



## Appendix A

*Moose*

### **Draft Land Protection Plan**

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## I. Introduction

This draft Land Protection Plan (LPP) provides detailed information about our proposal to expand Rachel Carson National Wildlife Refuge along the southern Maine coast. The refuge is part of the National Wildlife Refuge System (Refuge System) administered by the U.S. Fish and Wildlife Service (Service, we, our). We are distributing this plan for a 30-day period for public review and comment. Our main audience is affected landowners, interested individuals, organizations, federal and state agencies, and local officials. The comments we receive will help our Regional Director select among the alternatives for the final CCP. Once it has been approved, this LPP will allow us to acquire from willing sellers 5,558 acres of nationally significant wildlife habitat.

The purposes of this LPP are, to

- inform affected landowners and other interested parties about the resource protection needs, location, size, and acquisition priority of those 5,558 acres of nationally significant wildlife habitat;
- inform owners of land in our current, approved acquisition boundary that we are interested in acquiring that land, and remind them of our policies, priorities, options, and methods for protecting it;
- inform landowners whose properties we propose for acquisition about our policies, priorities, options, and methods for protecting their lands; and,
- inform them about our long-standing policy of acquiring land only from willing sellers,
- removes land from our current approved refuge boundary that is no longer suitable for Service acquisition.

The 5,558 acres we propose to acquire are considered nationally significant, under a set of biologically based criteria for identifying and mapping habitat for Service trust resources. Those lands now lack permanent, long-term protection by a conservation organization or agency. We believe their high natural resource values merit their inclusion within the Refuge System. As the Service acquires those lands, we will manage them for their wildlife resources, emphasizing the protection of such federal trust resources as federal-listed endangered or threatened species and migratory birds.

## II. Project Area Description

### ❖ Existing Refuge Lands

The refuge lies along 50 miles of coastline in York and Cumberland counties in southern Maine, in the heart of the Gulf of Maine watershed, a region of great biological diversity. The refuge comprises 10 divisions in the towns of Cape Elizabeth, Scarborough, Old Orchard Beach, Saco, Biddeford, Kennebunkport, Kennebunk, Wells, Ogunquit, York, and Kittery. Those divisions include the following acreage we own outright or in easement.

- Brave Boat Harbor Division: 748 acres; Towns of Kittery and York
- Moody Division: 403 acres; Towns of Ogunquit and Wells
- Lower Wells Division: 1,003 acres; Towns of Wells and Kennebunk
- Upper Wells Division: 667 acres; Town of Kennebunk
- Mousam River Division: 516 acres; Towns of Kennebunk and Kennebunkport

- Goose Rocks Division: 542 acres; Town of Kennebunkport
- Little River Division: 266 acres; Towns of Kennebunkport and Biddeford
- Biddeford Pool: 126 acres; Town of Biddeford
- Goosefare Brook: 502 acres; Towns of Saco and Biddeford
- Spurwink River: 520 acres; Towns of Scarborough and Cape Elizabeth

Each of the divisions was established for the protection and conservation of migratory birds, and each protects a tidal river or an estuary resource. We have yet to acquire 3,833 acres in our 9,126-acre approved refuge acquisition boundary.

### ❖ **Biological Significance**

Distributed at the mouths of more than a dozen tidal rivers and their watersheds, the refuge occupies a crucial place in this increasingly developed, fragmented region where the rivers meet the sea. Refuge estuaries provide nurseries for many marine fish. Its tidal rivers provide pathways for fish moving upstream and downstream to spawn. Fifty-five species of fish live in refuge estuaries and streams, including American eel, alewife, and blueback herring. The federal-listed shortnose sturgeon once may have lived in the York River.

The diverse aquatic and upland habitats on the refuge support breeding, migrating and wintering birds, and provide essential habitat for threatened or endangered species. Fifty percent to 75 percent of the Maine piping plover population nests on or near the refuge. Its coastal habitats include rocky and sandy shores, rivers, beaches, salt marshes, mudflats, and salt pannes. The Wells and Ogunquit marshes form the second largest salt marsh complex in the state, and have been identified as a focus area of statewide conservation significance.

Refuge salt marshes, mudflats, and salt pannes provide nesting, feeding, and staging habitat for more than 45 species of shorebirds and wading birds. The American black duck is the most common wintering waterfowl species, and can be found on open water on every marsh and river. Thousands of other waterfowl winter on the refuge, including common eider, scoter, bufflehead, common goldeneye, and common loon.

Lands on or near the refuge provide food and habitat for more than 250 species of birds. Maine Audubon and the State of Maine designated parts of the refuge an Important Bird Area: a place that supports habitat for rare or threatened species, a diverse assemblage of birds, or large concentrations of birds. Its upland forests of oak, hemlock, red spruce, pitch pine, and white pine and early successional grasslands and shrublands support such migrating birds—for which the refuge was established—as warblers, thrushes, and other songbirds, where they revitalize themselves in route to or from northern breeding areas.

### ❖ **Current Acquisition Boundary**

Maps A-1 through A-6 depict lands owned by the refuge and the current approved acquisition boundary. We reviewed the current approved acquisition boundary to identify lands that are no longer suitable for Service acquisition. Table A.1 provides a summary of the privately owned lands within the boundary and the privately owned lands to be removed from the boundary. Appendix I provides a list of the privately owned lands within the boundary.

**Table A.1. A summary of lands still in private ownership within the approved refuge boundary**

<i>Mainland Division</i>	<i>Private Land Tracts</i>		<i>Private Land Tracts to be Removed</i>		<i>New Total of Land Within Approved Refuge Boundary</i>
	<i>Parcels</i>	<i>Acres</i>	<i>Parcels</i>	<i>Acres</i>	
Brave Boat Harbor	51	267	1	11	256
Moody	122	59	3	15	44
Lower Wells	51	421	3	13	408
Upper Wells	80	980	4	4	976
Mousam River	35	346	3	4	342
Goose Rocks	95	339	?	11	328
Little River	47	233	8	39	194
Biddeford Pool	129	282	62	33	249
Goosefare Brook	27	94	N/A	0	94
Spurwink River	41	812	17	34	778
Total	678	3,833	101	164	3669

### ❖ Proposed Expansion Lands

Our proposal expands by 5,558 acres the Service acquisition of significant wetland and upland migratory bird habitat (maps A-1 through A-6). All of the land we acquire will become part of the refuge.

The Service identified important fish and wildlife habitats in southern Maine with geographic information system (GIS) habitat suitability models: an innovative and biologically sound approach to protecting habitat. The expansions below will contribute significantly to the conservation of federal trust resources in coastal Maine. They will also enhance opportunities for public use, including wildlife observation, interpretation, nature photography and recreational hunting. Our proposal focuses on expanding the 10 divisions and creating a new division around the highly significant York River.

#### ***York River—2,211 acres***

The 23-square-mile York River watershed, an area of concern in southern Maine, lies in the Mt. Agamenticus (Mt. A.) conservation planning area. The Mt. Agamenticus to the Sea initiative forms a partnership among state, federal and local groups to conserve the largest unfragmented block of coastal wildlife habitat between Portland and the New Jersey Pine Barrens. It harbors 24 rare plant species and 11 rare animal species in a center of biological diversity in Maine. The proposed York River Division will build upon the 7,000 acres of habitat now conserved in public or quasi-public ownership by linking our Brave Boat Harbor Division through the York River to Mt. A. conservation lands.

That new division will provide a corridor of wildlife habitat from the mountain to the sea. The tidal portion of the York River extends from York harbor inland about 5 miles, then widens to encompass a salt marsh dominated by cordgrass and needle rush. A white pine-red oak forest with some pitch pine and red maple, containing patches of shrubland, grassland, and freshwater wetland, borders the salt marsh.

The refuge identified habitats in the York River watershed that support federal trust resources, and is working with conservation partners, local communities, and landowners to protect it. We propose to create the York River Division by acquiring the most significant 2,211 acres of that wildlife habitat: contiguous and disjunct fingers of salt marsh along the main channel and tributaries of the river, and critical terrestrial uplands.

Waterfowl, particularly black ducks, use the tidal river and salt marsh during migration. The winding, protected river is especially important as habitat for black ducks in harsh weather. Greater and lesser yellowlegs, semipalmated and least sandpipers, and black-bellied and semipalmated plovers forage on the tidal river mudflats. Commercially and recreationally important finfish and shellfish rely on the salt marsh as nursery habitat, including American eel, alewife, and rainbow smelt.

New England cottontail, a species petitioned for listing under the Endangered Species Act, lives in several of the shrubland borders of the river's tributaries. Those pockets of thicket habitat also provide habitat for American woodcock, prairie warbler, and chestnut-sided warbler. Protecting that habitat also benefits the saltmarsh sharp-tailed sparrow. That species, a top conservation priority for Partners in Flight Planning Area 9, is identified as a species of Continental Importance in the Eastern Avifaunal Biome, and is designated in need of immediate conservation action.

### ***Biddeford Pool—1,272 acres***

Of the 5,558 acres we propose to acquire, 1,272 lie in the Biddeford expansion area, roughly defined along Route 9 to Newtown Road, south to West Street, south to the Little River (or branch), then along the river back to Route 9. Habitats in that area include early successional grassland and shrubland, high-quality wetland (forested wetland, pocket swamp, vernal pool), river, and mixed upland forest. Due to its high concentrations of wetlands and rare plants and animals, this is also a state focus area of ecological significance. Its habitats fulfill the needs at various life cycle stages for key focal species such as bobolink, willow flycatcher, wood thrush, American woodcock, prairie warbler, alewife, Blandings turtle, and New England cottontail.

### ***Brave Boat Harbor—534 acres***

Five hundred thirty-four acres lie in the Brave Boat Harbor expansion area. Refuge land to the east, a large, undeveloped area to the north, and development to the south and west border that area. Its habitats include a large, freshwater wetland, forested wetland, upland forest, shrubland, and grassland. Those fulfill the needs at various life cycle stages for such key federal trust resources as American black duck, Louisiana waterthrush, American woodcock, blue-winged warbler, and wood thrush, among others. The state-listed spotted turtle also dwells here.

### ***Spurwink River—537 acres***

Five hundred thirty-seven acres lie in two locations in the Spurwink River expansion area. One is roughly defined along Pleasant Hill Road, then east to existing refuge lands. The second runs along Hillside Avenue, then east, connecting other refuge lands. Those two locations include the last large blocks of land that remain undeveloped adjacent to the refuge in Scarborough. One landowner holds about 24 percent of that land. The property along Pleasant Hill Road would complete a wildlife corridor connecting the refuge with the Scarborough Marsh State Wildlife Management Area.

Habitats in the 537 acres include early successional grassland, shrubland, forested wetland, river, and mixed forest. Those fulfill the needs at various life cycle stages for such key federal trust resources as bobolink, American woodcock, blue-winged warbler, alewife, and New England cottontail, among others.

***Upper Wells/Mousam River—255 acres***

Two hundred fifty-five acres lie in the Upper Wells/Mousam River expansion area. That area includes five small segments surrounded by or adjacent to the refuge or its approved acquisition boundary. Those segments will improve the management capabilities of the refuge for a multitude of wildlife species. Habitats include freshwater wetland, forested wetland, bog, upland forest, grassland, shrubland, and tidal stream. Those fulfill the needs at various life cycle stages for such key federal trust resources as American black duck, Louisiana waterthrush, bobolink, American woodcock, blue-winged warbler, alewife, and wood thrush, among others.

***Moody—21 acres***

Twenty-one acres owned by one landowner lie in the Moody expansion area. They provide additional buffer for refuge lands to the south and east. That acreage is primarily grassland, and has been cooperatively managed for more than 12 years by the landowner and the refuge to maintain habitat for bobolink and other grassland species of concern.

***Little River—728 acres***

Seven hundred twenty-eight acres lie in the Little River expansion area. They abut the proposed Biddeford expansion area, and are roughly defined along Route 9 south from the Little River to the Biddeford/Kennebunkport line, then northwest along the town line, then northeast back to the Little River. Their habitats include early successional grassland and shrubland, high-quality wetland (forested wetland, pocket swamp, vernal pool), river, and mixed upland forest. This area is a state focus area of ecological significance, because of its high concentrations of wetlands and rare plants and animals. Those habitats fulfill the needs at various life cycle stages for such key focal species as bobolink, willow flycatcher, wood thrush, American woodcock, prairie warbler, alewife, Blanding's turtle, and New England cottontail.

**III. Status of Resources to be Protected**

Our Gulf of Maine Program mapped valuable habitats for federal-listed endangered or threatened species, declining migratory songbirds, shorebirds, waterfowl, and anadromous fish in southern Maine and throughout the U.S. portion of the Gulf of Maine watershed (USFWS unpublished data). That analysis guided our proposed expansion of the refuge acquisition boundary. About 34,000 acres encompass the lands with the highest value for wildlife in 12 towns in southern Maine.

We initially investigated acquiring approximately 25,800 acres, or 75 percent of those lands with the highest wildlife value, by purchasing fee title or conservation easements. We subsequently refined that land protection to focus on the wildlife habitats of highest value on 5,558 acres adjacent to the approved refuge acquisition boundary, and a new division encompassing the wildlife habitat of highest value in the York River watershed. We selected that subset of lands based on their highest aggregate habitat values and their conservation potential, given their parcel sizes.

The land acquisition we propose will benefit the quality of life in the communities around the refuge. The rapid growth of urban sprawl is a leading factor in the decline of quality of life in the region. Southern Maine's coastal areas continue to face numerous threats and pressures. Those include the development of permanent and seasonal camps, homes, and other structures, recreational boating and kayaking, the presence of humans during waterbird nesting seasons, unleashed pets, and the exploitation of cultural resources. Sources of pollution include septic systems, animal waste, urban runoff, construction, agricultural chemicals, logging, mining, hazardous material spills, sand and gravel extractions, junkyards,

landfills, litter, and debris. The growing human population exacerbates those stresses, which accumulate over time.

Threats to refuge fish and wildlife resources will come primarily from outside the refuge boundaries, through increased boating, non-point source pollution runoff, nutrient loading and habitat fragmentation. To ensure that we maintain the quality of the refuge environment, and people continue to experience quality visits, we will restrict public use to specific sites and well-marked trails. Service acquisition of these lands will minimize those threats, and accomplish the goals and objectives of many national and regional conservation plans or initiatives.

#### ❖ **Land Conservation Partners**

We will expand our partnerships with such state agencies as the Maine Department of Inland Fisheries and Wildlife, Parks and Conservation, and the Land for Maine's Future on prioritizing, conserving, and managing high-value wildlife habitats. We will expand our partnerships with land trusts in the 12 towns neighboring the refuge and non-governmental organizations, including The Nature Conservancy, Maine Audubon Society, The Trust for Public Land, the Maine Coast Heritage Trust, and the Friends of Rachel Carson Refuge. We will also assist local communities in identifying parcels for conservation that support important trust resources.

#### ❖ **Habitat Suitability Model**

We used the Gulf of Maine Program Habitat Suitability Model to define the proposed expansion boundary for the refuge. It is also a valuable planning tool for other conservation partners, including the Wells National Estuarine Research Reserve. We mapped the habitats of 43 endangered species, migratory birds (including non-game birds of management concern, shorebirds, and waterfowl), and migratory (inter-jurisdictional and anadromous) fishes. Then we combined those individual maps to identify areas with high richness and habitat quality for those evaluation species. We also mapped large, contiguous areas of undeveloped land and protected land in the study area.

For our analysis, we selected a subset of the federal "trust species": those with seriously reduced populations nationwide, in the Gulf of Maine watershed, or in the State of Maine. We included trust species if they were known to appear in the study area more than occasionally, and were (1) federal-listed as threatened or endangered, or (2) state-listed by two of the three states in the Gulf of Maine watershed, or (3) state-listed by Maine, or (4) experiencing persistent, long-term declines in populations over much of their U.S. range.

We used the biological survey information to identify habitats and test certain habitat maps derived from the models. We developed simple habitat models, similar to the Service habitat suitability index models, for use in our GIS. For each species, that development included review of the literature and discussions with experts to identify and estimate the relative suitability of such habitat features as landcover types, water depths, or soil types. The suitability of each factor was expressed as an index ranging from 0 (least suitable) to 1.0 (most suitable), relative to conditions available in southern Maine.

Those models compute habitat suitability according to the correspondence of the type or level of each environmental factor with the preferred conditions. Thus, the identification of habitat depends on the accuracy of both the models and the environmental base maps to which the models are applied. We used the draft models to produce habitat maps for all 43 species, 16 of which had multiple coverages (e.g., roosting and feeding; reproducing and wintering). To interpret that complex array of data, we produced a composite coverage that included habitat information for all species.

The composite displayed the overall range of habitat values regardless of the underlying land cover type. To display habitat value by cover type (e.g., show the relatively highest value grasslands, or the highest value forested areas) we made composites of habitat scores for each of four major landcover classes: (1) grass, shrub, and bare land; (2) forest; (3) freshwater aquatic and fresh emergent wetlands; and (4) saltwater, estuarine and saline emergent wetlands, so that we could select highly scored examples of one or all cover classes.

For our preferred alternative in the CCP, we derived subsets of those areas with the highest aggregate habitat values that offer ecological diversity and conservation potential based on the extent of the tracts.

### ❖ **Links to Recovery Plans and Other Conservation Initiatives**

#### ***Piping Plover Recovery Plan (USFWS 1996)***

The primary objectives in this recovery plan is to achieve well-distributed increases in plover numbers and productivity, and to provide long-term protection for breeding and wintering plovers and their habitats. The approved refuge acquisition boundary includes multiple nesting beaches for the federal-listed threatened piping plover on the Upper Wells, Goose Rocks, and Goosefare Brook divisions. The Mousam River Division provides additional areas for foraging. The expanded acquisition boundary does not include piping plover nesting habitats, but would protect foraging grounds and provide additional buffers for the nesting areas. Protecting these lands from development also protects the water quality and high-value estuarine systems required by plovers.

#### ***Northern Bald Eagle Recovery Plan (USFWS 1983)***

The primary objective in this recovery plan is to re-establish self-sustaining populations of bald eagle throughout the northern states, including Maine. Our proposal supports that objective by providing roosting, perching and feeding areas for migratory bald eagles in all 10 divisions and the proposed York River Division.

#### ***Roseate Tern Recovery Plan (USFWS 1998)***

The primary recovery objective in this plan is to increase the northeast nesting population of the federal-listed endangered roseate tern to 5,000 breeding pairs. That total should include at least six large colonies with high productivity. A large colony consists of at least 200 nesting pairs. The roseate tern population in Maine is considered one large colony, with a record high of 289 pairs in 2001. We are striving to expand their geographic distribution and increase their nesting population in Maine. The refuge holds conservation easements on several parcels in the Crescent Surf Beach and Parsons Beach area in the Upper Wells Division that support the loafing, feeding and staging of roseate terns.

#### ***New England Cottontail***

This candidate species for federal listing appears year-round on the refuge and surrounding lands. Our land protection proposal includes early successional habitat to be managed for large blocks of thicket habitat to benefit New England cottontail. We think the primary reason for that species' steep decline is the lack of thicket habitat in blocks larger than 15 to 20 acres.

#### ***Partners in Flight (PIF) Plan for Physiographic Area 9 (Dettmers and Rosenberg 2000) and Bird Conservation Region 30 priorities (2004, unpublished data)***

The PIF Area 9 plan identifies bird species of conservation concern in the southern New England physiographic area. The refuge lies at the northernmost extent of that physiographic area. Its priority habitats include maritime marshes, beaches and dunes, mature hardwood forests, shrublands, pitch pine barrens, and grasslands. Forest fragmentation, urbanization, and human use severely threaten

them. We propose their protection for the benefit of species for which our region has high conservation responsibility.

### ***Saltmarsh***

Our land protection proposal supports protecting this priority habitat by acquiring salt marsh and its critical surrounding upland. The threats to this habitat and the wildlife species associated with it include pollution, human disturbance, sea-level rise, invasive species, and predation. Enhancing the protection of salt marsh habitat will benefit PIF priority species, including salt marsh sharp-tailed sparrow and American black duck. Salt marsh sharp-tailed sparrows and Nelson's sharp-tailed sparrows both breed in salt marshes in the refuge. Egrets, ibises, and herons use them extensively as foraging sites both while breeding and migrating. Ospreys and northern harriers forage in refuge marshes during migration. Those marshes also provide critical feeding, migrating, wintering and, to a lesser extent, breeding habitat for American black duck. The salt marsh along the York River will help protect aquatic habitat for American eel, alewife, and other fish species.

### ***Mature Mixed Forest***

Our plan protects larger blocks of unfragmented, mature, mixed forest. Forest fragmentation is one of the largest threats in PIF Area 9. Protecting the remaining forested blocks is suggested for halting the decline of many of their priority bird species. The following PIF priority birds will benefit: rose-breasted grosbeak, Baltimore oriole, veery, scarlet tanager, wood thrush, black-and-white warbler, hairy woodpecker, black-billed cuckoo, blackburnian warbler, and eastern wood-pewee.

### ***Early Successional Shrub/Grassland/Pitch Pine***

Our proposal will increase our shrubland management capability, and enable us to create and maintain shrubland habitats for the following priority bird species in PIF Area 9: American woodcock, prairie warbler, eastern towhee, and whip-poor-will. Those species need management to stabilize or reverse declines in their population. Shrubland habitat also supports breeding populations of New England cottontail on the refuge. The lands we propose for protection include grassland and other open habitats. The PIF Area 9 plan recommends the identification, protection, and management of large grasslands such as those to reverse the decline of such grassland birds as the bobolink in the northeast.

### ***Beaches/Dunes***

The lands we included in our land protection proposal do not include beach or dune systems. Much of the beaches are in town, state, or federal ownership. The remaining beaches generally are developed and in private ownership. However, our land protection proposal does include buffers of maritime marsh and salt marsh that in turn protect water quality and quantity in the tidal rivers and estuaries. Good water quality in those estuarine ecosystems is important for piping plovers, least, common, and roseate terns, and American oystercatchers.

### ***Freshwater Wetlands***

Forested freshwater wetlands and emergent marsh are conserved in this land protection proposal, benefiting American black duck, American bittern, great blue heron, and Blanding's turtle.

### ***North Atlantic Regional Shorebird Conservation Plan (2000)***

Goals in this plan include maintaining or enhancing "current or historic population levels and diversity of shorebirds" and protecting or managing "sufficient area of high priority habitats to support current populations of breeding, migrating and wintering shorebirds." Our proposal protects breeding habitat

for American woodcock, piping plover; willet, common snipe and killdeer; and migratory habitat for semipalmated plover, semipalmated sandpiper, greater yellowlegs, and others.

#### ***North Atlantic Waterfowl Management Plan (2004)***

The 2004 update for this plan identifies 14 waterfowl priorities for BCR 30. Our land protection proposal provides important breeding, migrating and wintering grounds for American black duck, wood duck, and mallard. Another nine species benefit from protected migrating, foraging and wintering grounds: common eider, greater scaup, lesser scaup, black scoter, common goldeneye, long-tailed duck, surf scoter, white-winged scoter, red-breasted merganser, and the Atlantic breeding population of Canada goose.

#### ***North American Waterbird Conservation Plan (2002)***

This plan identifies 55 priority species of concern in North America. Our proposal supports that plan's species and population goals for the sustainable distribution, diversity, and abundance of waterbirds throughout North America and for restoring populations of priority species, including those in decline. Our proposal will also support that plan's habitat goal to secure, maintain, and enhance sufficient high-quality habitat throughout the year to achieve and maintain sustainable populations of waterbirds throughout North America.

Our protection plan benefits 12 waterbird species of conservation concern, including breeding habitat for least tern, a species of high concern. It also provides salt marsh protection for migrating and summer foraging habitat for immature and mature little blue heron, snowy egret, tricolored heron, and roosting and staging habitat for roseate tern. For species of moderate concern, our plan provides foraging habitat for Bonaparte's gull, black-crowned night-heron, common tern, and great cormorant.

#### ***Maine Department of Inland Fisheries and Wildlife (MDIFW) Species Assessments and Management Plans***

The MDIFW has developed species assessment and management plans for wild turkeys, migratory shorebirds, passerines, ruffed grouse, woodcocks, common eiders, waterfowl, bald eagles, peregrine falcons, piping plovers, black racers, Blanding's turtles, grasshopper sparrows, spotted turtles, moose, deer, coyotes, river otters, snowshoe hares, beavers, minks, bobcats, raccoons, muskrats, red foxes, woodchucks, gray foxes, and short-tailed and long-tailed weasels. Our proposal conforms to those plans by supporting permanent habitat protection for those species.

#### ***Shortnose Sturgeon Recovery Plan (1998)***

The recovery objective in this plan is to recover populations to levels of abundance at which they no longer require protection under the Endangered Species Act. For each population segment, the minimum population size will be large enough to maintain genetic diversity and avoid extinction. The York River supports potential, high-quality habitat for shortnose sturgeon, and it probably once lived in the river. Although no sturgeons recently have been documented in the York River, it can serve as a recovery site as the recovery plan is implemented.

## **IV. Our Proposed Action**

With the support of our conservation partners, we will acquire 5,558 acres of land from willing sellers. We believe that acreage represents a realistic objective over the next 15 years, given our past rate of acquisition. We will continue to cooperate with the state and those partners in seeking ways to protect the remaining 28,442 acres (of the 34,000 acres of priority lands) of land that supports important trust resources and can accommodate priority public uses. We may participate in managing some of those lands, but we do not anticipate the need for the Service to acquire them.

Maps A-1 through A-6 and associated tables A2.1 through A2.7 show our proposed expansion areas. The tables list map lots by division and provide other information we thought would be of interest, including

- Town
- Map number
- Current ownership: public or private, non-governmental organization (NGO), Coast Guard (CG) or Navy
- Acreage
- Service priority for acquisition
- Proposed acquisition method

Most of the parcels that support nationally significant trust resources in our proposal are privately owned. We placed each parcel in one of two priorities for acquisition: Priority 1 or Priority 2. We identified 3,347 acres as Priority 1. Those are either unacquired parcels in our currently approved acquisition boundary, or lie immediately adjacent to that boundary.

We identified 2,211 acres as Priority 2. Those are parcels that lie within the proposed York River Division.

We will use those priorities only when two parcels are available for acquisition, and we have funding to purchase only one. Those priorities do not reflect a landowner's preference to sell the land. Because Service policy is to acquire land only from willing sellers, the order of actual land acquisition will be based on availability.

#### ❖ **York River Division**

The York River is located in the southern third of York County, and traverses its width. The York River watershed is an area of concern in southern Maine. The Mt. Agamencus to the Sea Initiative involves many local and state land trusts in the cooperative protection of this area. The Service identified areas of the York River that support federal trust resources, and will partner with conservation groups in protecting them. That area lies adjacent to and west of U.S. Route 1 and the Maine Turnpike, and is bounded by the Town of York and the Atlantic Ocean to the east. The York River system contains substantial, undeveloped expanses of salt marsh reaching from the sea inland past the Maine Turnpike. The land valuable to wildlife includes contiguous and disjunct fingers of salt marsh along the main channel and tributaries of the river.

The proposed new division and most of the other division expansion areas are composed of about 60 percent tidal marsh (creek, flat, emergent wetland, field). The remaining lands consist mostly of forest. Elevation rises from sea level to 11 feet above sea level. The wetlands and adjacent uplands provide the most valuable wildlife habitat. The target habitat is high salt marsh dominated by cordgrass and needle rush.

The forest community includes lowland red maple, pitch pine, and white pine-red oak stands, and small tracts of shrublands, grasslands, freshwater wetlands, and uplands. Those occur on sandy soils and rocky slopes adjacent to the shores. The dominant trees are red and white oak, although white pine, pitch pine, and red maple are also present. Patches of huckleberry, lowbush, and velvet-leaf blueberry grow in moist hollows. Hemlock mixes with an understory of gray birch. Other understory shrubs include beaked hazelnut, witch hazel, and wild raisin. Canada mayflower, bunchberry, starflower, and teaberry are common herbs in this natural community.

The riverine system meanders more than 10 miles through low marshes and gently sloping banks. The salt marsh and protected shores benefit migratory birds. Waterfowl, particularly black ducks, use the tidal river and salt marsh during migration. The winding, protected river is especially important as habitat for black ducks in harsh weather. Other abundant species include Canada goose, mallard, bufflehead, red-breasted merganser, and common goldeneye. Most puddle ducks use the salt pannes and the upper reaches of tidal creeks, while diving ducks prefer the deeper parts of the tidal creeks and the mouths of rivers and streams.

Greater and lesser yellowlegs, semipalmated and least sandpipers, and black-bellied and semipalmated plovers forage on the tidal river mudflats. Commercially and recreationally important finfish and shellfish rely on the salt marsh as nursery habitat, including American eel, alewife, and rainbow smelt.

New England cottontail, a species petitioned for listing under the Endangered Species Act, inhabits several of the shrubland borders of the tributaries of the York River. Those pockets of thicket habitat also provide habitat for American woodcock, prairie warbler, and chestnut-sided warbler. Protecting that habitat will also benefit the saltmarsh sharp-tailed sparrow, a species of top conservation priority in Partners in Flight Planning Area 9 and a species of Continental Importance in the Eastern Avifaunal Biome, designated in need of immediate conservation action.

Various northern bird species winter in the area, and it is also important to a variety of migratory passerines, shorebirds, wading birds, gulls, terns, and raptors. Virginia and sora rails are present, and grouse, pheasants, and turkeys use the area. Northern harriers breed in the estuary communities, and Cooper's and broad-winged hawks nest in the upland forest. Infrequently during the winter, bald eagles stay in parts of the area, where they feed primarily on herring gulls and black ducks. Rough-legged hawks, northern harriers, and sharp-shinned hawks hunt over the salt marshes in winter. Short-eared, great horned, and snowy owls feed on small mammals and birds in the salt marsh during winter. Great horned, barred, and northern saw-whet owls are fairly common throughout the area, but only great horned owls have been confirmed as nesters.

Commercially and recreationally important finfish and shellfish species that rely on coastal wetlands for important nursery areas will also benefit, including American eel and alewife. A rich assemblage of mammals, including deer, river otter, mink, striped skunk, raccoon, red fox, moose, fisher, gray fox, beaver, porcupine, snowshoe hare, New England cottontail, and other small mammals live in the York River watershed. Our proposed new division will provide continued, wildlife-dependent recreation, including wildlife observation, and waterfowl and deer hunting.

## V. Protection Options Considered

The following discussion identifies the protection options that are available to us. We evaluated each of them before developing our proposed action, which we present in detail in attachments 1 and 2. Our policies are to acquire only the minimal interest necessary to meet refuge goals and objectives, and to acquire land only from willing sellers. We believe our proposed action is a cost-effective way of providing the minimal level of protection needed to meet those objectives, given the information now available to us. However, as lands become available in the future, changes in their protection options may be warranted to ensure we are using the best option at that time.

### ❖ Option 1. No Service Acquisition; Protection by Others

Under option 1, we will maintain present refuge acquisition boundaries, and not expand the refuge or protect additional lands. However, we will continue to purchase lands within the approved land acquisition

boundary through fee title or conservation easement. Our draft CCP/EA evaluates this “no new acquisition” option in alternative A.

Under that option, we will cooperate with such state agencies as the Maine Department of Inland Fisheries and Wildlife, State Parks, and Conservation and the Land for Maine’s Future, as well as land trusts in our 12 neighboring towns, national non-government organizations like The Nature Conservancy, Maine Audubon Society, The Trust for Public Land, Maine Coast Heritage Trust, and Friends of Rachel Carson Refuge to support their land protection and management programs of mutual interest and benefit to the Service.

Our concern with this option is that, although ownership by those groups affords some level of protection, they often do not have the financial or administrative resources to buy all the significant lands, nor can they actively manage the lands as needed to protect priority species. Without our contribution to land protection, many of the lands we identified would likely be developed. Conservation groups and the public have stated that Service acquisition and management is vital for ensuring the long-term protection of nationally significant lands that support trust resources.

In summary, we do not propose to use option 1 because

- It would not adequately protect federal trust resources on the refuge;
- It does not support the refuge vision, goals, and objectives; and
- It is not supported by the state or the majority of the public, our partners, or elected officials.

❖ **Option 2. Less-than-Fee Acquisition by the Service**

In option 2, we will protect and manage lands by purchasing only a partial interest, typically in the form of a conservation easement. That option keeps the land in private ownership, while allowing the refuge some control over its use. We will negotiate with each landowner the extent of the rights we are interested in buying. Those may vary, depending on the configuration and location of the land, the current extent of development, the nature of wildlife activities nearby, the needs of the landowner, and other considerations. Attachment 2 identifies the parcels that we propose to acquire through conservation easements.

Easements are most appropriate for use when

- The parcel is large, and only minimal management of the resource is needed, and development is the greatest threat;
- The landowner wants to maintain ownership; or
- Only a portion of the parcel contains lands of interest to the Service.

❖ **Option 3. Full Fee Simple and Less-than-Fee Acquisition by the Service**

In option 3, we will use a combination of full fee simple and less-than-fee acquisition, the latter in the form of conservation easements. We propose to acquire 237 parcels totaling 1,240 acres in full fee simple and 106 parcels totaling 4,318 acres via easement. This option provides us the utmost flexibility in managing priority parcels, and ensures the permanent protection of nationally significant federal trust resources. Generally, the lands we buy require active management. We propose fee acquisition when adequate land protection is not assured under other ownerships, or active land management is required, or the parcel is

too small to sell a conservation easement. Attachment 2 identifies, parcel by parcel, what we propose to acquire in full fee simple and through conservation easements.

We should also note that as future transactions progress, a conservation easement could be converted to full fee simple acquisition: for example, when an owner is interested in selling the remainder of interest in the land; or when changes to zoning or land use regulation compromise resource values; or, when our management objectives change so that more active management is necessary to meet refuge goals and objectives. We will evaluate that need on a case-by-case basis.

## VI. Acquisition Methods

We may use four methods of acquiring either a full or a partial interest in the parcels identified for Service acquisition: (1) fee purchase (e.g., complete title, or a partial interest like a conservation easement); (2) donation; (3) exchange; or (4) transfer.

### ❖ Purchase

Fee purchase involves buying a full (fee simple) or partial interest (conservation easement) in land from willing sellers as our funding permits. Fee simple ownership assures the permanent protection of resources, and allows the complete control necessary for habitat management activities, providing public use opportunities, and managing public access. Conservation easements will ensure the permanent protection of resources and allow for the minimum control necessary for management activities. Generally, we purchase at least the development rights, and possibly, the ability to control access during the nesting season.

A conservation easement refers to the purchase of limited rights (less-than-fee) from a willing landowner. That landowner retains ownership of the land, and sells certain rights to the Service, after agreement by both parties. Easements are property rights, and are usually perpetual. If a landowner later sells the property, the easement continues as part of the title. Properties subject to easements generally remain on the tax rolls, although the assessment may be reduced by the reduction of market value if the town gives the landowner a tax abatement for that easement.

Much of our funding to buy land in either fee or conservation easement comes from the Land and Water Conservation Fund, which is composed of certain user fees, proceeds from the disposal of surplus federal property, the federal motor boat fuels tax, and oil and gas lease revenues. About 90 percent of that fund now derives from Outer Continental Shelf oil and gas leases. Another source of funding is the Migratory Bird Conservation Fund, which derives from Federal Duck Stamp revenue. We plan to use primarily the Land and Water Conservation Fund to purchase the land our proposal identifies.

### ❖ Donation

We generally encourage donations in fee title or conservation easement for lands, provided that such management concerns as contaminants are not major issues. We are not aware of any present opportunities to accept donations.

### ❖ Exchange

We have the authority to exchange land in Service ownership for other land that has equal or greater wildlife habitat value. Inherent in that concept is the requirement to get dollar-for-dollar value, occasionally by an equalization payment. Exchanges are attractive because they usually do not increase

federal holdings or require purchase funds. However, they also may be very labor-intensive, and take a long time to complete. We are not aware of any present opportunities for an exchange.

#### ❖ **Transfer**

Transfers may occur in the future, as lands become excess to the needs of other federal agencies; however, we are not currently aware of any opportunities.

## **VII. Service Land Acquisition Policies**

Once our Director approves a new refuge acquisition boundary, we contact affected landowners to determine if they are interested in selling their properties. If an owner expresses an interest in selling, a real estate appraiser will appraise that property to determine its market value. Once appraisals have been completed and funding becomes available, we can present an offer for the landowner's consideration. Unless sold, donated, or transferred to the Service, lands within the approved acquisition boundary do not automatically become part of the refuge.

The Service, like other Federal agencies, has the power of eminent domain. We rarely use that approach, because our established policy is to work with willing sellers as funds become available. On rare occasions, we have used eminent domain, or condemnation, to clear title on unknown ownerships or to establish value. Our proposal assumes the continuation of our long-standing, willing-sellers-only policy.

Appraisals are conducted by Service appraisers or private appraisers under contract to the Service, and must meet federal as well as professional standards. We are required by law to appraise properties at market value, based on comparable sales of similar properties.

A landowner may choose to sell land to the Service in fee simple, but retain the right to occupy an existing residence, referred to as a "life-use reservation." As their name implies, life-use reservations apply to the seller's lifetime, but they can also apply to a specific number of years. After the appraisal is approved, and before making the offer, we would discount from the appraised value of the buildings and land the value for life use, based on the age of the owner and the term of the reservation. The occupant would be responsible for the upkeep on the reserved premises.

## **VIII. Coordination**

In 1998, we began to evaluate the need for additional protection at the refuge as part of its CCP. We started an Environmental Assessment (EA) to study protecting federal trust resources on lands adjacent to the refuge and establishing a new division in the York River watershed, and officially announced our planning in a Notice of Intent in the "Federal Register."

Effective conservation usually begins with effective community involvement. To ensure that our future management of the refuge will reflect the issues, concerns, and opportunities expressed by the public, we kept updated mailing lists of refuge neighbors, friends, professional contacts, and others for sharing information and updates about the CCP process.

In May and June 1998, refuge staff invited visitors to a series of morning coffees, to discuss current refuge operations and the planning process. We sent four press releases about the CCP to 15 newspapers in Maine and New Hampshire. Local public access cable stations also ran notices. The York County Coast Star, southern Maine's primary local newspaper, raised public awareness by publishing a long article about our refuge planning. We also designed and distributed leaflets about the morning coffees and our upcoming Issues Workbook.

In summer 1999, we distributed to the public 500 copies of a 12-page Issues Workbook, the backbone of this plan's important public participation component. That workbook provided background information about the planning project and a means for interested citizens to share their concerns and thoughts on important refuge issues. A refuge volunteer tallied the responses in the more than 100 workbooks that returned. In July 1999, we sent to our CCP mailing list an update summarizing the responses, and distributed it from the refuge office. Refuge planning team members met several times per month to synthesize information and prepare the CCP, and briefed the Regional Office in September 1999.

We also held several information-gathering workshops in 1999. They included a gathering in March of the extended planning team, a public use and community goals meeting in June, and, a biological resources meeting, also in June. Our facilitated, all-day Alternatives Workshop in August gathered 15 stakeholder representatives. Refuge staff and 10 observers, including congressional representatives and Service administrators, assisted the workshop participants in setting goals in the topical areas of wildlife, community, public use, and water quality. We mailed a complete summary of their comments and the materials the workshop generated to participants and observers soon after.

Throughout our draft CCP/EA planning process, we solicited and carefully considered public comments on Service land acquisition. We worked with the MDIFW, statewide conservation organizations, local municipalities, local land trusts and national conservation organizations that are directly involved in land protection strategies in coastal Maine. Their continuing work will preserve additional federal trust resources. Specifically, the State of Maine helped us develop the Habitat Suitability Model and prioritize lands for Service acquisition.

We have prepared this draft LPP to support the land protection proposal in our draft CCP/EA for the refuge. We are distributing it to affected landowners, our conservation partners, State of Maine and local agencies, and other interested individuals and groups for a 30-day public review and comment period. We will also hold public meetings during that period.

## **IX. Socioeconomic and Cultural Impacts**

Some say Maine's seacoast is the backbone of the state economy. That is not surprising, as Maine's southern coast and mid-coast regions are growing at a faster rate (1.7 percent between 1990 and 1996) than the state as a whole (0.9 percent between 1990 and 1996), with most of its 1.2 million people living in coastal counties (State Planning Office, 2000). Most certainly, the natural beauty and rich resources of the shore and ocean draw people to the coast.

The refuge directly contributes to the economies of 11 towns in coastal Maine. Since 1966, the Service has paid refuge revenue sharing to counties or towns for refuge land it administers. Lands acquired by the Service are removed from the tax rolls. However, under the provisions of the Refuge Revenue Sharing Act, the county or other local unit of government receives an annual revenue sharing payment that often equals or exceeds the amount that would have been collected from property taxes if the land had stayed in private ownership. In 2004, the Service paid \$58,019 to communities in Maine for refuge lands. If the Service acquires all the additional lands in this proposal, it would add \$65,000 to Maine communities in refuge revenue sharing, projecting the 2004 distribution rate Congress allocated. This figure does not take into account property tax losses, if any.

Wildlife-dependent uses of the refuge include consumptive and non-consumptive recreational activities. Consumptive activities include sport hunting for waterfowl (including eiders), upland gamebirds, and deer, as well as fishing and shellfishing. Non-consumptive activities include wildlife observation and photography and environmental education and interpretation. This proposal will expand opportunities for hunting, watching, and photographing wildlife, and environmental education and interpretation.

The industries of coastal Maine include lobstering and other commercial fisheries, commercial seabird viewing, other natural resource-based industries such as timber and blueberries, environmental education, aquaculture, real estate and land development. In some areas, such as Route 1 in Wells, the characteristic land use is commercial strip development. In others, such as York Beach, there is extensive primary and secondary residential development. Still others, such as sections along Route 9 in Kennebunkport, are characterized as rural with scattered development, or series of small town or village centers, such as York Harbor, Ogunquit, Kennebunkport, and the historic resort village of Biddeford Pool. Other areas have extensive recreational land uses, theme attractions such as Old Orchard Beach, and recreational beaches such as Scarborough Beach and Ferry Beach. A series of visitor attractions range from York's Wild Kingdom to the Wells National Estuarine Research Reserve. Most of those are outdoor attractions, catering to both local and tourist populations.

The Service routinely reviews and assesses archaeological and historic sites under Section 106 of the National Historic Preservation Act (NHPA), when ground-disturbing activities are likely. A detailed archaeological report, "Rachel Carson National Wildlife Refuge Historic and Prehistoric Archaeological Resource Survey" (1995), is on file at refuge headquarters. It identifies areas of high, moderate, and low or unknown archaeological resource sensitivity.

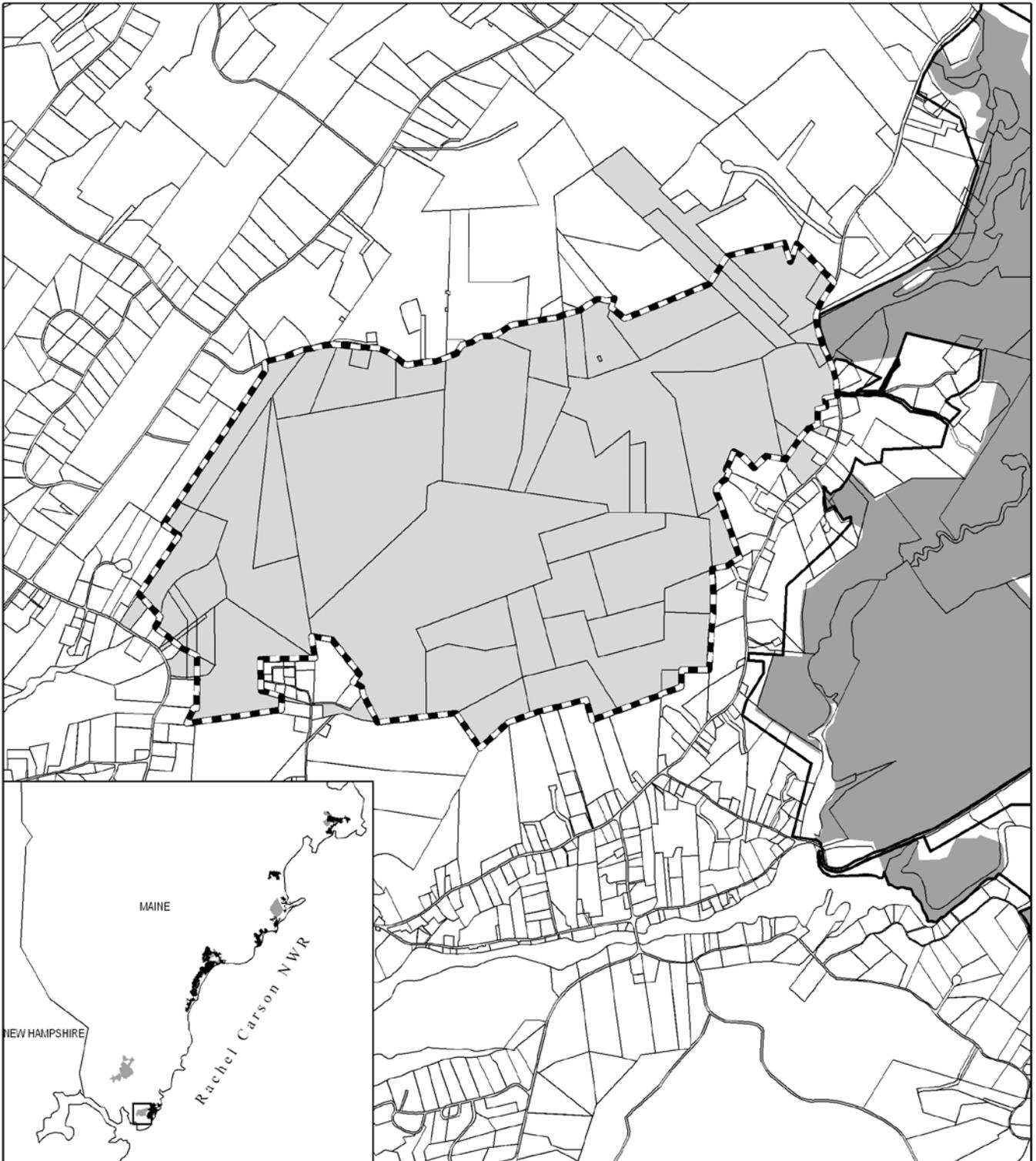
Our proposal would increase the protection of cultural resources, because refuge lands would not be developed, and because we adhere to the protection requirements of the NHPA. Service ownership would protect known cultural sites against vandalism, and would protect as yet unidentified or undeveloped sites from disturbance or destruction. Our environmental education and interpretation programs will also continue to promote public understanding and appreciation of the area's rich cultural resources. In summary, we do not predict any significant, adverse, socioeconomic or cultural impacts from our proposed action.



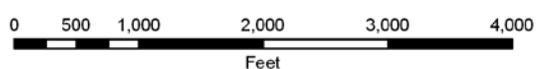
U.S. Fish and Wildlife Service

Land Protection Plan Expansion Areas

Rachel Carson National Wildlife Refuge - Brave Boat Harbor Division Kittery, ME - Map A-1



- |   |                       |   |           |
|---|-----------------------|---|-----------|
|  | LPP Focus Areas       |  | Approved  |
|  | LPP Expansion Parcels |  | Easement  |
|  | Kittery Parcels       |  | Ownership |



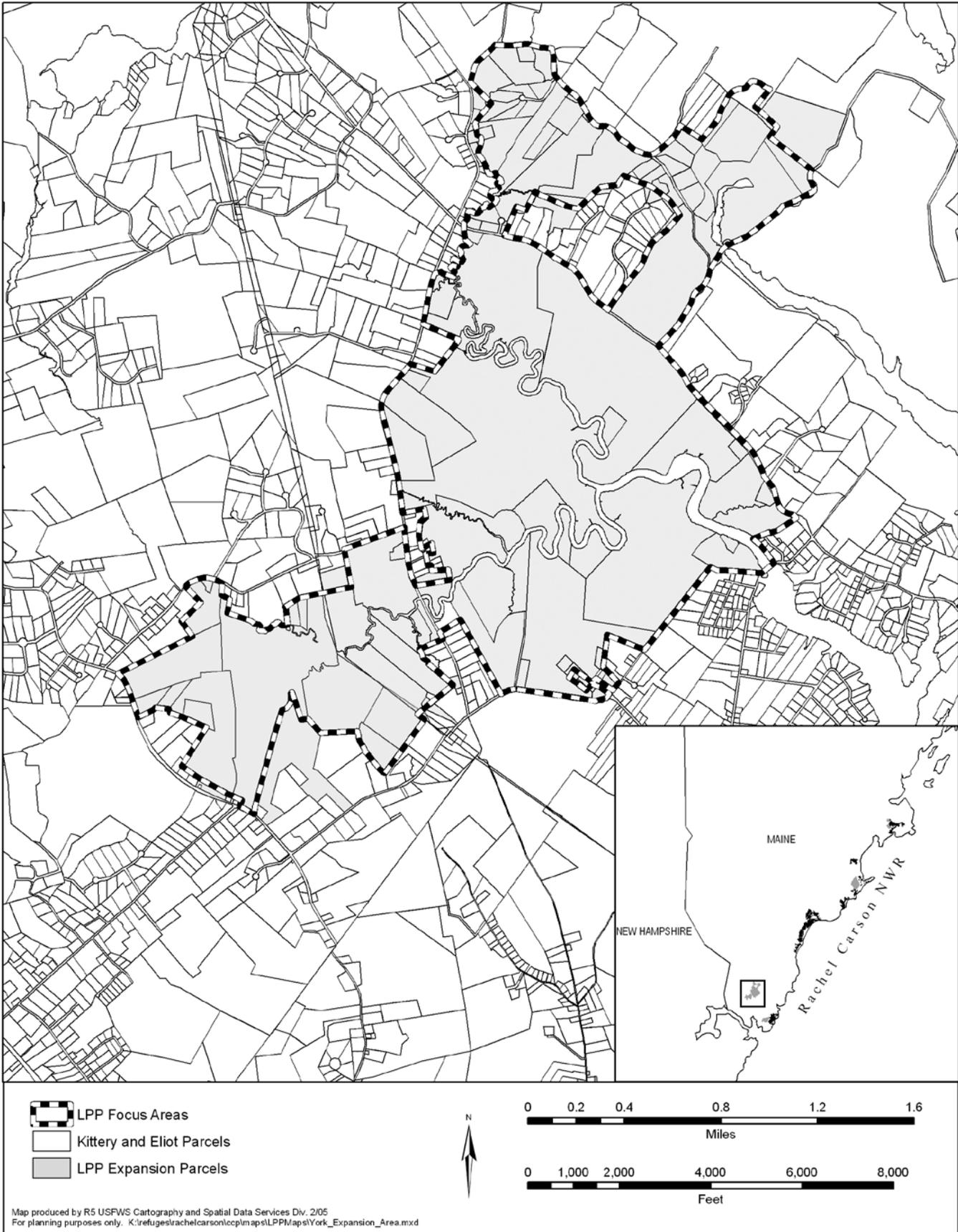
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U.S. Fish and Wildlife Service

Land Protection Plan Expansion Areas

Rachel Carson National Wildlife Refuge - York River Division York & Eliot, ME - Map A-2

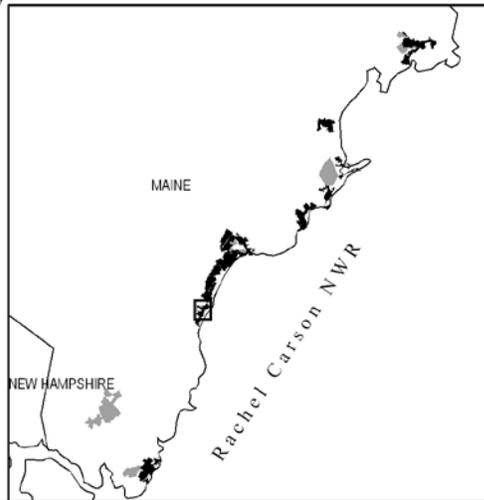
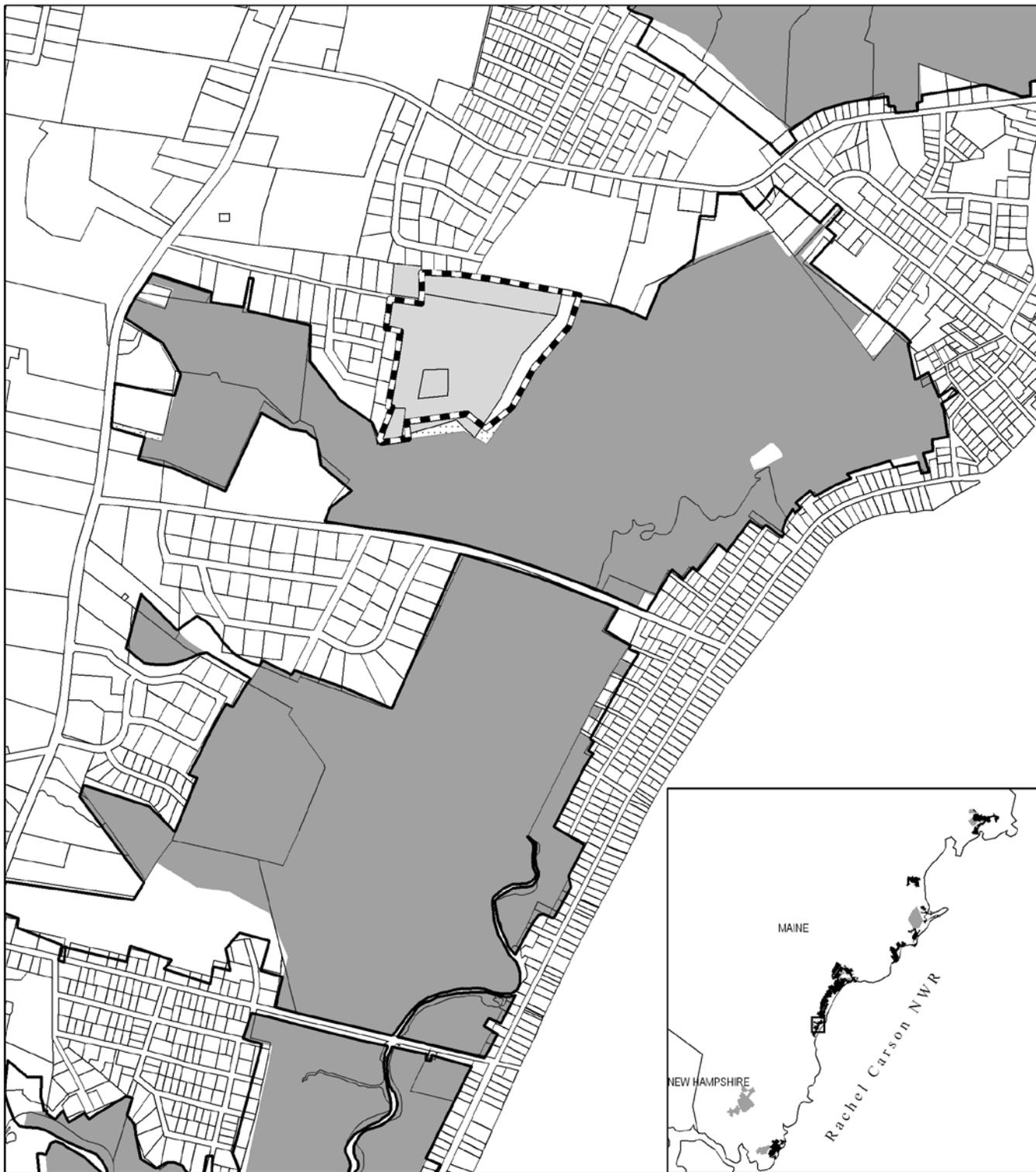




U.S. Fish and Wildlife Service

Land Protection Plan Expansion Areas

Rachel Carson National Wildlife Refuge - Moody Division Wells, ME - Map A-3



-  LPP Focus Areas
-  LPP Expansion Parcels
-  Approved
-  Easement
-  Ownership



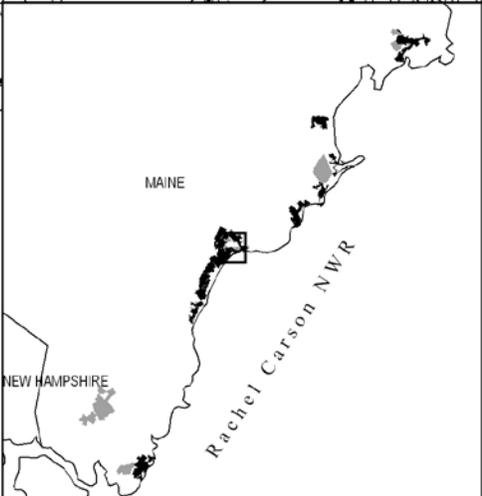
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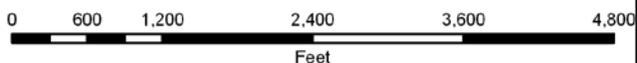
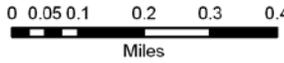
U.S. Fish and Wildlife Service

Land Protection Plan Expansion Areas

Rachel Carson National Wildlife Refuge - Upper Wells and Mousam River Divisions Wells, ME - Map A-4



-  LPP Focus Areas
-  Approved
-  LPP Expansion Parcels
-  Easement
-  Ownership



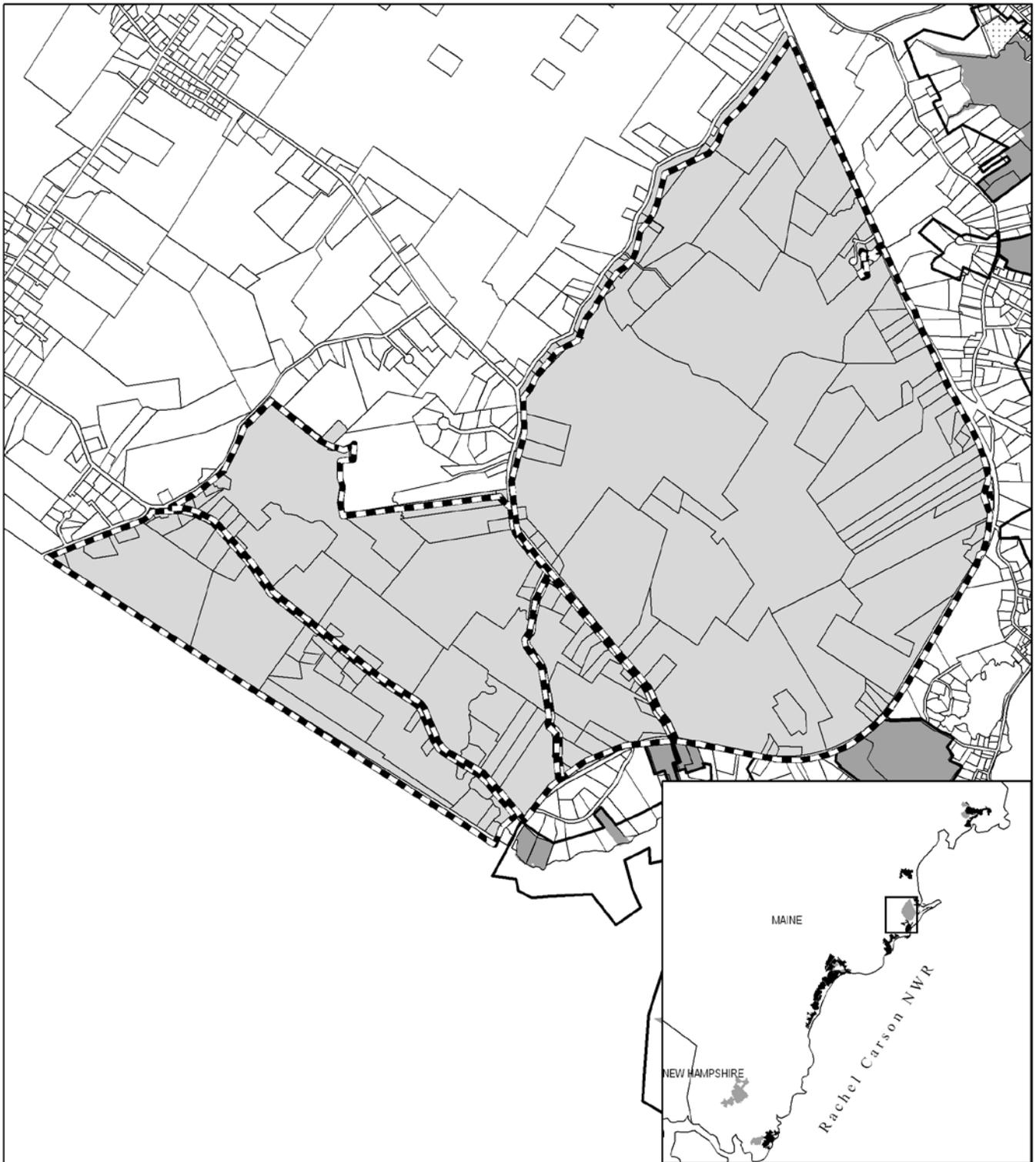
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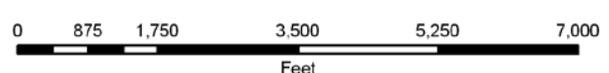
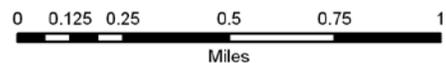
U.S. Fish and Wildlife Service

Land Protection Plan Expansion Areas

Rachel Carson National Wildlife Refuge - Biddeford Pool Division Biddeford, ME - Map A-5



-  LPP Focus Areas
-  LPP Expansion Parcels
-  Approved
-  Easement
-  Ownership



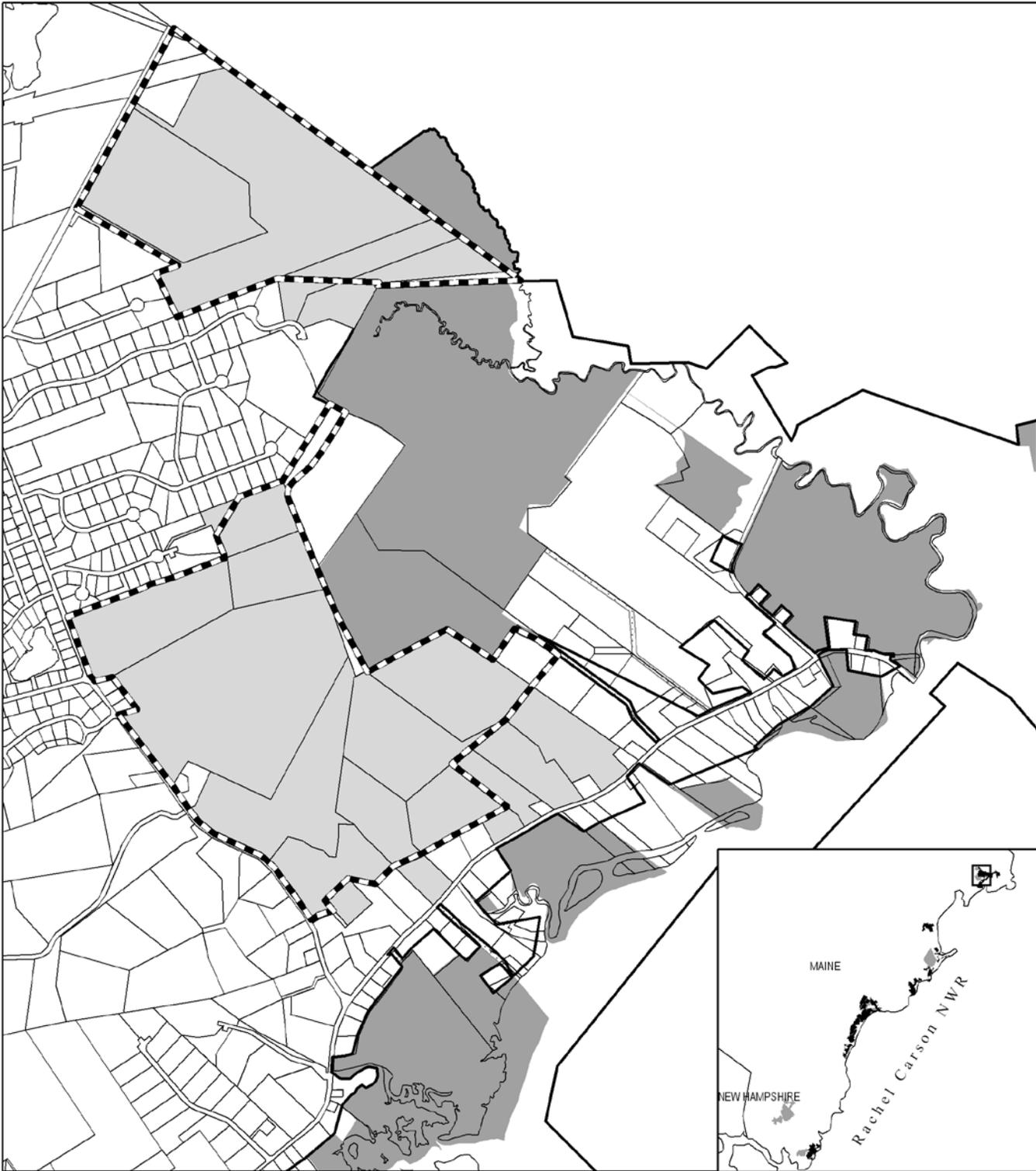
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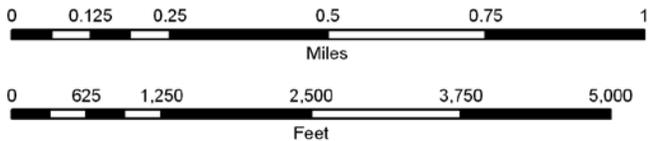
U.S. Fish and Wildlife Service

Land Protection Plan Expansion Areas

Rachel Carson National Wildlife Refuge - Spurwink Division Scarborough, ME - Map A-6



- LPP Focus Areas
- LPP Expansion Parcels
- Ownership
- Approved
- Easement



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### Key to Tables

<b>Parcel ID (Map Lot)</b>	Map, block, and lot numbers from town tax maps.
<b>Town</b>	The town where the parcel is located.
<b>Map #</b>	The map in attachment 1 that shows the parcel.
<b>Ownership</b>	All parcels in the proposed acquisition area are privately owned, i.e. owned by individuals, corporations, conservation organizations, etc.
<b>Acres</b>	Estimated acreage for each parcel from our Geographic Information System (GIS) database. This estimate may not exactly match town tax records; some parcels lack detailed information.
<b>Priority 1</b>	Parcels not yet acquired within the currently approved Refuge boundary.
<b>Priority 2</b>	All other parcels in the proposed refuge boundary and the new York River Division.
<b>Acquisition Method</b>	Whether we would pursue acquisition in full fee simple (fee) or a partial fee conservation easement (see discussion in “Acquisition Methods”). We identify what we believe, given the information now available, is the minimal level of Service interest needed for project objectives that are also cost-effective. However, as lands become available in the future, changes may be warranted to ensure we are using the option that best fits the situation at that time and meets our and landowner needs.

**Table A2.1. Brave Boat Harbor Division - Kittery**

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
63,0,29	Kittery	A-1	Private	12.0	1	Easement
63,0,31	Kittery	A-1	Private	8.0	1	Fee
63,0,23	Kittery	A-1	Private	42.0	1	Easement
63,0,32	Kittery	A-1	Private	6.0	1	Fee
63,0,34	Kittery	A-1	Private	8.3	1	Fee
63,0,11A	Kittery	A-1	Private	12.0	1	Easement
56,0,6	Kittery	A-1	Private	9.5	1	Fee
63,0,11	Kittery	A-1	Private	21.0	1	Easement
63,0,27	Kittery	A-1	Private	7.8	1	Fee
56,0,1	Kittery	A-1	Private	40.0	1	Easement
63,0,25	Kittery	A-1	Private	17.0	1	Easement
57,0,24	Kittery	A-1	Private	8.0	1	Fee
57,0,22	Kittery	A-1	Private	19.0	1	Easement
57,0,1	Kittery	A-1	Private	0.0	1	Fee
57,0,4	Kittery	A-1	Private	6.2	1	Fee
57,0,5	Kittery	A-1	Private	8.3	1	Fee
57,0, 20	Kittery	A-1	Private	6.7	1	Fee
57,0,18	Kittery	A-1	Private	7.0	1	Fee
57,0,6	Kittery	A-1	Private	13.6	1	Easement
57,0,11	Kittery	A-1	Private	0.0	1	Fee
57,0,14	Kittery	A-1	Private	1.0	1	Fee
63,0,39	Kittery	A-1	Private	13.8	1	Easement
63,0,28	Kittery	A-1	Private	8.3	1	Fee
63,0,37	Kittery	A-1	Private	10.9	1	Easement
63,0,42	Kittery	A-1	Private	1.2	1	Fee
63,0,31	Kittery	A-1	Private	3.0	1	Fee
63,0,22	Kittery	A-1	Private	1.2	1	Fee
63,0,21	Kittery	A-1	Private	0.7	1	Fee
56,0,9	Kittery	A-1	Private	6.5	1	Fee
56,0,08-1	Kittery	A-1	Private	1.0	1	Fee
56,0,08-2	Kittery	A-1	Private	4.0	1	Fee
43,0,2	Kittery	A-1	Private	26.7	1	Easement
63,0,15	Kittery	A-1	Private	3.4	1	Fee
63,0,25-1	Kittery	A-1	Private	2.8	1	Fee
63,0,3	Kittery	A-1	Private	3.3	1	Fee
42,0,18	Kittery	A-1	Private	4.6	1	Fee
63,0,4	Kittery	A-1	Private	4.1	1	Fee
42,0,24	Kittery	A-1	Private	2.0	1	Fee
42,0,16	Kittery	A-1	Private	1.4	1	Fee
57,0,8	Kittery	A-1	Private	6.2	1	Fee

**Table A2.2. York River Division - York**

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
218-057	York	A-2	Private	3.134	2	Fee
218-055	York	A-2	Private	6.452	2	Fee
218-059	York	A-2	Private	13.510	2	Easement
218-061	York	A-2	Private	10.241	2	Easement
218-060	York	A-2	Private	3.008	2	Fee
218-135	York	A-2	Private	25.143	2	Easement
218-063	York	A-2	Private	3.013	2	Fee
218-062	York	A-2	Private	3.051	2	Fee
218-064	York	A-2	Private	3.378	2	Fee
402-003	York	A-2	Private	54.458	2	Easement
218-133	York	A-2	Private	0.701	2	Fee
401-065	York	A-2	Private	5.857	2	Fee
218-131	York	A-2	Private	8.217	2	Fee
218-065	York	A-2	Private	6.255	2	Fee
218-068	York	A-2	Private	3.003	2	Fee
218-066	York	A-2	Private	3.025	2	Fee
401-067	York	A-2	Private	25.156	2	Easement
218-127	York	A-2	Private	0.360	2	Fee
218-125	York	A-2	Private	33.029	2	Easement
218-073	York	A-2	Private	17.642	2	Easement
401-069	York	A-2	Private	12.246	2	Easement
218-129	York	A-2	Private	5.090	2	Fee
218-067	York	A-2	Private	0.772	2	Fee
218-069	York	A-2	Private	3.440	2	Fee
218-123	York	A-2	Private	34.871	2	Easement
401-055	York	A-2	Private	5.656	2	Fee
402-001	York	A-2	Private	55.006	2	Easement
218-071	York	A-2	Private	0.979	2	Fee
401-053	York	A-2	Private	3.664	2	Fee
219-061	York	A-2	Private	3.165	2	Fee
219-063	York	A-2	Private	3.428	2	Fee
401-071	York	A-2	Private	3.820	2	Fee
219-027	York	A-2	Private	3.747	2	Fee
218-096	York	A-2	Private	8.812	2	Fee
218-111	York	A-2	Private	12.851	2	Easement
219-049	York	A-2	Private	80.606	2	Easement
218-093	York	A-2	Private	3.936	2	Fee
219-051	York	A-2	Private	8.123	2	Fee
218-089	York	A-2	Private	1.419	2	Fee
218-091	York	A-2	Private	1.840	2	Fee
215-040	York	A-2	Private	1.719	2	Fee
215-067	York	A-2	Private	91.363	2	Easement
215-069	York	A-2	Private	188.934	2	Easement
215-049	York	A-2	Private	1.900	2	Fee
215-051	York	A-2	Private	8.452	2	Fee
215-053	York	A-2	Private	12.398	2	Easement

**Table A2.2. York River Division - York** *(continued)*

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
215-055	York	A-2	Private	4.836	2	Fee
215-065	York	A-2	Private	221.558	2	Easement
215-063	York	A-2	Private	3.898	2	Fee
207-045	York	A-2	Private	36.285	2	Easement
214-035	York	A-2	Private	43.818	2	Easement
215-071	York	A-2	Private	5.932	2	Fee
207-043	York	A-2	Private	25.126	2	Easement
214-033	York	A-2	Private	2.310	2	Fee
208-045	York	A-2	Private	148.325	2	Easement
214-029	York	A-2	Private	2.998	2	Fee
208-001	York	A-2	Private	19.310	2	Easement
208-005	York	A-2	Private	3.393	2	Fee
208-003	York	A-2	Private	17.414	2	Easement
214-028	York	A-2	Private	17.475	2	Easement
208-017	York	A-2	Private	51.110	2	Easement
208-049	York	A-2	Private	5.661	2	Fee
208-047	York	A-2	Private	11.523	2	Easement
207-041	York	A-2	Private	44.836	2	Easement
214-003	York	A-2	Private	1.835	2	Fee
208-025	York	A-2	Private	12.299	2	Easement
207-042	York	A-2	Private	2.624	2	Fee
208-023	York	A-2	Private	29.170	2	Easement
206-022	York	A-2	Private	0.905	2	Fee
206-019	York	A-2	Private	3.792	2	Fee
206-021	York	A-2	Private	4.438	2	Fee
206-019	York	A-2	Private	9.154	2	Fee
206-009	York	A-2	Private	26.235	2	Easement
206-013	York	A-2	Private	23.302	2	Easement
208-032	York	A-2	Private	1.657	2	Fee
206-049	York	A-2	Private	2.997	2	Fee
208-031	York	A-2	Private	2.087	2	Fee
206-004	York	A-2	Private	3.019	2	Fee
207-039	York	A-2	Private	29.516	2	Easement
401-056	York	A-2	Private	5.233	2	Fee
401-070	York	A-2	Private	4.778	2	Fee
206-047	York	A-2	Private	34.934	2	Easement
208-036	York	A-2	Private	2.145	2	Fee
208-029	York	A-2	Private	2.059	2	Fee
208-035	York	A-2	Private	0.991	2	Fee
208-027	York	A-2	Private	1.983	2	Fee
208-033	York	A-2	Private	2.129	2	Fee
208-034	York	A-2	Private	103.427	2	Easement
406-017	York	A-2	Private	7.904	2	Fee

**Table A2.3. York River Division - Eliot**

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
76,17	Eliot	A-2	Private	1.3	1	Fee
57,0,8	Eliot	A-2	Private	130.0	1	Easement
76,9	Eliot	A-2	Private	3.2	1	Fee
76,10	Eliot	A-2	Private	3.3	1	Fee
66,47	Eliot	A-2	Private	6.9	1	Fee
58,01	Eliot	A-2	Private	116.0	1	Easement
57,5	Eliot	A-2	Private	53.0	1	Easement
66,48	Eliot	A-2	Private	3.6	1	Fee
58,0,3	Eliot	A-2	Private	18.6	1	Easement
56,5	Eliot	A-2	Private	14.6	1	Easement
58,0,2	Eliot	A-2	Private	10.0	1	Easement

**Table A2.4. Moody Division - Wells**

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
00111-014.	Wells	A-3	Private	4.39	1	Fee
00111-015.	Wells	A-3	Private	14.78	1	Easement
00111-015.A	Wells	A-3	Private	0.75	1	Fee
00111-016.2	Wells	A-3	Private	0.58	1	Fee

**Table A2.5. Upper Wells and Mousam - Kennebunk**

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
22 2A	Kennebunk	A-4	Private	49.60	1	Fee
22 103	Kennebunk	A-4	Private	5.22	1	Fee
22 102	Kennebunk	A-4	Private	5.79	1	Fee
21 16	Kennebunk	A-4	Private	17.88	1	Fee
22 101	Kennebunk	A-4	Private	4.38	1	Fee
22 4	Kennebunk	A-4	Private	26.35	1	Fee
22 5D	Kennebunk	A-4	Private	24.62	1	Fee
22 2B	Kennebunk	A-4	Private	7.27	1	Fee
22 5	Kennebunk	A-4	Private	5.09	1	Fee
22 5E	Kennebunk	A-4	Private	5.97	1	Fee
12 3	Kennebunk	A-4	Private	31.84	1	Fee
12 2	Kennebunk	A-4	Private	12.44	1	Fee
22 3	Kennebunk	A-4	Private	3.43	1	Fee
23 1	Kennebunk	A-4	Private	15.56	1	Fee
23 1B	Kennebunk	A-4	Private	5.60	1	Fee
22 1	Kennebunk	A-4	Private	59.79	1	Fee
23 1C	Kennebunk	A-4	Private	20.52	1	Fee
12 12	Kennebunk	A-4	Private	5.59	1	Fee
23 12	Kennebunk	A-4	Private	1.74	1	Fee
23 11	Kennebunk	A-4	Private	1.55	1	Fee
23 13	Kennebunk	A-4	Private	1.58	1	Fee

**Table A2.5. Upper Wells and Mousam - Kennebunk** *(continued)*

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
12 13	Kennebunk	A-4	Private	10.60	1	Fee
23 14	Kennebunk	A-4	Private	2.12	1	Fee
23 15	Kennebunk	A-4	Private	2.14	1	Fee

**Table A2.6. Biddeford Pool Division**

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
4-56-2	Biddeford	A-5	Private	0.97	1	Fee
4-56-1	Biddeford	A-5	Private	1.74	1	Fee
4-56	Biddeford	A-5	Private	5.07	1	Fee
4-40	Biddeford	A-5	Private	6.68	1	Fee
4-73	Biddeford	A-5	Private	0.63	1	Fee
4-72	Biddeford	A-5	Private	0.88	1	Fee
4-70	Biddeford	A-5	Private	2.99	1	Fee
4-61-9	Biddeford	A-5	Private	1.00	1	Fee
4-61-1	Biddeford	A-5	Private	1.77	1	Fee
4-61-6	Biddeford	A-5	Private	1.06	1	Fee
4-61-5	Biddeford	A-5	Private	3.03	1	Fee
4-61-3	Biddeford	A-5	Private	1.96	1	Fee
4-61-7	Biddeford	A-5	Private	1.21	1	Fee
4-61-8	Biddeford	A-5	Private	1.26	1	Fee
4-61-2	Biddeford	A-5	Private	3.00	1	Fee
4-61	Biddeford	A-5	Private	19.98	1	Easement
4-58-1	Biddeford	A-5	Private	14.99	1	Easement
4-57-1	Biddeford	A-5	Private	0.95	1	Fee
4-58	Biddeford	A-5	Private	0.83	1	Fee
4-57	Biddeford	A-5	Private	34.46	1	Easement
4-53-1	Biddeford	A-5	Private	2.88	1	Fee
4-53	Biddeford	A-5	Private	1.77	1	Fee
9-18	Biddeford	A-5	Private	127.11	1	Easement
5-10	Biddeford	A-5	Private	0.67	1	Fee
5-13-1	Biddeford	A-5	Private	1.41	1	Fee
5-13-4	Biddeford	A-5	Private	104.07	1	Easement
5-13-2	Biddeford	A-5	Private	5.66	1	Fee
5-18	Biddeford	A-5	Private	28.27	1	Easement
5-15	Biddeford	A-5	Private	1.28	1	Fee
4-74	Biddeford	A-5	Private	55.71	1	Easement
4-36-2	Biddeford	A-5	Private	2.95	1	Fee
4-36-3	Biddeford	A-5	Private	2.90	1	Fee
4-36-4	Biddeford	A-5	Private	2.83	1	Fee
4-32	Biddeford	A-5	Private	1.20	1	Fee
4-31	Biddeford	A-5	Private	2.98	1	Fee
4-32-1	Biddeford	A-5	Private	2.03	1	Fee
4-30-1	Biddeford	A-5	Private	2.21	1	Fee
4-30-2	Biddeford	A-5	Private	1.03	1	Fee

**Table A2.6. Biddeford Pool Division** *(continued)*

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
4-37	Biddeford	A-5	Private	42.47	1	Easement
4-30	Biddeford	A-5	Private	69.16	1	Easement
4-29	Biddeford	A-5	Private	15.84	1	Easement
4-28-1	Biddeford	A-5	Private	8.53	1	Fee
4-75	Biddeford	A-5	Private	3.59	1	Fee
4-74-1	Biddeford	A-5	Private	2.06	1	Fee
4-67	Biddeford	A-5	Private	4.52	1	Fee
4-68	Biddeford	A-5	Private	7.05	1	Fee
4-64	Biddeford	A-5	Private	3.86	1	Fee
4-63	Biddeford	A-5	Private	50.10	1	Easement
4-62	Biddeford	A-5	Private	3.21	1	Fee
4-78	Biddeford	A-5	Private	1.42	1	Fee
4-69	Biddeford	A-5	Private	1.14	1	Fee
4-66-3	Biddeford	A-5	Private	1.95	1	Fee
4-66-1	Biddeford	A-5	Private	1.70	1	Fee
4-66-2	Biddeford	A-5	Private	1.67	1	Fee
4-65	Biddeford	A-5	Private	0.62	1	Fee
4-66	Biddeford	A-5	Private	26.94	1	Easement
4-71-1	Biddeford	A-5	Private	0.41	1	Fee
4-71	Biddeford	A-5	Private	0.80	1	Fee
4-82-5	Biddeford	A-5	Private	1.39	1	Fee
4-82-3	Biddeford	A-5	Private	1.62	1	Fee
4-82-6	Biddeford	A-5	Private	0.95	1	Fee
4-82	Biddeford	A-5	Private	85.68	1	Easement
4-59	Biddeford	A-5	Private	18.08	1	Easement
4-59-1	Biddeford	A-5	Private	0.94	1	Fee
4-39	Biddeford	A-5	Private	0.79	1	Fee
4-59-2	Biddeford	A-5	Private	2.14	1	Fee
4-59-4	Biddeford	A-5	Private	41.00	1	Easement
4-59-3	Biddeford	A-5	Private	29.61	1	Easement
4-48-3	Biddeford	A-5	Private	7.05	1	Fee
4-48-2	Biddeford	A-5	Private	7.11	1	Fee
4-48	Biddeford	A-5	Private	19.67	1	Easement
4-44	Biddeford	A-5	Private	5.74	1	Fee
4-43	Biddeford	A-5	Private	3.59	1	Fee
4-38-3	Biddeford	A-5	Private	1.16	1	Fee
4-38-1	Biddeford	A-5	Private	0.73	1	Fee
4-38-2	Biddeford	A-5	Private	2.93	1	Fee
4-36-1	Biddeford	A-5	Private	2.98	1	Fee
4-36	Biddeford	A-5	Private	2.49	1	Fee
4-26-1	Biddeford	A-5	Private	0.93	1	Fee
4-38	Biddeford	A-5	Private	30.89	1	Easement
4-38-5	Biddeford	A-5	Private	0.62	1	Fee
4-23-1	Biddeford	A-5	Private	1.21	1	Fee
4-24-3	Biddeford	A-5	Private	6.14	1	Fee
4-25-3	Biddeford	A-5	Private	1.39	1	Fee

**Table A2.6. Biddeford Pool Division** *(continued)*

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
4-25-9	Biddeford	A-5	Private	1.33	1	Fee
4-25-7	Biddeford	A-5	Private	0.94	1	Fee
4-33	Biddeford	A-5	Private	0.78	1	Fee
4-35	Biddeford	A-5	Private	4.89	1	Fee
4-111	Biddeford	A-5	Private	55.76	1	Easement
5-13-5	Biddeford	A-5	Private	3.37	1	Fee
5-11	Biddeford	A-5	Private	0.62	1	Fee
5-15-1	Biddeford	A-5	Private	1.40	1	Fee
5-15-2	Biddeford	A-5	Private	1.27	1	Fee
5-15-3	Biddeford	A-5	Private	1.25	1	Fee
5-27	Biddeford	A-5	Private	0.81	1	Fee
4-25	Biddeford	A-5	Private	205.33	1	Easement
10-25	Biddeford	A-5	Private	3.88	1	Fee
4-112	Biddeford	A-5	Private	3.80	1	Fee
5-23-1	Biddeford	A-5	Private	1.42	1	Fee
5-23	Biddeford	A-5	Private	1.99	1	Fee
5-19	Biddeford	A-5	Private	44.70	1	Easement
5-28	Biddeford	A-5	Private	26.72	1	Easement
5-28-1	Biddeford	A-5	Private	3.67	1	Fee
5-29-1	Biddeford	A-5	Private	7.28	1	Fee
5-29-3	Biddeford	A-5	Private	12.04	1	Easement
5-34-1	Biddeford	A-5	Private	0.82	1	Fee
5-33-1	Biddeford	A-5	Private	2.81	1	Fee
5-39	Biddeford	A-5	Private	1.37	1	Fee
5-40	Biddeford	A-5	Private	30.78	1	Easement
10-45	Biddeford	A-5	Private	3.13	1	Fee
10-46	Biddeford	A-5	Private	2.35	1	Fee
10-47	Biddeford	A-5	Private	2.30	1	Fee
10-48	Biddeford	A-5	Private	2.82	1	Fee
9-18-3	Biddeford	A-5	Private	32.39	1	Easement
9-18-1	Biddeford	A-5	Private	19.28	1	Easement
0-0	Biddeford	A-5	Private	5.66	1	Fee
9-7	Biddeford	A-5	Private	1.02	1	Fee
9-7-1	Biddeford	A-5	Private	1.27	1	Fee
9-10	Biddeford	A-5	Private	17.64	1	Easement
9-11	Biddeford	A-5	Private	1.78	1	Fee
9-14	Biddeford	A-5	Private	13.03	1	Easement
9-15	Biddeford	A-5	Private	54.66	1	Easement
4-23	Biddeford	A-5	Private	11.40	1	Easement
4-28	Biddeford	A-5	Private	14.30	1	Easement
4-28-2	Biddeford	A-5	Private	1.75	1	Fee
4-38-4	Biddeford	A-5	Private	0.70	1	Fee
5-37	Biddeford	A-5	Private	10.64	1	Easement
9-18-2	Biddeford	A-5	Private	31.05	1	Easement
9-7-3	Biddeford	A-5	Private	2.12	1	Fee
9-7-2	Biddeford	A-5	Private	1.31	1	Fee

**Table A2.6. Biddeford Pool Division** *(continued)*

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
9-7-4	Biddeford	A-5	Private	6.99	1	Fee
5-35	Biddeford	A-5	Private	17.63	1	Easement
5-41	Biddeford	A-5	Private	2.51	1	Fee
4-48-5	Biddeford	A-5	Private	2.26	1	Fee
4-48-1	Biddeford	A-5	Private	4.50	1	Fee
4-48-4	Biddeford	A-5	Private	11.07	1	Easement
4-25-6	Biddeford	A-5	Private	0.86	1	Fee
4-25-8	Biddeford	A-5	Private	0.87	1	Fee
4-25-2	Biddeford	A-5	Private	0.95	1	Fee
4-25-4	Biddeford	A-5	Private	7.40	1	Fee
4-25-10	Biddeford	A-5	Private	4.77	1	Fee
4-25-5	Biddeford	A-5	Private	0.87	1	Fee
4-25-1	Biddeford	A-5	Private	1.43	1	Fee
4-35-1	Biddeford	A-5	Private	60.33	1	Easement
4-24-4	Biddeford	A-5	Private	1.10	1	Fee
5-13-3	Biddeford	A-5	Private	126.35	1	Easement
5-13	Biddeford	A-5	Private	43.74	1	Easement
4-24-1	Biddeford	A-5	Private	0.26	1	Fee
5-38	Biddeford	A-5	Private	21.99	1	Easement
5-29	Biddeford	A-5	Private	36.77	1	Easement
5-29-2	Biddeford	A-5	Private	11.19	1	Easement
5-34-2	Biddeford	A-5	Private	1.51	1	Fee
5-34	Biddeford	A-5	Private	2.32	1	Fee
4-24	Biddeford	A-5	Private	1.75	1	Fee
4-24-2	Biddeford	A-5	Private	8.87	1	Fee

**Table A2.7. Spurwink Division**

<i>Map Lot</i>	<i>Town</i>	<i>Map #</i>	<i>Ownership</i>	<i>Acres</i>	<i>Priority</i>	<i>Acquisition Method</i>
RO96,0,9	Scarborough	A-6	Private	76.0	1	Easement
RO96,0,5	Scarborough	A-6	Private	47.5	1	Easement
RO96,0,18	Scarborough	A-6	Private	15.0	1	Easement
RO96,0,19	Scarborough	A-6	Private	15.5	1	Easement
RO95,0,5	Scarborough	A-6	Private	12.4	1	Easement
RO95,0,5A	Scarborough	A-6	Private	13.5	1	Easement
RO95,0,6	Scarborough	A-6	Private	31.6	1	Easement
RO95,0,10	Scarborough	A-6	Private	81.5	1	Easement
RO98,0,20	Scarborough	A-6	Private	43.0	1	Easement
R099,0,42	Scarborough	A-6	Private	30	1	Easement
R098,0,18	Scarborough	A-6	Private	37.4	1	Easement
RO98,016A	Scarborough	A-6	Private	6.7	1	Fee
RO98,0,13	Scarborough	A-6	Private	14.3	1	Easement
RO98,0,16	Scarborough	A-6	Private	14.4	1	Easement
RO99,0,44A	Scarborough	A-6	Private	15.0	1	Easement
RO99,0,43	Scarborough	A-6	Private	3.0	1	Fee

