore nesting seabird populations on the Refuge's islands to contribute to regional and international seabird conservation goals.

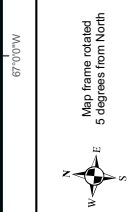
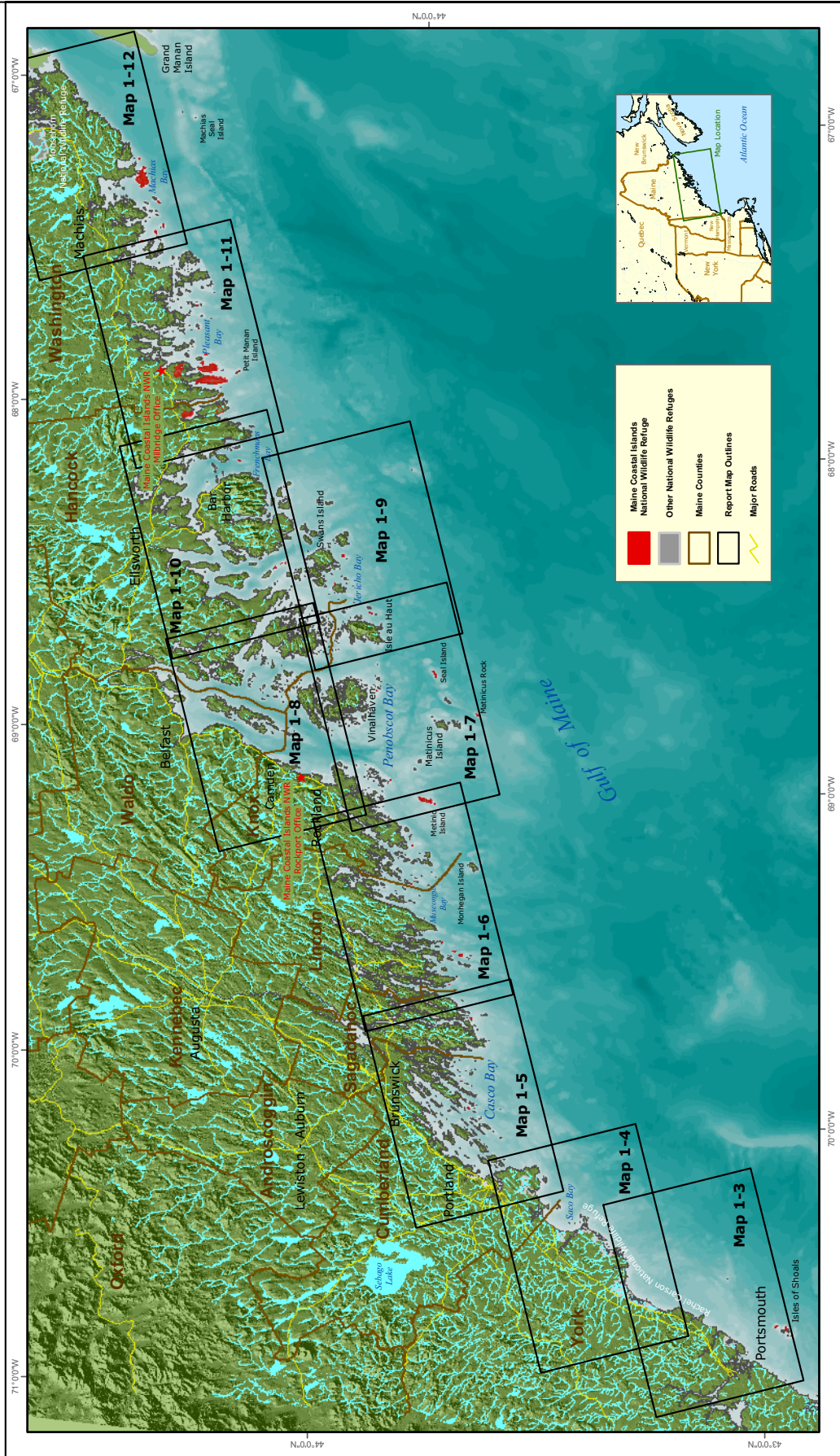
Goal 6: Promote enjoyment and stewardship of coastal Maine wildlife and their habitats by providing priority, wildlife-dependent recreational and educational opportunities.

Goal 7: Protect the integrity of coastal Maine wildlife and habitats through an active land acquisition and protection program.

Goal 8: Communicate and collaborate with local communities, Federal, State, local, and Tribal representatives, and other organizations throughout coastal Maine to further the mission of the National Wildlife Refuge System.

Map 1-2

MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT
Maine Coastal Islands National Wildlife Refuge



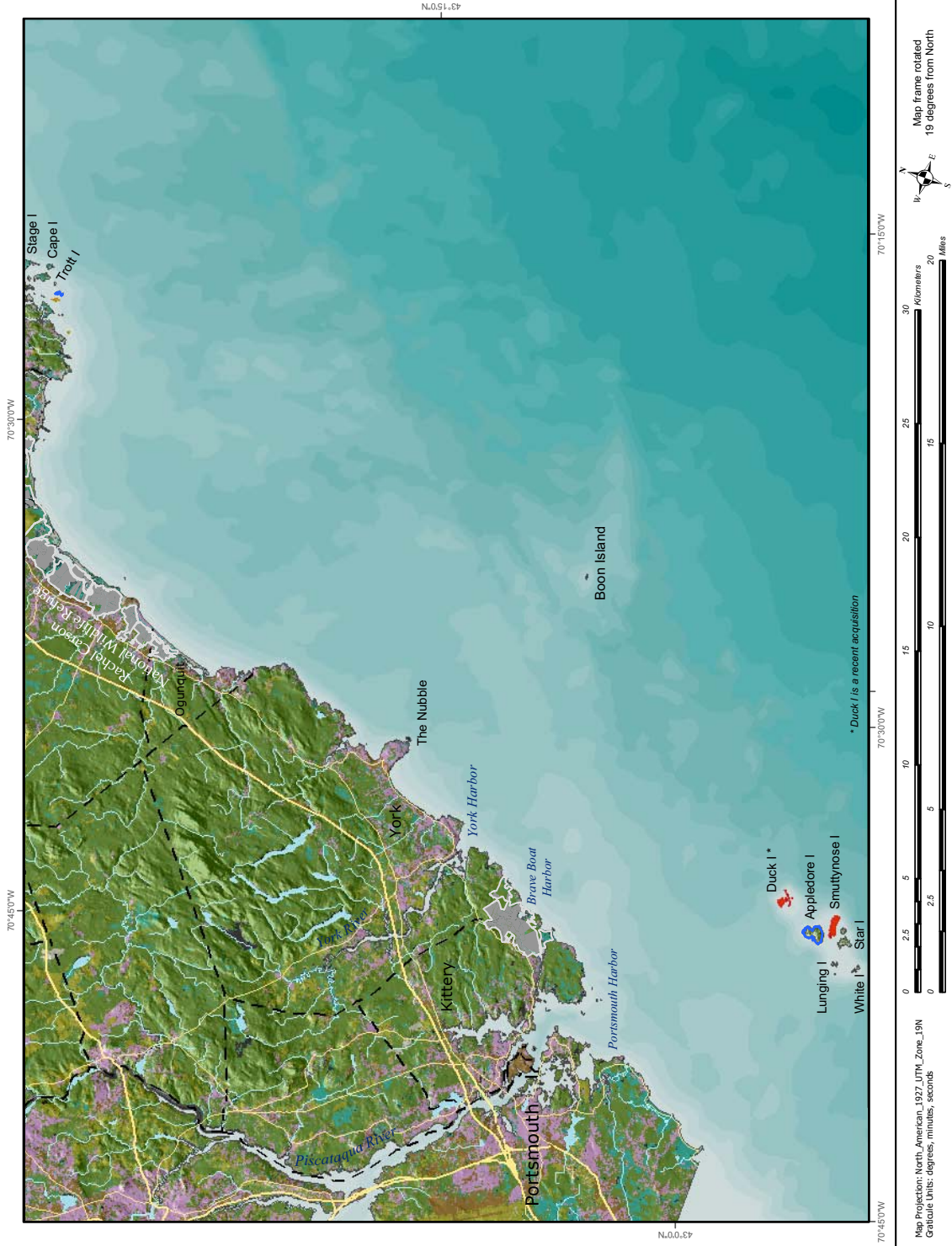
Map frame rotated
5 degrees from North

Map Projection: North American_1927 UTM_Zone_19N
 Graphic Units: degrees, minutes, seconds

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MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT

Map 1-3 Kittery



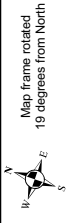
- Land Protection Legend**
- Maine Coastal Islands
 - National Wildlife Refuge
 - Maine Coastal Islands
 - National Wildlife Refuge Approved for Acquisition
 - Nationally Significant Islands* Permanently Protected by Others
 - Nationally Significant Islands* Not Permanently Protected
 - Nationally Significant Bald Eagle Nesting Sites* Not Permanently Protected
 - Other National Wildlife Refuges

*Nationally significant is defined by criteria developed in agreement with the National Wetlands Program, National Wetlands Inventory, and other conservation partners. Specific criteria used to determine national significance identified in Chapter 1 of the CCPEIS.

- Base Map Legend**
- Primary Roads
 - Secondary Roads
 - Town Lines
 - Fresh Water

- National Land Cover Database**
- Residential
 - Commercial, Industrial or Transportation
 - Bare Rock or Barren Land
 - Forested
 - Grassland
 - Wetland

Data sources:
 National Land Cover Database from the US EPA
 Digital Elevation Model from USGS NED data
 National Wetlands Inventory from US Fish and Wildlife Service
 Town lines adapted from Maine Office of GIS data
 All National Wildlife Refuge boundaries from USFWS
 Bathymetry from MassGIS
 Map produced by USFWS RSCarto 2/23/2005

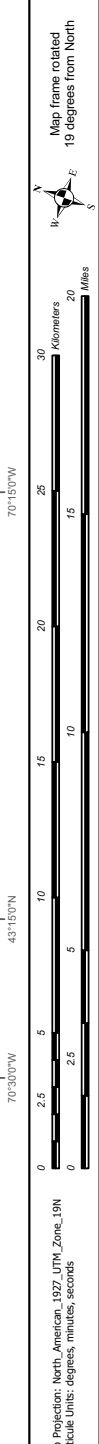


Map Projection: North American 1927 UTM Zone 18N
 Graticule Units: degrees, minutes, seconds
 * Duck I is a recent acquisition

MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT
Map 1-4 Saco Bay



70°45'00"W 70°30'00"W 70°15'00"W 70°00'00"W
 43°30'00"N 43°15'00"N 43°00'00"N



Map Projection: North American 1927 UTM Zone 19N
 Graticule Units: degrees, minutes, seconds

- Land Protection Legend**
- Maine Coastal Islands National Wildlife Refuge
 - Maine Coastal Islands National Wildlife Refuge Approved for Acquisition
 - Nationally Significant Islands* Permanently Protected by Others
 - Nationally Significant Islands* Not Permanently Protected
 - Nationally Significant Bald Eagle Nesting Sites* Not Permanently Protected
 - Other National Wildlife Refuges

* Nationally significant is defined by criteria developed in partnership with Gulf of Maine Program, Maine Dept. of Inland Fisheries & Wildlife and conservation partners. Specific criteria used to determine significance identified in Chapter 1 of the CCP/EIS.

- Base Map Legend**
- Primary Roads
 - Secondary Roads
 - Town Lines
 - Fresh Water

- National Land Cover Database**
- Residential
 - Commercial, Industrial or Transportation
 - Bare Rock or Barren Land
 - Forested
 - Grassland
 - Wetland

Data sources:
 National Land Cover Database from the US EPA
 National Wetlands Inventory from USFWS
 Roads from USGS 1:100,000 road data
 Town lines adapted from Maine Office of GIS data
 All National Wildlife Refuge boundaries from USFWS
 Mainland from Maine Office of GIS
 Map produced by USFWS RSCarto 1/6/2005

MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT

Map 1-5 Casco Bay



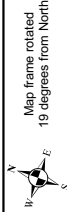
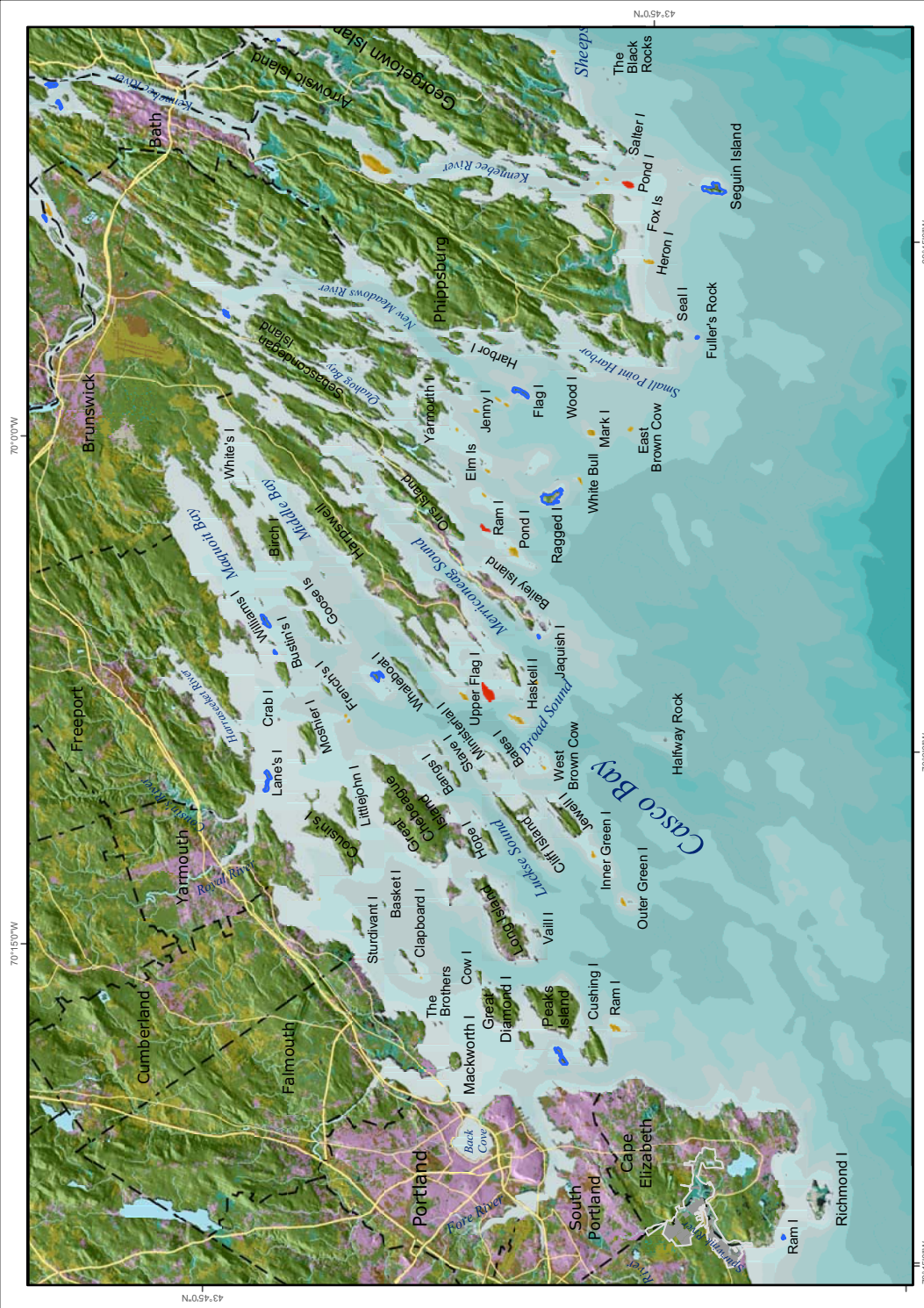
- Land Protection Legend**
- Maine Coastal Islands
 - National Wildlife Refuge
 - Maine Coastal Islands
 - National Wildlife Refuge
 - Approved for Acquisition
 - Nationally Significant Islands*
 - Permanently Protected by Others
 - Nationally Significant Islands*
 - Not Permanently Protected
 - Nationally Significant Bald Eagle Nesting Sites*
 - Not Permanently Protected
 - Other National Wildlife Refuges

Nationally significant is defined by criteria developed in partnership with the Wildlife Program, conservation partners. Specific criteria used to determine national significance identified in Chapter 1 of the CCPIS.

- Base Map Legend**
- Primary Roads
 - Secondary Roads
 - Town Lines
 - Fresh Water

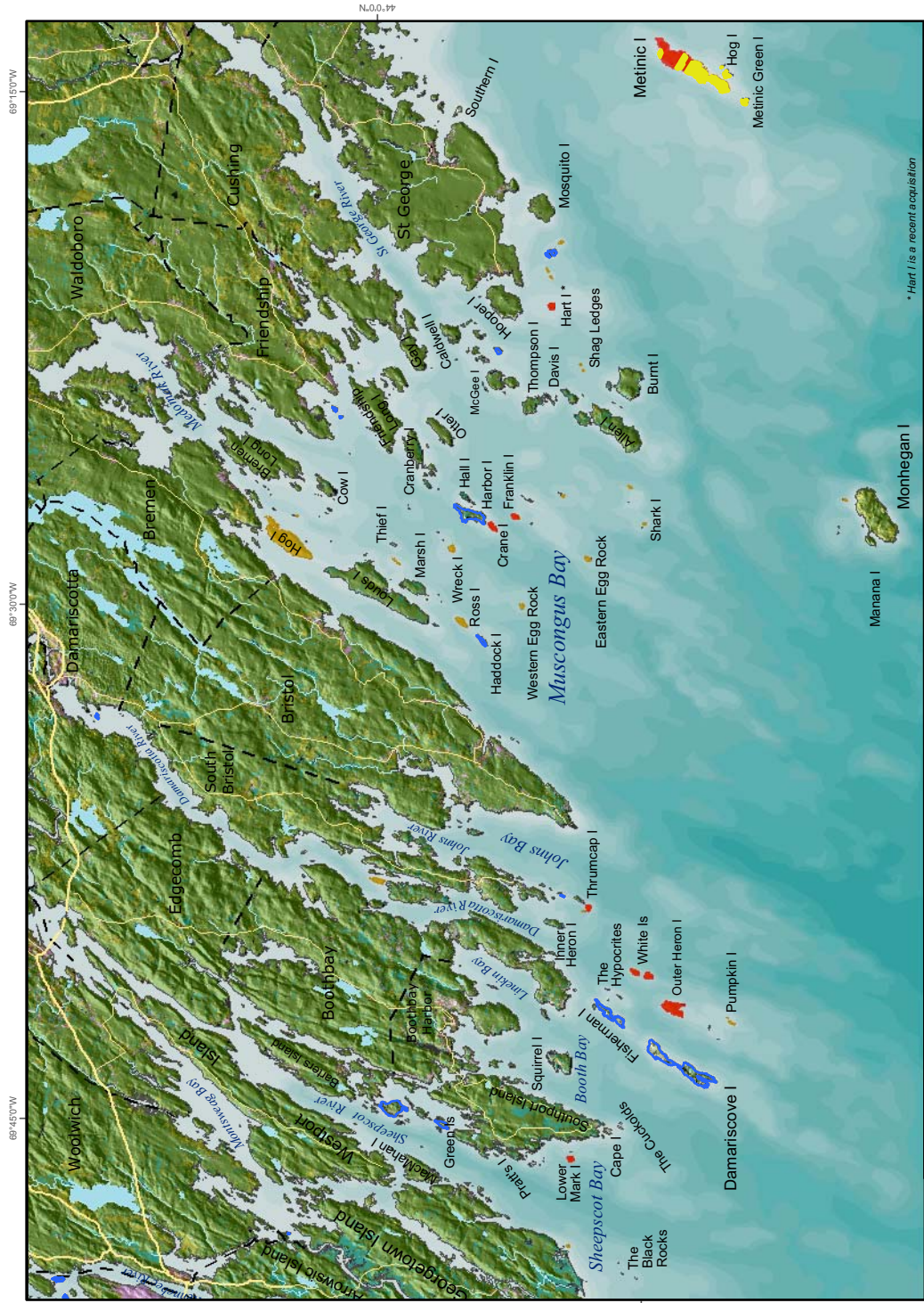
- National Land Cover Database**
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 - Grassland
 - Wetland

Data sources:
 National Land Cover Database from the US EPA
 Digital Elevation Model from USGS NED data
 Roads from USGS 1:100,000 road data
 Bathymetry from MassGIS
 Map produced by USFWS RCato 1/10/2005



Map frame rotated
 19 degrees from North

MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT
Map 1-6 Muscongus Bay



*Hart I is a recent acquisition



- Land Protection Legend**
- Maine Coastal Islands
 - National Wildlife Refuge
 - Maine Coastal Islands
 - National Wildlife Refuge
 - Approved for Acquisition
 - Nationally Significant Islands*
 - Permanently Protected by Others
 - Nationally Significant Islands*
 - Not Permanently Protected
 - Nationally Significant Bald Eagle Nesting Sites*
 - Not Permanently Protected
 - Other National Wildlife Refuges

Nationally significant is defined by others developed in partnership with Gulf of Maine Program, Maine Dept. of Inland Fisheries & Wildlife and conservation partners. Specific criteria used to determine national significance identified in Chapter 1 of the CCP/EIS.

Base Map Legend

- Primary Roads
- Secondary Roads
- Town Lines
- Fresh Water

National Land Cover Database

- Residential
- Commercial, Industrial or Transportation
- Bare Rock or Barren Land
- Forested
- Grassland
- Wetland

Data sources:
 National Land Cover Database from the US EPA
 Digital Elevation Model from the USGS
 National Wetlands Inventory from the USGS
 USGS 1:50,000 scale topographic maps
 Town lines adapted from Maine Office of GIS data
 All National Wildlife Refuge boundaries from USFWS
 Bathymetry from MassGIS
 Map produced by USFWS RC-Carto 2/23/2005

**MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT**

Map 1-7 Outer Penobscot Bay



Land Protection Legend

- █ Maine Coastal Islands National Wildlife Refuge
- █ Maine Coastal Islands National Wildlife Refuge Approved for Acquisition
- █ Nationally Significant Islands* Permanently Protected by Others
- █ Nationally Significant Islands* Not Permanently Protected
- █ Nationally Significant Bald Eagle Not Permanently Protected
- █ Other National Wildlife Refuges

*Nationally significant is defined by criteria developed in partnership with Gulf of Maine Program, conservation partners. Specific criteria used to determine national significance identified in Chapter 1 of the CCP/EIS.

Base Map Legend

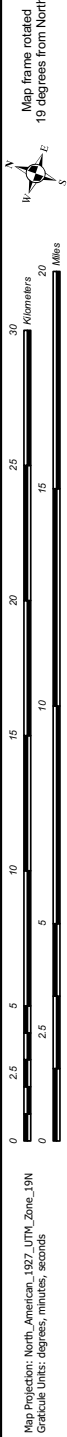
- Primary Roads
- Secondary Roads
- Town Lines
- Fresh Water

National Land Cover Database

- █ Residential
- █ Commercial, Industrial or Transportation
- █ Bare Rock or Barren Land
- █ Forested
- █ Grassland
- █ Wetland

Data sources:
National Land Cover Database from the US EPA
Digital Elevation Model from USGS NED data
Map projection: North American 1927 UTM Zone 19N
Town Lines added from Maine Office of GIS data
All National Wildlife Refuge boundaries from US FWS Bathymetry from MassGIS
Map produced by USFWS I&C/Caro: 2/23/2005

Map frame rotated 19 degrees from North



MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT

Map 1-8 Inner Penobscot Bay



Map Projection: North_American_1927_UTM_Zone_19N
 Graticule Units: degrees, minutes, seconds

0 2.5 5 10 15 20 25 30
 Kilometers

0 2.5 5 10 15 20
 Miles

Map frame rotated 19 degrees from North

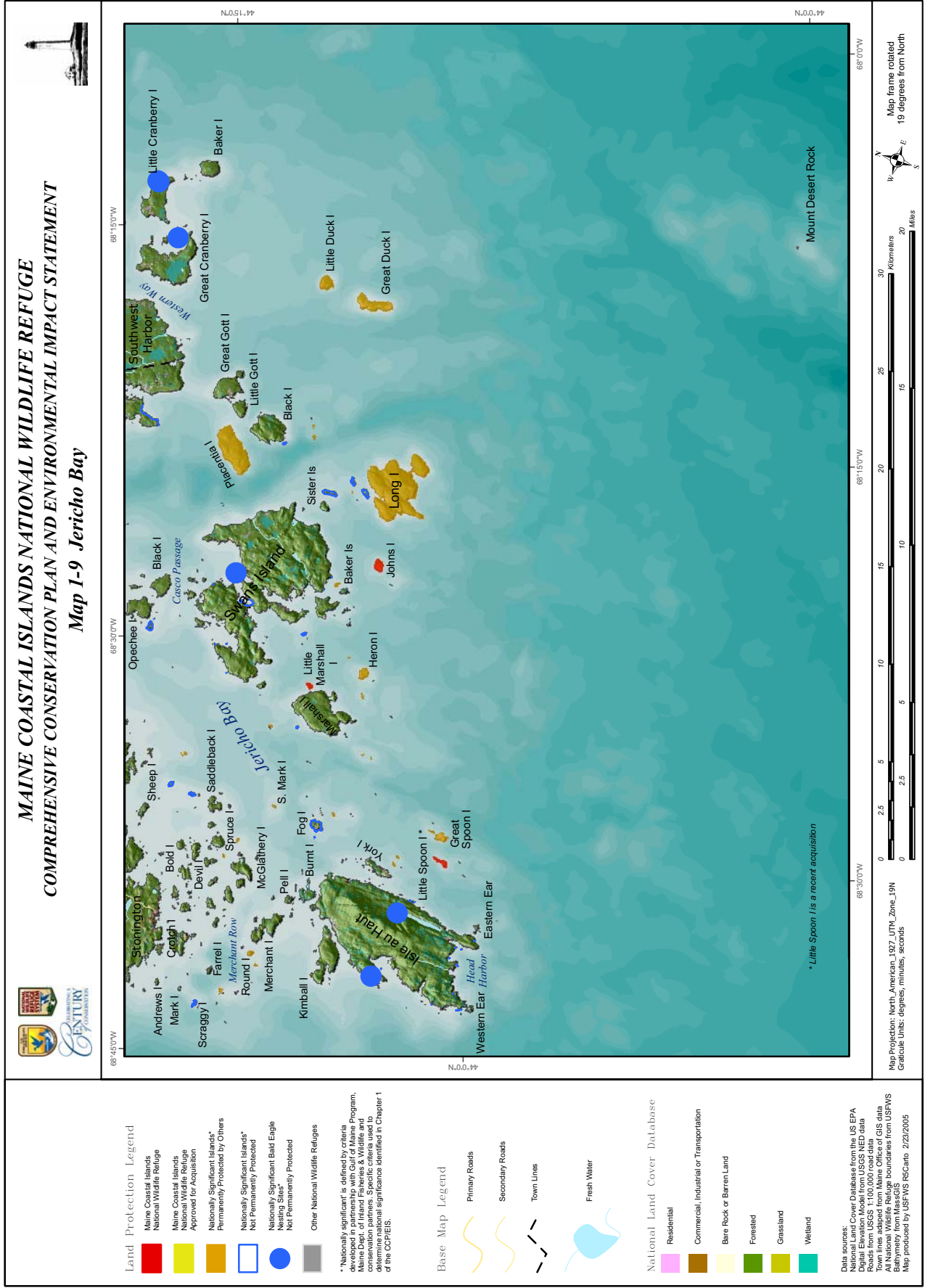
- Land Protection Legend**
- Maine Coastal Islands National Wildlife Refuge
 - Maine Coastal Islands National Wildlife Refuge Approved for Acquisition
 - Nationally Significant Islands* Permanently Protected by Others
 - Nationally Significant Islands* Not Permanently Protected
 - Nationally Significant Bald Eagle Nesting Sites*
 - Not Permanently Protected
 - Other National Wildlife Refuges

* "Nationally significant" is defined by criteria developed in partnership with staff of Maine Program, Maine Dept. of Inland Fisheries & Wildlife and conservation partners. Specific criteria used to determine national significance identified in Chapter 1 of the CCP/EIS.

- Base Map Legend**
- Primary Roads
 - Secondary Roads
 - Town Lines
 - Fresh Water

- National Land Cover Database**
- Residential
 - Commercial, Industrial or Transportation
 - Bare Rock or Barren Land
 - Forested
 - Grassland
 - Wetland

Data sources: Cover Database from the US EPA Digital Elevation Model from USGS NED data Roads from USGS 1:100,000 road data Town lines adapted from Maine Office of GIS data Bathymetry from MassGIS Boundaries from USFWS Map produced by USFWS RSCarlo /11/2005



**MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT**

Map 1-10 Frenchman Bay



68°45'0"W 68°30'0"W 68°15'0"W 68°0'0"W
44°30'0"N 44°15'0"N 44°0'0"N

Map frame rotated 19 degrees from North
0 2.5 5 10 15 20 25 30 Kilometers
0 2.5 5 10 15 20 Miles
Map Projection: North American 1927 UTM_Zone_18N
Graphic Units: degrees, minutes, seconds

- Land Protection Legend**
- Maine Coastal Islands National Wildlife Refuge
 - Maine Coastal Islands National Wildlife Refuge Approved for Acquisition
 - Nationally Significant Islands* Permanently Protected by Others
 - Nationally Significant Islands* Not Permanently Protected
 - Nationally Significant Bald Eagle Islands* Not Permanently Protected
 - Other National Wildlife Refuges

*Nationally significant is defined by criteria developed in partnership with Cur of Maine Program, conservation partners. Specific criteria used to determine national significance identified in Chapter 1 of the CCPEIS.

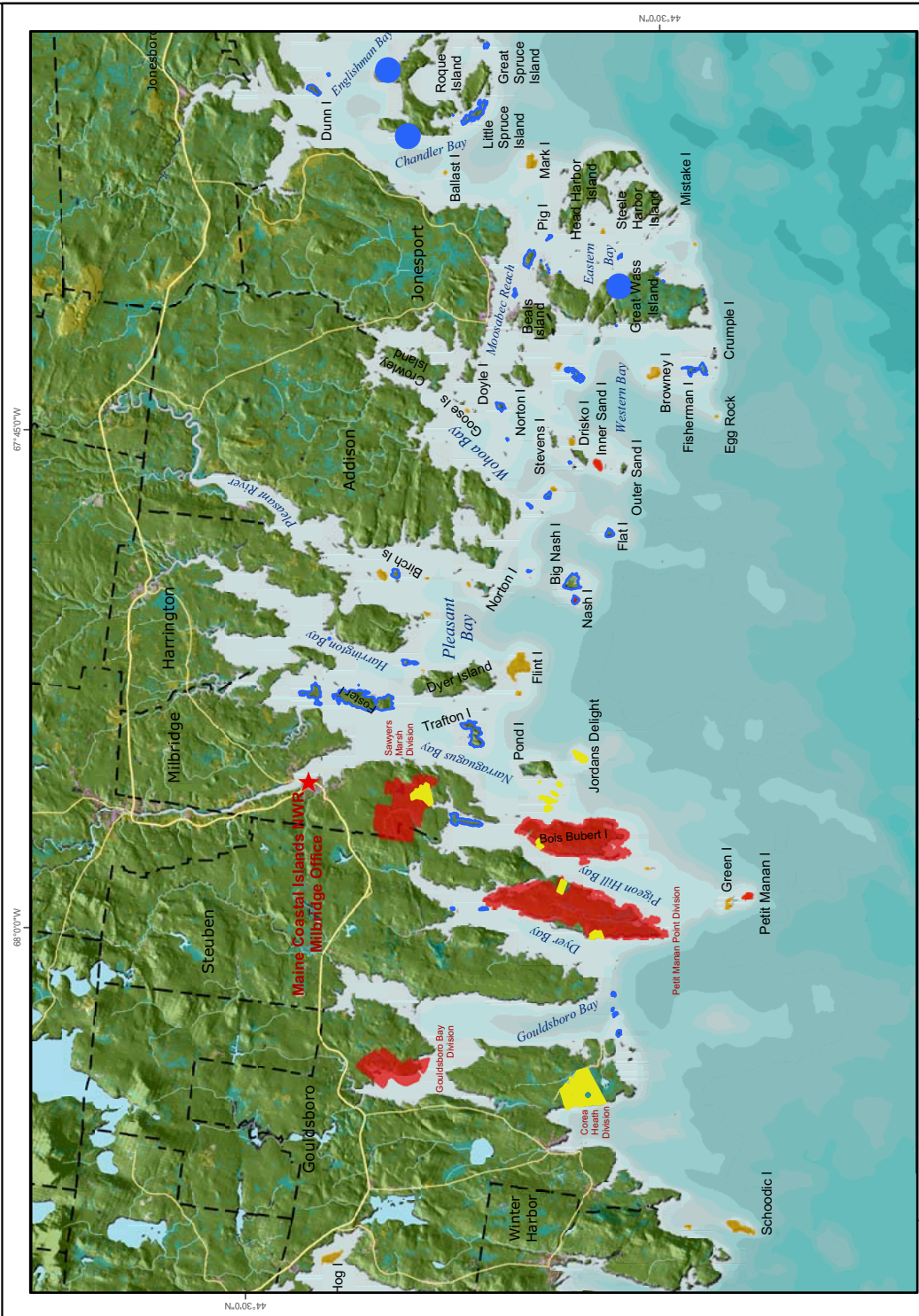
- Base Map Legend**
- Primary Roads
 - Secondary Roads
 - Town Lines
 - Fresh Water

- National Land Cover Database**
- Residential
 - Commercial, Industrial or Transportation
 - Bare Rock or Barren Land
 - Forested
 - Grassland
 - Wetland

Data sources:
National Land Cover Database from the US EPA
Digital Elevation Model from USGS NED data
Town Lines from Maine Office of GIS data
All National Wildlife Refuge boundaries from USFWS
Bathymetry from MassGIS
Map produced by USFWS RSCart 2/23/2005

MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT

Map 1-11 Petit Manan



Land Protection Legend

- Maine Coastal Islands
- National Wildlife Refuge
- Maine Coastal Islands
- National Wildlife Refuge
- National Wildlife Refuge
- Approved for Acquisition
- Nationally Significant Islands*
- Permanently Protected by Others
- Nationally Significant Islands*
- Not Permanently Protected
- Nationally Significant Bald Eagle
- Not Permanently Protected
- Other National Wildlife Refuges

Base Map Legend

- Primary Roads
- Secondary Roads
- Town Lines
- Fresh Water

National Land Cover Database

- Residential
- Commercial, Industrial or Transportation
- Bare Rock or Barren Land
- Forested
- Grassland
- Wetland

* "Nationally significant" is defined by criteria developed in partnership with the Maine Program, Bureau of Land Management, and various conservation partners. Specific criteria used to determine national significance identified in Chapter 1 of the CCOPEIS.

Map Projection: North American 1927 UTM Zone 18N
 Graticule Units: degrees, minutes, seconds

Scale: 0 to 30 Kilometers / 0 to 20 Miles

Map frame rotated 19 degrees from North

Data sources:
 National Land Cover Database from the US EPA
 National Wetlands Inventory from the US EPA
 Roads from USGS 1:100,000 road data
 Town lines adapted from Maine Office of GIS data
 All National Wildlife Refuge boundaries from USFWS
 Boundary from the US Department of the Interior
 Map produced by USFWS RegCaro 1/11/2005

MAINE COASTAL ISLANDS NATIONAL WILDLIFE REFUGE
COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT
Map I-12 Cobscook Bay



- Land Protection Legend**
- Maine Coastal Islands National Wildlife Refuge
 - Maine Coastal Islands National Wildlife Refuge Approved for Acquisition
 - Nationally Significant Islands* Permanently Protected by Others
 - Nationally Significant Islands* Not Permanently Protected
 - Nationally Significant Bald Eagle Nesting Sites*
 - Other National Wildlife Refuges

* "Nationally significant" is defined by criteria developed in partnership with Gulf of Maine Program, Maine Dept. of Inland Fisheries & Wildlife and conservation partners. Specific criteria used to determine national significance identified in Chapter 1 of the CCP/EIS.

- Base Map Legend**
- Primary Roads
 - Secondary Roads
 - Town Lines
 - Fresh Water

- National Land Cover Database**
- Residential
 - Commercial, Industrial or Transportation
 - Bare Rock or Barren Land
 - Forested
 - Grassland
 - Wetland

Data sources:
 National Land Cover Database from the US EPA
 National Wetlands Inventory from the US Fish and Wildlife Service
 Roads from USGS 1:100,000 road data
 Town lines adapted from Maine Office of GIS data
 All National Wildlife Refuge boundaries from USFWS
 Map produced by USFWS RSG/Geo 11/22/2005

