

Appendix C

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Refuge landscape

Wilderness Review

- Wilderness Inventory Areas
- Summary of Wilderness Inventory Findings
- Conclusion
- Wilderness Review Team

Wilderness Inventory Areas

Our wilderness inventory team identified 10 wilderness inventory areas (WIAs) in the Rachel Carson National Wildlife Refuge. Our findings for each WIA follow.

Note: Each refuge division was created initially to protect a tidal river or an estuary resource. Subsequent boundary expansions included adjacent uplands to protect wetlands and water quality and provide critical wildlife habitat.

❖ **Brave Boat Harbor Division**

1. Describe the division in a general manner (acres, habitats etc.). Is the area in federal fee title ownership?

The Brave Boat Harbor Division encompasses approximately 700 acres in the towns of York and Kittery, and manages an additional 40 acres under a conservation easement. Oak-pine forest with vernal pools and old field upland habitats surround salt marsh and estuary habitat. Portions of upland forest have a dense understory of serviceberry (*Amelanchier canadensis*), bayberry (*Myrica pensylvanica*), sweet gale (*Myrica gale*), high bush blueberry (*Vaccinium corymbosum*), male-berry (*Lyonia liqustrina*), and spirea (*Spirea latifolia*). Some forested areas have an understory of speckled alder (*Alnus rugosa*), winterberry (*Ilex veticillata*), honeysuckle (*Lonicera morrowi*), sweet gale, spirea, poison ivy (*Toxicodendron rydbergii*), and Virginia rose (*Rosa virginiana*) (Lortie and Pelletier 1988). Several rare plants, including white wood aster, saltmarsh false-foxglove, and dwarf glasswort, are found at the division.

This area was nominated for inclusion in the Maine Ecological Reserves program because of its saltmarsh ecosystem and the presence of oak-pine forest, exemplary white oak-red oak forest and perched hemlock-hardwood swamp communities, acidic fen, shrub swamp, and vernal pool (McMahon 1998). It also lies within a Maine Beginning With Habitat Focus Area (Greater Brave Boat Harbor/Gerrish Island) known to harbor rare natural communities, including red oak-white oak forest, dune grassland, and spartina saltmarsh (Maine Department of Inland Fisheries and Wildlife).

2. Describe why the division does not meet the roadless criteria (number of roads, total miles). Are the roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use?

None of the divisions are undivided, contiguous blocks of habitat. Brave Boat Harbor is defined and divided by Seapoint Road, Raynes Neck Road, Short Farm Road, and others.

3. Is the division of sufficient size to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management?

No.

4. Describe why the division does not meet the naturalness criteria (number of structures, including all imprints of mans work). Does the division appear to have been affected primarily by the forces of nature with the imprint of human work substantially unnoticeable? Are the human impacts substantially unnoticeable in the unit as a whole? Does the division contain significant hazards caused by humans, such as the presence of unexploded ordnance from military activity? Describe the presence of physical impacts of refuge management facilities and activities.

Each division is located at the wildland-urban interface. However, homes lie next to and, in some cases, within blocks of protected habitat. We believe the Rachel Carson refuge has more neighbors than any other national wildlife refuge. Hundreds of homes lie within a mile of this division. From most places on it, homes and other improvements are visible. It has no known human-created hazards and no known ordnance. Refuge prescribed fire units are located in this division.

5. **Does the area meet the solitude criteria? Does the division provide opportunities for solitude or primitive and unconfined recreation? Does the area offer the opportunity to avoid the sights, sounds and evidence of other people?**

No. Homes and other improvements are visible from most places on this division.

6. **Please address any supplemental values (identified above) that occur in this WIA.**

None.

❖ **Moody Division**

1. **Describe the division in a general manner (acres, habitats, etc.). Is the area in federal fee title ownership?**

The Moody Division comprises 391 acres in the towns of Ogunquit and Wells, and manages 4 acres under a conservation easement. The division is almost entirely salt marsh, with some old field and coastal scrub-shrub habitat.

2. **Describe why the division does not meet the roadless criteria (number of roads, total miles). Are the roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use?**

Furbish Road and Borne Avenue bisect the division. None of the divisions are undivided, contiguous blocks of habitat.

3. **Is the division of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management?**

No.

4. **Describe why the division does not meet the naturalness criteria (number of structures, including all imprints of mans work). Does the division appear to have been affected primarily by the forces of nature with the imprint of human work substantially unnoticeable? Are the human impacts substantially unnoticeable in the unit as a whole? Does the division contain significant hazards caused by humans, such as the presence of unexploded ordnance from military activity? Describe the presence of physical impacts of refuge management facilities and activities.**

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5. **Does the area meet the solitude criteria? Does the division provide opportunities for solitude or primitive and unconfined recreation? Does the area offer the opportunity to avoid the sights, sounds and evidence of other people?**

No. Homes and other improvements are visible from most places on this division.

6. **Please address any supplemental values (identified above) that occur in this WIA.**

None.

❖ **Lower Wells Division**

1. **Describe the division in a general manner (acres, habitats, etc.). Is the area in federal fee title ownership?**

The Lower Wells Division comprises 1,000 acres, with 6 acres under easement in the Town of Wells. Lower Wells is almost entirely salt marsh, with some maritime forest edges, coastal shrublands, and open fields. This division includes the Webhannet salt marshes, one of the largest salt marsh systems in the state, and an important black duck wintering area. Most of the historic barrier beach is now dense residential and commercial development. Scoters congregate in winter in the nearshore marine waters.

2. **Describe why the division does not meet the roadless criteria (number of roads, total miles). Are the roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use?**

Drakes Island Road, Upper Landing Road, Lower Landing Road, and Mile Road all cross the division. None of the divisions are undivided contiguous blocks of habitat.

3. **Is the division of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management?**

No.

4. **Describe why the division does not meet the naturalness criteria (number of structures, including all imprints of mans work). Does the division appear to have been affected primarily by the forces of nature with the imprint of human work substantially unnoticeable? Are the human impacts substantially unnoticeable in the unit as a whole? Does the division contain significant hazards caused by humans, such as the presence of unexploded ordnance from military activity? Describe the presence of physical impacts of refuge management facilities and activities.**

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5. **Does the area meet the solitude criteria? Does the division provide opportunities for solitude or primitive and unconfined recreation? Does the area offer the opportunity to avoid the sights, sounds and evidence of other people?**

No. Homes and other improvements are visible from most places on this division.

6. **Please address any supplemental values (identified above) that occur in this WIA.**

None.

❖ **Upper Wells Division**

1. **Describe the division in a general manner (acres, habitats, etc.). Is the area in federal fee title ownership?**

This division, in the Town of Wells, encompasses 643 acres, with an additional 13 acres under easement. The division is approximately 50 percent mixed pine and hardwood forest and 50 percent salt marsh, beach dune, old field and shrub habitat. Several rivers run through it: the Little and Merriland rivers, and Branch Brook. Crescent Surf Beach in this division usually supports the largest concentration of nesting least terns in Maine.

Up to eight pairs of federal-listed threatened piping plovers have nested on the beach, and it is a staging area for the federal-listed endangered roseate tern. New England cottontails live in the scrub-shrub habitat. Upper Wells encompasses portions of a pitch pine bog natural community, a sparsely forested peatland. Upland forests contain an overstory of pitch pine, white pine, red maple, and red oak. The understory has dense thickets of serviceberry bayberry, sweet gale, high bush blueberry, male-berry, and spirea (Lortie and Pelletier 1988).

2. **Describe why the division does not meet the roadless criteria (number of roads, total miles). Are the roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use?**

Western Avenue (Route 9), Skinner Mill Road, Harts Road and the Boston and Maine Railroad all cross the division. None of the divisions are undivided, contiguous blocks of habitat.

3. **Is the division of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management?**

No.

4. **Describe why the division does not meet the naturalness criteria (number of structures, including all imprints of mans work). Does the division appear to have been affected primarily by the forces of nature with the imprint of human work substantially unnoticeable? Are the human impacts substantially unnoticeable in the unit as a whole? Does the division contain significant hazards caused by humans, such as the presence of unexploded ordnance from military activity? Describe the presence of physical impacts of refuge management facilities and activities.**

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5. **Does the area meet the solitude criteria? Does the division provide opportunities for solitude or primitive and unconfined recreation? Does the area offer the opportunity to avoid the sights, sounds and evidence of other people?**

No. Homes and other improvements are visible from most places on this division.

6. **Please address any supplemental values (identified above) that occur in this WIA.**

None.

❖ **Mousam River Division**

1. **Describe the division in a general manner (acres, habitats, etc.). Is the area in federal fee title ownership?**

The Mousam River Division, in the Town of Kennebunk, contains 431 acres, and has an additional 64 acres under conservation easement. The division is primarily forested uplands with abundant vernal pools. The other habitats include salt marsh, river, estuary, open field and scrub-shrub.

2. **Describe why the division does not meet the roadless criteria (number of roads, total miles). Are the roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use?**

Western Avenue (Route 9), Brown Street, Harts Road, Hawthorne Lane, Caspar Lane, Ocean View road and the Bridle Path all cross the division. None of the divisions are undivided, contiguous blocks of habitat.

3. **Is the division of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management?**

No.

4. **Describe why the division does not meet the naturalness criteria (number of structures, including all imprints of mans work). Does the division appear to have been affected primarily by the forces of nature with the imprint of human work substantially unnoticeable? Are the human impacts substantially unnoticeable in the unit as a whole? Does the division contain significant hazards caused by humans, such as the presence of unexploded ordnance from military activity? Describe the presence of physical impacts of refuge management facilities and activities.**

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5. **Does the area meet the solitude criteria? Does the division provide opportunities for solitude or primitive and unconfined recreation? Does the area offer the opportunity to avoid the sights, sounds and evidence of other people?**

No. Homes and other improvements are visible from most places on this division.

6. **Please address any supplemental values (identified above) that occur in this WIA.**

None.

❖ **Goose Rocks Division**

1. **Describe the division in a general manner (acres, habitats, etc.) Is the area in federal fee title ownership?**

This division, in the Town of Kennebunkport, encompasses 540 acres, plus 1 acre under easement. Three-fourths of this division is 75-percent tidal. Its habitats include salt marsh, river, beach, estuary and coastal shrubland. Smith Brook, Batson River, Goose Rocks Creek, and Sampson Cove are in this division. Piping plovers historically nested at the end of Marshall Point Road. Upland forests contain an overstory of pitch pine, white pine, red maple, and red oak. The understory has dense thickets of serviceberry, bayberry, sweet gale, high bush blueberry, male-berry, and spirea. Some forested areas have an understory of speckled alder, winterberry, honeysuckle, sweet gale, spirea, poison ivy, and Virginia rose (Lortie and Pelletier 1988).

2. **Describe why the division does not meet the roadless criteria (number of roads, total miles). Are the roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use?**

Marshall Point Road, Dyke Road, Kings Highway, Goose Rocks Road, Sunset Lane, Norwood Lane, Whittemore Road, and several paved, private roads cross the division. None of the divisions are undivided, contiguous blocks of habitat.

3. **Is the division of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management?**

No.

4. **Describe why the division does not meet the naturalness criteria (number of structures, including all imprints of mans work). Does the division appear to have been affected primarily by the forces of nature with the imprint of human work substantially unnoticeable? Are the human impacts substantially unnoticeable in the unit as a whole? Does the division contain significant hazards caused by humans, such as the presence of unexploded ordnance from military activity? Describe the presence of physical impacts of refuge management facilities and activities.**

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5. **Does the area meet the solitude criteria? Does the division provide opportunities for solitude or primitive and unconfined recreation? Does the area offer the opportunity to avoid the sights, sounds and evidence of other people?**

No. Homes and other improvements are visible from most places on this division.

6. **Please address any supplemental values (identified above) that occur in this WIA.**

None.

❖ **Little River Division**

1. **Describe the division in a general manner (acres, habitats, etc.) Is the area in federal fee title ownership?**

This division, in Kennebunkport and Biddeford, encompasses 156 acres, with an additional 59 acres under conservation easement. The Little River runs through the division, which is mostly tidal habitat (about 60 percent); the rest is forested upland and scrubland.

2. **Describe why the division does not meet the roadless criteria (number of roads, total miles). Are the roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use?**

Granite Point Road, Fortunes Rocks Road, Elizabeth Road and numerous private roads cross this division. None of the divisions are undivided, contiguous blocks of habitat.

3. **Is the division of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management?**

No.

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None.

❖ **Biddeford Pool division**

1. **Describe the division in a general manner (acres, habitats, etc.). Is the area in federal fee title ownership?**

This division, in Biddeford, encompasses 71 acres, with an additional 5 acres under easement. Its Biddeford Pool holdings protect some of the state's most important estuarine habitats. Most of the area is salt marsh, coastal shrubland, and grassland with some pitch pine forest.

2. **Describe why the division does not meet the roadless criteria (number of roads, total miles). Are the roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use?**

Old Pool Road, Salt Marsh Lane, Days Landing, Channel Cove, Lane, Bridge Street, Mile Stretch Road, and Hills Beach Road all cross this division. None of the divisions are undivided, contiguous blocks of habitat.

3. **Is the division of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management?**

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None.

❖ **Goosefare Brook Division**

1. **Describe the division in a general manner (acres, habitats, etc.) Is the area in federal fee title ownership?**

This division, in the towns of Saco and Old Orchard Beach, consists of 494 acres and an additional 8 acres under easement. It consists of a small beach, salt marshes, and several hundred acres of pitch pine and mixed pine/hardwood forest. Goosefare Brook runs through this area. One pair of nesting piping plovers commonly uses the beach.

2. **Describe why the division does not meet the roadless criteria (number of roads, total miles). Are the roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use?**

Seaside Avenue, Shore Avenue, Cottage Avenue, Marshview Road, Atlantic Way Trail, Palmer Avenue, Pineywoods Road, Meadow Avenue, Richards Way and Wildwood Drive all cross or intersect this division. None of the divisions are undivided, contiguous blocks of habitat.

3. **Is the division of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management?**

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None.

❖ **Spurwink Division**

1. **Describe the division in a general manner (acres, habitats, etc.). Is the area in federal fee title ownership?**

This division, in the towns of Scarborough and Cape Elizabeth, encompasses 493 acres and another 27 acres under easement. It is centered along the waters of the Spurwink River and Pollack Creek, and consists of upland fields, salt marsh, shrublands, and some mature forest.

2. **Describe why the division does not meet the roadless criteria (number of roads, total miles). Are the roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use?**

Spurwink Road, Wiley Way, Starbird Road, Spurwink Avenue, Stanford Lane, Quarry Road, Ivory Hill Road, Heron Point Road, Sawyer Street, and Salt Marsh Way, all cross or intersect this division. None of the divisions are undivided, contiguous blocks of habitat.

3. **Is the division of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management?**

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5. **Does the area meet the solitude criteria? Does the division provide opportunities for solitude or primitive and unconfined recreation? Does the area offer the opportunity to avoid the sights, sounds and evidence of other people?**

No. Homes and other improvements are visible from most places on this division.

6. **Please address any supplemental values (identified above) that occur in this WIA.**

None.

Summary of Wilderness Inventory Findings

This area has been settled for nearly 400 years. Because of that infringement by humans, mostly taking the form of roads and houses, none of the lands that compose the current, approved refuge acquisition boundary or the lands in the preliminary project proposal are suitable for designation as wilderness.

Conclusion

We find that none of the WIAs at the Rachel Carson National Wildlife Refuge, Wells, Maine, meet the minimum criteria to qualify as a WSA as defined by the Wilderness Act. No further investigation into wilderness designation is needed at the refuge.

Wilderness Review Team

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