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Chapter 1. Introduction and Background

1.1 Introduction

Nestucca Bay National Wildlife Refuge (NWR or Refuge) is managed by the U.S. Fish and Wildlife Service (USFWS or Service) as part of the National Wildlife Refuge System (NWRS or System). The Oregon Coast National Wildlife Refuge Complex (Complex) comprises six individual national wildlife refuges that span most of the coast of Oregon and support a rich diversity of wildlife habitats including coastal rocks, reefs, and islands; forested and grass-covered headlands; estuaries; and freshwater marshes. The six national wildlife refuges include Cape Meares, Oregon Islands, Three Arch Rocks, Bandon Marsh, Nestucca Bay, and Siletz Bay (Figure 1-1). This Comprehensive Conservation Plan (CCP) applies only to Nestucca Bay NWR. CCPs for Bandon Marsh and Siletz Bay NWRs are being developed concurrently, and the CCPs for the Complex's other three NWRs have been completed under a previous planning effort.

Nestucca Bay Refuge lands are located near Pacific City and Neskowin, in Tillamook County, Oregon (Figure 1-2). The Refuge was established in 1991 with the acquisition of a 370-acre dairy farm, and has since expanded to 1,010 acres, with an additional 2,500+ acres of private and state inholdings within the approved refuge boundary. Nestucca Bay Refuge was established to protect wintering habitat for the Aleutian Canada goose, which was originally federally listed as endangered in 1967 and delisted in 2001, and for the declining dusky Canada goose; and to protect diverse coastal wetland habitats and upland habitat buffers for a variety of migratory waterfowl, shorebirds, raptors, songbirds, anadromous fish, and other wildlife. In 2002, the Refuge was expanded to include the Neskowin Marsh Unit (currently at 228 acres) located about 2.5 miles south of the Nestucca Bay Unit. Neskowin Marsh incorporates unique freshwater wetland and bog habitats and wildlife resources not found within the original refuge boundary.

1.1.1 Nestucca Bay Unit

The Service originally proposed to establish the Nestucca Bay NWR by initially acquiring 370 acres of land, further seeking to acquire partial or whole interest in up to 3,926 acres of land, and cooperatively managing 400 acres of tidelands with the State of Oregon (USFWS 1993a). The Service's Land Protection Plan (1993a) described the lost wetland habitat caused by commercial and residential encroachments into coastal wetlands. As these pressures increased upon open bay and estuarine wetland habitats, there was a shift in use by many wetland-dependent wildlife species to diked, former tideland habitats. These diked wetlands, many of which are used for grazing, haying, or silage cutting, were becoming more important to wildlife, particularly migrating and wintering waterfowl. The Service's Concept Plan for Waterfowl Habitat Protection – Middle Upper Pacific Coast (USFWS 1989) identified the estuarine wetlands and diked former tidelands within the Nestucca estuary as a high priority for protection.

In 1990, when the proposal to establish the Refuge was under evaluation, the dairy pastures adjacent to Nestucca Bay provided wintering habitat used by one of the most diverse groups of geese found in Oregon, including dusky, Aleutian (then endangered), Taverner's, cackling, lesser, Vancouver, and western subspecies of Canada geese. Other than a small group of 40 to 60 wintering birds at Goat Island near Brookings, Oregon, the Nestucca Bay area was the only wintering area for dusky Canada geese on the Oregon coast, supporting an estimated population of 500. At the time, the dusky Canada goose population had seen drastic population declines over the previous two decades. A flock of

about 100 Aleutian Canada geese, out of a total population estimated near 6,300, also wintered at Nestucca Bay. These geese had been using pastures adjacent to the bay during the day and roosting offshore on Haystack Rock (Oregon Islands NWR) at night; however, depredation complaints from dairy farmers led to hazing of dusky Canada geese which caused them to roost and feed on Haystack Rock during the day and return to the pastures at night. The remainder of the Aleutian Canada geese wintered in the central valley of California.

It was recognized and stated in the EA for the proposed refuge that refuge establishment was not anticipated to take lands out of active dairy production, as present dairy farming practices were largely compatible with habitat management goals for dusky and Aleutian Canada geese. It was and has continued to be the intent of the Service to ensure that these compatible practices continue to secure protection for this wintering habitat. Additional wildlife species listed as threatened at the time (and since delisted) utilizing the area proposed as Nestucca Bay NWR included bald eagles, California brown pelicans, and peregrine falcons.

1.1.2 Neskowin Marsh Unit

Following establishment of Nestucca Bay NWR, the rapid increase in residential, resort, and recreational development along the Oregon coast, and the resulting threats to the integrity of coastal ecosystems, led the Service to propose an expansion of the refuge boundary in 2000. The Service proposed the addition of the Neskowin Marsh Unit to the Nestucca Bay Refuge in response to an opportunity to acquire properties from willing sellers, in order to conserve the Neskowin Marsh complex and associated rare coastal bog ecosystem and assist in recovery of threatened and endangered species present in the area (USFWS 2000a). At the time of the proposal, Neskowin Marsh was the largest unprotected freshwater marsh remaining on the Oregon coast. The primary purpose for expanding the refuge boundary and establishing this refuge unit was to provide permanent protection to the exceptional biological values of this unique and outstanding coastal bog ecosystem.

1.2 Significance of the Refuge

Nestucca Bay Refuge provides important winter habitat for the formerly endangered Aleutian Canada goose and serves as an important overwintering site for up to 18% of the declining population of the dusky Canada goose. Other subspecies of white-cheeked geese, including Taverner's, cackling, lesser, and western Canada geese, also use refuge pastures. The freshwater wetlands and estuarine habitats support thousands of migratory waterfowl and shorebirds. The riverine and estuarine habitats provide essential habitat for Chinook salmon, threatened coho salmon, chum salmon, steelhead trout, and coastal cutthroat trout. Mammals such as marsh shrews, Oregon voles, muskrats, beaver, mink, river otters, and raccoons are common in the marshes and wetter pastures and harbor seals forage over flooded tidal flats. Deer and elk graze the marsh and pasture grasses. Riparian forest patches and the valley forested wetlands support small mammals as well as many amphibians and reptiles such as long-toed and Pacific giant salamanders, rough-skinned newts, Pacific tree frogs, and garter snakes.

Forested areas on this Refuge are used as breeding habitat by neotropical songbirds including Swainson's thrush, Wilson's warbler, orange-crowned warbler, and western tanager. The forest is also used on a year-round basis by other songbirds including chestnut-backed chickadee, Pacific wren, golden-crowned kinglet, varied thrush, and song sparrow. The recently delisted California

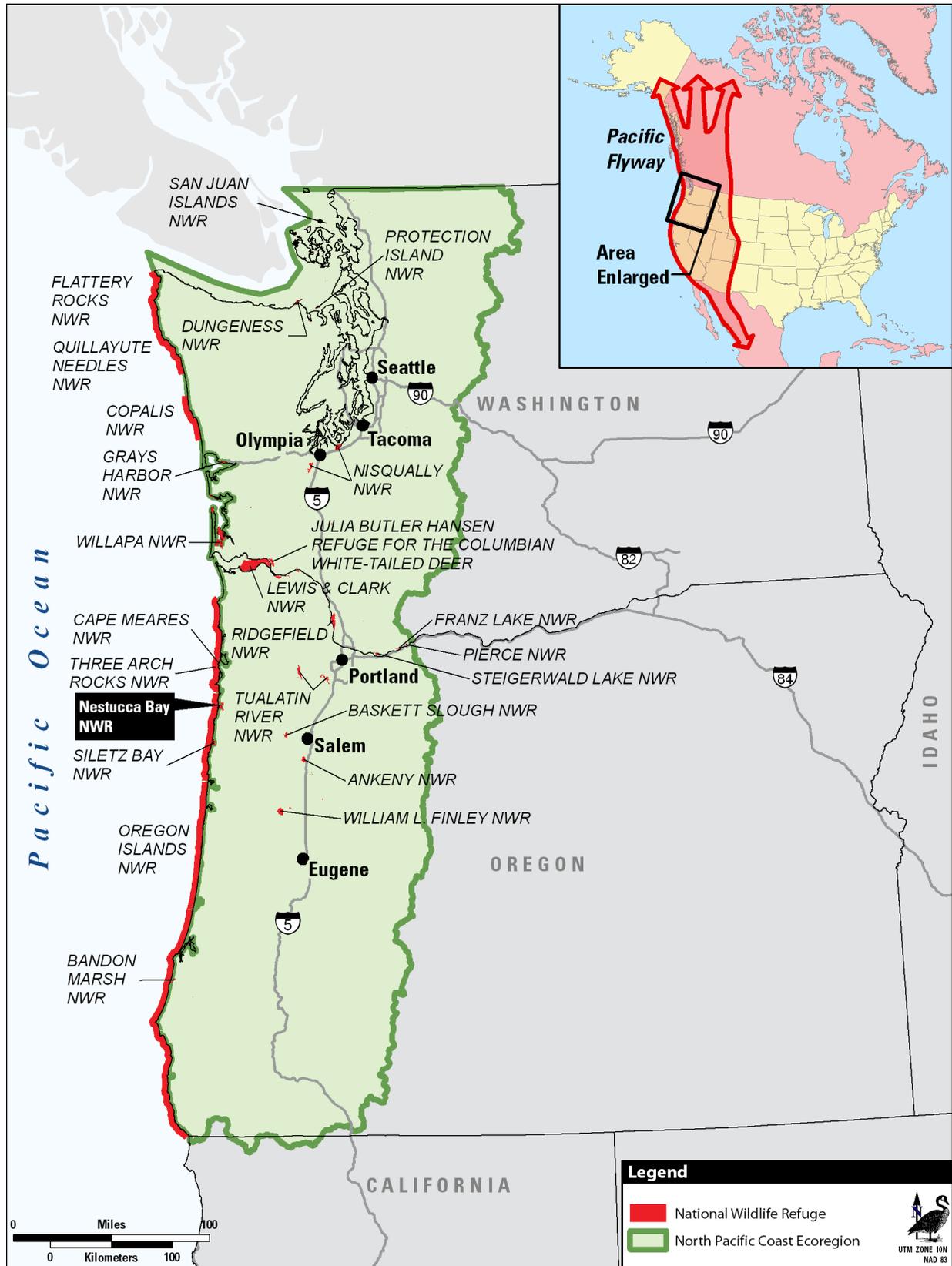
brown pelican uses the open waters within Nestucca Bay as foraging habitat in summer and early fall. Peregrine falcon observations are numerous from fall through spring. Cannery Hill, located on the upper portion of the Nestucca Bay Unit, has several bald eagle perching sites.

Habitats within the Neskowin Marsh Unit, located about 2.5 miles south of the Nestucca Bay Unit, include marsh, bogs, forested wetlands, upland shrub and meadows, and adjacent forested uplands. The bog communities are extremely specialized, and include sedge fen, shrub carr, and sphagnum bog. The marsh, originally a lake, formed when shifting sand blocked stream drainages. The area is underlain by peat, and a number of lakes, ponds, and pools scattered throughout the wetland are vestiges of a larger lake system in-filled by peat formation. This area now supports extensive shrub swamps (hooker willow, crabapple, and spirea), Sitka spruce swamp, Sitka sedge fern, and peatland with high-quality sphagnum fens interspersed with lakes, pools, and ponds. A forested lagg occurs along the northeast portion of the marsh. The marsh is one of the largest and highest-quality freshwater wetlands remaining on the coast of Oregon; the sphagnum fen is the second-largest known site on the coast, and it contains the largest known occurrence of acid-forming *Sphagnum fuscum* mire known on the coast (Christy and Brophy 2002).

The complexity of marsh, forested wetlands, and adjacent upland woodlands found within the Neskowin Marsh Unit provide important habitat for neotropical migratory songbirds birds such as yellow-rumped warbler, common yellowthroat, marsh wren, olive-sided flycatcher, and hermit thrush. Waterfowl use the marsh throughout the winter and in the fall and spring migration periods. Species commonly observed include mallard, wood duck, American wigeon, northern pintail, green-winged teal, ring-necked duck, lesser scaup, and bufflehead. Both mallard and wood duck are probable breeders at the marsh. A variety of other marsh dependent birds and waterbirds using the marsh include red-winged blackbird, great blue heron, green heron, Virginia rail, and sora. Mammals occurring at Neskowin Marsh include black-tailed deer, Roosevelt elk, black bear, river otter, and beaver. Anadromous fish, including Chinook salmon, threatened coho salmon, chum salmon, steelhead trout, and coastal cutthroat use Neskowin Creek for spawning and rearing, and juvenile coho salmon also use the marsh as off-channel overwintering habitat. In the spring, thousands of amphibians and numerous egg masses appear in the wetlands, indicating that the marsh is an important breeding area for red-legged frogs and northwestern salamanders. Peregrine falcons and bald eagles nest in the vicinity and use the wetland and surrounding upland habitat for hunting, foraging, and resting.

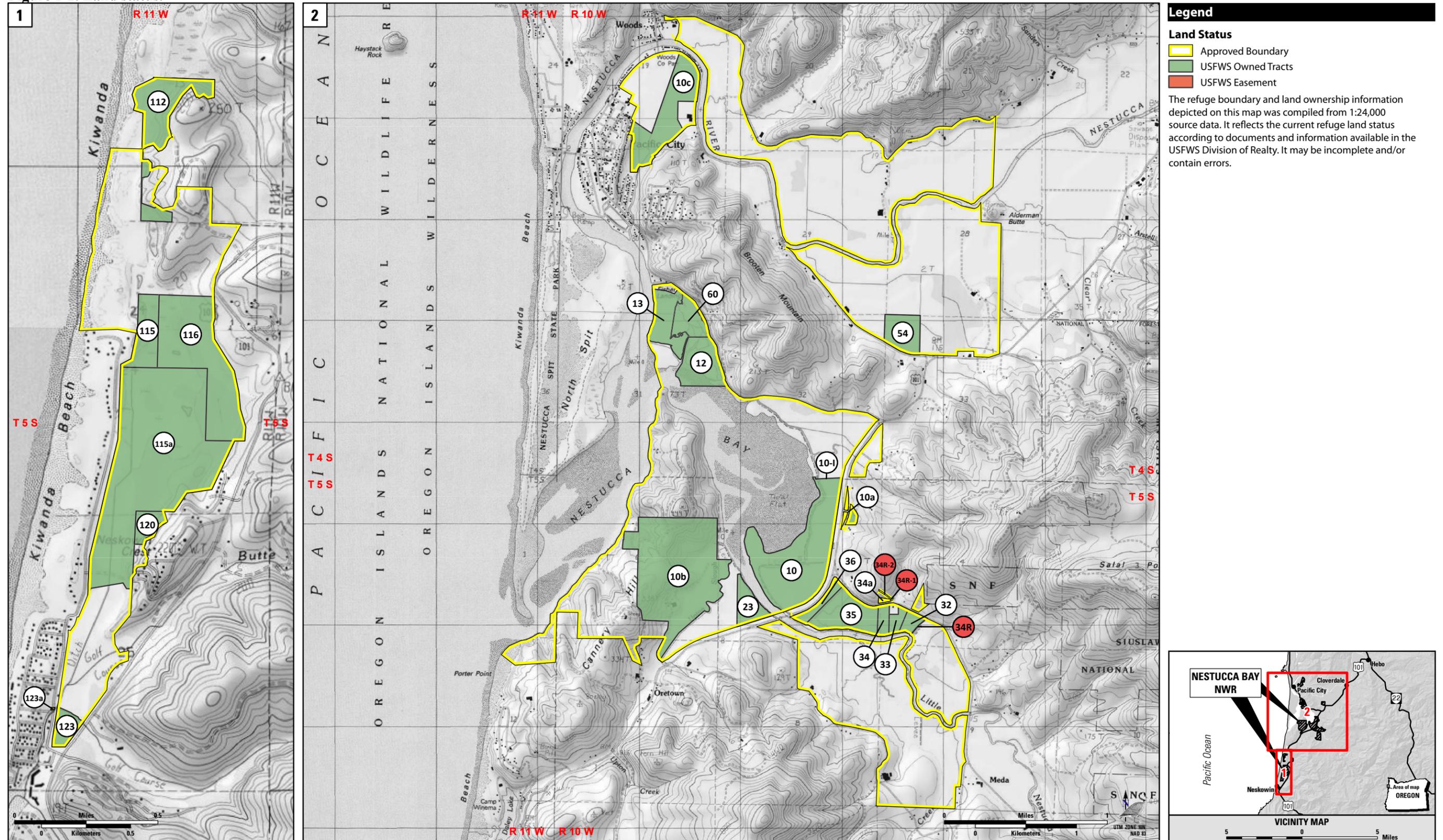
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Figure 1-1. Regional context.



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Figure 1-2. Land status.



Data Sources: Refuge Boundaries from USFWS/R1; 1:24,000 scale Topographic Map from USGS

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1.3 Proposed Action

We, the U.S. Fish and Wildlife Service (Service), manage wildlife refuges as part of the National Wildlife Refuge System. This document is the Refuge's Comprehensive Conservation Plan (CCP). A CCP sets forth management guidance for a refuge for a period of 15 years, as required by the National Wildlife Refuge System Administration Act (16 U.S.C. 688dd-688ee, et seq.) (Refuge Administration Act), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57). The Refuge Administration Act requires CCPs to identify and describe:

- The purposes of the refuge;
- The fish, wildlife, and plant populations, their habitats, and the archaeological and cultural values found on the refuge;
- Significant problems that may adversely affect wildlife populations and habitats and ways to correct or mitigate those problems;
- Areas suitable for administrative sites or visitor facilities and opportunities for fish- and wildlife-dependent recreation.

The Service developed and examined alternatives for future management of Nestucca Bay National Wildlife Refuge through the CCP process. These were presented in the Draft Comprehensive Conservation Plan and Environmental Assessment (USFWS 2012a). We developed and evaluated three alternatives for the CCP and selected Alternative C as the preferred alternative.

The goals, objectives, and strategies under the preferred alternative best achieve the purpose and need for the CCP while maintaining balance among the varied management needs and programs. Thus, the preferred alternative represents the most balanced approach for achieving the Refuge's purposes, vision, and goals; contributing to the Refuge System's mission; addressing relevant issues and mandates; and managing the Refuge consistently with sound principles of fish and wildlife management. The preferred alternative was slightly modified between the draft and final documents based upon comments received from the public or other agencies and organizations (see Appendix K). The Service's Regional Director for the Pacific Region made the final decision about the alternative to be implemented. For details on the specific components of management direction for the Refuge over the next 15 years, see Chapter 2.

1.4 Purpose and Need for Action

The purpose of developing the CCP is to provide the refuge manager with a 15-year management plan for the conservation of fish, wildlife, and plant resources and their related habitats, while providing opportunities for compatible, wildlife-dependent recreational uses. The CCP, when fully implemented, should achieve refuge purposes; help fulfill the Refuge System mission; maintain and, where appropriate, restore the ecological integrity of each refuge and the Refuge System; help achieve the goals of the National Wilderness Preservation System; and meet other mandates. The CCP must be specific to the planning unit and identify the overarching wildlife, public use, or management needs for the refuge (602 FW 3.4C1d).

The need for the CCP is to provide reasonable, scientifically-grounded guidance for ensuring that over a period of 15 years, Nestucca Bay NWR will achieve the following purposes:

- Enhance, maintain, and protect Refuge habitats (including lowland pastures; upland prairie and mixed upland grasslands; upland forests; forested wetlands; and estuarine, freshwater and stream-riparian habitats) and other lands for the benefit of migratory birds and other wildlife.
- Gather sufficient scientific information to guide responsible adaptive management decisions.
- Provide visitors compatible wildlife-dependent public use opportunities that foster an appreciation and understanding of the Refuge’s fish, wildlife, plants, and their habitats, and have limited impacts to wildlife.
- Initiate and nurture relationships and develop cooperative opportunities to promote the importance of the Refuge’s wildlife habitat, and support Refuge stewardship.
- Protect and manage the Refuge’s cultural resources, and identify new ways to gain an understanding of the Refuge’s history and cultural resources.

1.5 Legal and Policy Guidance

1.5.1 The U.S. Fish and Wildlife Service

All refuges are managed by the Service, an agency within the Department of the Interior. The Service is the principal Federal agency responsible for conserving, protecting, and enhancing the Nation’s fish and wildlife populations and their habitats.

The mission of the Service is “working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.” Although we share this responsibility with other Federal, state, tribal, local, and private entities, the Service has specific trust responsibilities for migratory birds, endangered and threatened species, and certain anadromous fish and marine mammals. The Service has similar trust responsibilities for the lands and waters we administer to support the conservation and enhancement of fish, wildlife, plants, and their habitats. The Service also enforces Federal wildlife laws and international treaties for importing and exporting wildlife, assists with state fish and wildlife programs, and helps other countries develop wildlife conservation programs.

1.5.2 National Wildlife Refuge System

A refuge is managed as part of the National Wildlife Refuge System within a framework provided by legal and policy guidelines. The Refuge System is the world’s largest network of public lands and waters set aside specifically for conserving wildlife and protecting ecosystems.

The needs of wildlife and their habitats come first on refuges, in contrast to other public lands that are managed for multiple uses. Refuges are guided by various Federal laws and executive orders, Service policies, and international treaties. Fundamental are the mission and goals of the Refuge System and the designated purposes of the refuge unit as described in establishing legislation, executive orders, or other documents establishing, authorizing, or expanding a refuge.

National Wildlife Refuge System Mission and Goals

The mission of the Refuge System is “to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations

of Americans” (National Wildlife Refuge System Administration Act of 1966, as amended) (16 U.S.C. 668dd et seq.)

The goals of the Refuge System, as articulated in the Mission Goals and Purposes policy (601 FW 1) are:

- Conserve a diversity of fish, wildlife, and plants and their habitats, including species that are endangered or threatened with becoming endangered.
- Develop and maintain a network of habitats for migratory birds, anadromous and inter-jurisdictional fish, and marine mammal populations that is strategically distributed and carefully managed to meet important life history needs of these species across their ranges.
- Conserve those ecosystems, plant communities, wetlands of national or international significance, and landscapes and seascapes that are unique, rare, declining, or underrepresented in existing protection efforts.
- Provide and enhance opportunities to participate in compatible wildlife-dependent recreation (hunting, fishing, wildlife observation and photography, and environmental education and interpretation).
- Foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats.

Law and Policy Pertaining to the Refuge System

Refuges are guided by various Federal laws and executive orders, Service policies, and international treaties. Fundamental to the management of every refuge are the mission and goals of the Refuge System and the designated purposes of the refuge unit as described in establishing legislation, executive orders, or other documents establishing, authorizing, or expanding a refuge.

Key concepts and guidance of the Refuge System derive from the National Wildlife Refuge System Administration Act of 1966 (Administration Act) as amended (16 U.S.C. 668dd-668ee); the Refuge Recreation Act of 1962 as amended (16 U.S.C. 460k-460k-4); Title 50 of the Code of Federal Regulations; and the Service Manual. The Administration Act is implemented through regulations covering the Refuge System, published in Title 50, subchapter C of the Code of Federal Regulations and policies contained in the Service Manual. These regulations and policies govern general administration of units of the Refuge System.

Many other laws apply to the U.S. Fish and Wildlife Service and management of Refuge System lands. Examples include the Endangered Species Act of 1973, as amended, and the National Historic Preservation Act of 1966, as amended. Brief descriptions of laws pertinent to Nestucca Bay Refuge are included in this chapter. A complete list of laws pertaining to the Service and the Refuge System can be found at <http://laws.fws.gov>.

Refuge Recreation Act of 1962 (16 U.S.C. 460k-460k-4). The Refuge Recreation Act authorized the Secretary of the Interior to administer refuges, hatcheries, and other conservation areas for recreational use, when such uses do not interfere with the area’s primary purposes. It provided for public use fees and permits, and penalties for violating regulations. It also authorized the acceptance of donated funds and real and personal property, to assist in carrying out its purposes. Enforcement provisions were amended in 1978 and 1984 to make violations misdemeanors in accordance with the uniform sentencing provisions of 18 U.S.C. 3551-3586.

National Wildlife Refuge System Administration Act (16 U.S.C. 668dd et seq.) as amended by the National Wildlife Refuge System Improvement Act (Public Law 105-57). Of all the laws governing activities on national wildlife refuges, the Refuge Administration Act exerts the greatest influence. The National Wildlife Refuge System Improvement Act of 1997 (Refuge Improvement Act) amended the Administration Act by defining a unifying mission for all refuges, including a new process for determining compatible uses on refuges, and requiring that each refuge be managed under a comprehensive conservation plan. Key provisions of the Refuge Administration Act follow.

- Comprehensive conservation planning. A CCP must be completed for each refuge by the year 2012, as is required by the Refuge Administration Act. Each CCP will be revised every 15 years or earlier if monitoring and evaluation determine that changes are needed to achieve the refuge's purposes, vision, goals, or objectives. The Refuge Administration Act also requires that CCPs be developed with the participation of the public. Public comments, issues, and concerns are considered during the development of a CCP, and together, with the formal guidance, can play a role in selecting the preferred alternative. Information on public involvement can be found in Appendix J. The CCP provides guidance in the form of goals, objectives, and strategies for refuge programs, but may lack some of the specifics needed for implementation. Therefore, step-down management plans will be developed for individual program areas as needed, following completion of the CCP. The step-down plans are founded on management goals, objectives and strategies outlined in a CCP, and require appropriate NEPA compliance.
- Wildlife conservation; biological diversity, integrity and environmental health. The Refuge Administration Act expressly states that the conservation of fish, wildlife and plants, and their habitats is the priority of Refuge System lands, and that the Secretary of the Interior shall ensure that the biological integrity, diversity, and environmental health of refuge lands are maintained. House Report 105-106 accompanying the Improvement Act states "... the fundamental mission of our System is wildlife conservation: wildlife and wildlife conservation must come first."
- Refuge purposes. Each refuge must be managed to fulfill the Refuge System mission and the specific purpose(s) for which the refuge was established. The purposes of a refuge are specified in or derived from the law, proclamation, executive order, agreement, public land order, donation document, or administrative memorandum establishing, authorizing, or expanding a refuge, refuge unit, or refuge subunit. When a conflict exists between the Refuge System mission and the purpose of an individual refuge, the refuge purpose may supersede the mission.
- Priority public uses on refuges. The Administration Act superseded some key provisions of the Refuge Recreation Act regarding compatibility, and also provided significant additional guidance regarding recreational and other public uses on units of the Refuge System. The Refuge Administration Act identifies six priority wildlife-dependent recreational uses. These uses are hunting, fishing, wildlife observation and photography, and environmental education and interpretation. The Service is to grant these six wildlife-dependent public uses special consideration during planning for, management of, and establishment and expansion of units of the Refuge System. When determined compatible on a refuge-specific basis, these six uses assume priority status among all uses of the refuge in question. The Service is to make extra efforts to facilitate priority wildlife-dependent public use opportunities.

Compatibility and Appropriate Refuge Uses Policies (603 FW 2 and 1). With few exceptions, lands and waters within the Refuge System are different from multiple-use public lands in that they

are closed to all public access and use unless specifically and legally opened. No refuge use may be allowed or continued unless it is determined to be appropriate and compatible. Generally, an appropriate use is one that contributes to fulfilling the refuge purpose(s), the Refuge System mission, or goals or objectives described in a refuge management plan. A compatible use is a use that in the sound professional judgment of the refuge manager will not materially interfere with or detract from the fulfillment of the mission of the Refuge System or the purposes of the refuge.

The six wildlife-dependent recreational uses described in the Refuge Administration Act (hunting, fishing, wildlife observation and photography, and environmental education and interpretation) are defined as appropriate. When determined to be compatible, they receive priority consideration over other public uses in planning and management. Other non-wildlife-dependent uses on a refuge are reviewed by the refuge manager to determine if the uses are appropriate. If a use is determined appropriate, then a compatibility determination is completed.

When preparing a CCP, refuge managers must re-evaluate all general public, recreational, and economic uses (even those occurring to further refuge habitat management goals) occurring or proposed on a refuge for appropriateness and compatibility. Updated appropriate use and compatibility determinations for existing and planned uses for Nestucca Bay NWR are in Appendices A (Appropriateness) and B (Compatibility) of this CCP.

Biological Integrity, Diversity, and Environmental Health Policy (601 FW 3). The Refuge Administration Act directs the Service to “ensure that the biological integrity, diversity, and environmental health of the National Wildlife Refuge System are maintained for the benefit of present and future generations of Americans...” The policy is an additional directive for refuge managers to follow while achieving refuge purpose(s) and the Refuge System mission. It provides for the consideration and protection of a broad spectrum of native fish, wildlife, and habitat resources found on refuges and associated ecosystems. When evaluating the appropriate management direction for refuges (e.g., in compatibility determinations), refuge managers will use sound professional judgment to determine their refuge’s contribution to biological integrity, diversity, and environmental health at multiple landscape scales. Sound professional judgment incorporates field experience, knowledge of refuge resources, an understanding of the refuge’s role within an ecosystem, applicable laws, and best available science, including consultation with others both inside and outside the Service. The policy states that “the highest measure of biological integrity, diversity, and environmental health is viewed as those intact and self-sustaining habitats and wildlife populations that existed during historic conditions.”

Wildlife-dependent Recreation Policies (605 FW 1-7). The Refuge Administration Act states that “compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System.” A series of recreation policies provide additional guidance and requirements to consider after a recreational use has been determined to be compatible. These policies also establish a quality standard for visitor services on national wildlife refuges. Through these policies, we are to simultaneously enhance wildlife-dependent recreational opportunities, provide access to quality visitor experiences, and manage refuge resources to conserve fish, wildlife, plants, and their habitats. New and ongoing recreational uses should help visitors focus on wildlife and other natural resources, and provide an opportunity to display resource issues, management plans, and how the refuge contributes to the Refuge System and the Service’s mission. The policies also require development of a visitor services plan.

1.5.3 Other Laws and Mandates

Many other Federal laws, executive orders, Service policies, and international treaties govern the Service and Refuge System lands. Examples include the Migratory Bird Treaty Act of 1918, Refuge Recreation Act of 1962, National Historic Preservation Act of 1966, and the Endangered Species Act of 1973. For additional information on laws and other mandates, a list and brief description of Federal laws of interest to the Service can be found in the Laws Digest at <http://www.fws.gov/laws/Lawsdigest.html>.

In addition, over the last few years, the Service has developed or revised numerous policies and Director's Orders to reflect the mandates and intent of the Refuge Administration Act. Some of these key policies include the Biological Integrity, Diversity, and Environmental Health Policy (601 FW 3); the Compatibility Policy (603 FW 2); the Comprehensive Conservation Planning Policy (602 FW 3); Mission, Goals, and Purposes (601 FW 1), Appropriate Refuge Uses (603 FW 1); Wildlife-Dependent Public Uses (605 FW 1); wilderness-related policies (610 FW 1-5) and the Director's Order for Coordination and Cooperative Work with State Fish and Wildlife Agency Representatives on Management of the National Wildlife Refuge System. These policies and others in draft or under development can be found at <http://refuges.fws.gov/policymakers/nwrpolicies.html>.

In developing a CCP, refuges must consider these broader laws and policies as well as Refuge System and ecosystem goals and visions. The CCP must be consistent with these and also with the refuge purpose.

1.6 Refuge Establishment and Purposes

1.6.1 Legal Significance of the Refuge Purpose

The purpose for which a refuge was established or acquired is of key importance in refuge planning. Purposes must form the foundation for management decisions. The refuge purposes are the driving force in the development of the refuge vision statements, goals, objectives, and strategies in a CCP and are critical to determining the compatibility of existing and planned refuge uses.

The purposes of a refuge are specified in or derived from the law, proclamation, executive order, agreement, public land order, donation document, or administrative memorandum establishing, authorizing, or expanding a refuge, refuge unit, or refuge subunit.

Unless the establishing law, order, or other document indicates otherwise, purposes dealing with the conservation, management, and restoration of fish, wildlife, plants, and the habitats on which they depend, take precedence over other purposes in the management and administration of any unit. Where a refuge has multiple purposes related to fish, wildlife, and plant conservation, the more specific purpose will take precedence in instances of conflict. When an additional unit is acquired under an authority different from the authority used to establish the original unit, the addition takes on the purpose(s) of the original unit, but the original unit does not take on the purpose(s) of the newer addition. When a conflict exists between the Refuge System mission and the purpose of an individual refuge, the refuge purpose may supersede the mission of the System.

1.6.2 Purpose and History of Refuge Establishment

Nestucca Bay NWR was established in 1991 under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1532-1544, 87 Stat. 884), “to conserve (a) fish or wildlife which are listed as endangered species or threatened species...or (b) plants”; the Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742(a)-754) “for the development, advancement, management, conservation, and protection of fish and wildlife resources”; the Migratory Bird Conservation Act of 1929 (16 U.S.C. 715-715d) “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds”; the Consolidated Farm and Rural Development Act [7 U.S.C. 2002], “for conservation purposes”; and the Emergency Wetlands Resources Act of 1986 [16 U.S.C. 39 100 Stat 3583], to accomplish “conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to fulfill international obligations contained in various migratory bird treaties and conventions.” All of the tracts within the original Nestucca Bay Unit, with the exception of the Semidi (Martella) Tract (10c) and the Utter Tract (54), were purchased with funds authorized by the Land and Water Conservation Fund Act. The most recent acquisition, the Lyda Tract (23), was acquired with Migratory Bird Hunting and Conservation Stamp Act funds.

The Utter Tract was acquired through primary transfer from the Farm Service Agency under the authority of the Consolidated Farm and Rural Development Act (7 U.S.C. 2002), “for conservation purposes.” The Semidi Tract was purchased with Federal Land Transaction Facilitation Act funds. The Federal Land Transaction Facilitation Act (FLTFA) of 2000 authorizes Department of Interior (DOI) and the U.S. Forest Service to use the proceeds from sales of Bureau of Land Management lands to acquire inholdings in federally designated areas, such as national wildlife refuges.

The Neskowin Marsh Unit was also established under authority of the Fish and Wildlife Act of 1956; the Endangered Species Act of 1973; and the Migratory Bird Conservation Act of 1929.

1.6.3 Land Status and Ownership

Following the identification of the Nestucca Bay estuary and associated diked former tidelands as important habitats for waterfowl (USFWS 1989), the Service became aware of the availability of property in the area which had been operated as a dairy farm for many years, but supported significant numbers of wintering geese. The property included diked wetland pastures used predominantly by dusky Canada geese, a species listed as sensitive and undergoing a serious population decline. In light of the Service emphasis on protecting coastal waterfowl habitat and the importance of Nestucca Bay habitats to the (then) endangered Aleutian Canada goose and dusky Canada goose, the Service decided to initiate a land protection program for those species and others (USFWS 1993a).

The project area included approximately 4,700 acres, of which some 4,300 were in private ownership and the remaining 400 acres consisted of State-owned tidelands. The study area included the dairy property, and the land protection proposal included both acquisition of conservation easements and fee title purchases. Fee title purchases were proposed on lands where active Service management or development of interpretive facilities seemed appropriate.

Local apprehension regarding the establishment of a refuge was centered around the concern that acquisition by the Federal government would result in a significant land-base loss to the dairy industry and a steep downturn to the dairy driven economy. After much discussion and negotiation with the dairy landowner representatives, the Service entered into a formal Memorandum of

Agreement (MOU) with the Nestucca Landowners Association at the time of refuge establishment. This agreement was included in the final Establishment EA, and the intentions stated within the agreement have been considered as management direction. In the Revised Final EA for Nestucca Bay NWR (01/1993), in which the approved refuge boundary was reduced to 3,060 acres, the Service emphasizes that acquisition was considered a mechanism for ensuring that the dairying practices which had supplied the migratory geese with high-quality wintering habitat would be continued for the long term. In developing the MOU, “the Service and dairy landowner representatives worked toward developing an understanding which would protect wintering goose habitat in the Nestucca Bay area while recognizing the importance of the dairy industry in meeting that objective.” The MOU states that “Refuge lands will continue to be grazed as appropriate. ... It is vital that the Refuge pastures be maintained in a shortgrass condition in order to support wintering geese.”

In the intervening years since establishing the Refuge, the Service has acquired an additional 216 acres of diked wetland pastures within the original approved boundary of Nestucca Bay NWR. This included a transfer of 31 acres of lowland and upland pasture conveyed to the Service from the Farm Services Agency. A total of 346 acres of refuge pastures are now managed for geese, utilizing the services and expertise of local dairy operators through Cooperative Land Management Agreements.

Additional acquisitions to the original Nestucca Bay approved boundary have included formerly diked pastures that had reverted to muted tidal wetlands due to a non-functioning tidegate and dike breaches. These wetland tracts were not considered desirable as dairy pasture and they had reverted to jurisdictional tidal wetlands, and therefore were restored to full tidal action as part of the 82-acre Little Nestucca Tidal Marsh Restoration completed in 2007. Other acquisitions within the original boundary included intertidal marsh adjacent to state tidelands.

In 1998, the Service began the planning process to expand Nestucca Bay NWR through the addition of the Neskowin Marsh Unit to the Refuge. The acceleration of development along the Oregon coast, including new and planned housing developments adjacent to or overlooking Neskowin Marsh, caused concern on the part of the Service that further development in and around Neskowin Marsh could severely impact the unique and rare habitats found there. At the time of the proposal, Neskowin Marsh was the largest unprotected freshwater marsh remaining on the Oregon coast. The Service identified approximately 375 acres of land to be included within the approved boundary of the proposed Neskowin Marsh Unit. Implementation of this proposal expanded the refuge boundary from 3,060 acres to 3,435 acres to encompass the entire Neskowin Marsh complex, including the Neskowin Beach Golf Course (48 acres) and freshwater marsh just south of the golf course.

Since the establishment of the Neskowin Marsh Unit in 2002, 228 acres of wetland and adjacent uplands have been acquired within the Unit, including 27.5 acres of seasonally flooded marsh and adjacent coastal dune and riparian woodland which were donated by the Sycan B. Corporation for addition to the Neskowin Marsh Unit. The Sahlali Shores housing development by the Sycan B. Corporation bordered the Neskowin Marsh, with the planned homes situated on a steep slope above and to the southeast of the tract that was donated. This property was very important as a buffer to prevent further urban development from encroaching on Neskowin Marsh. A small portion of the donation tract was located outside (north of) the approved refuge boundary but because it was an integral part of the wetland complex, the boundary was adjusted through a Categorical Exclusion.

1.7 Relationship to Other Planning Efforts

When developing a CCP, the Service considers the goals and objectives of existing national, regional, state, and ecosystem plans and/or assessments. The CCP is expected to be consistent, as much as possible, with existing plans and assist in meeting their conservation goals and objectives (602 FW 3). This section summarizes some of the key plans reviewed by members of the core team while developing the CCP.

1.7.1 Refuge Plans

Key plans utilized for the original Nestucca Bay NWR include the Environmental Assessment for the proposed Nestucca Bay National Wildlife Refuge, produced in 1990 by the Service (USFWS 1990). This plan includes a history of the area and its various ownerships, the rationale for proposing its inclusion into the Refuge System, a description of historical and current uses and threats, detailed descriptions of wildlife and habitats included in the proposed refuge, and an evaluation of the biological, social, and economic effects of establishing this refuge. The Revised Final Environmental Assessment and Land Protection Plan for the Nestucca Bay National Wildlife Refuge and Cooperative Resource Management Area (USFWS 1993a), also included the rationale for amending the original EA, the revised acreage, and the Memorandum of Agreement established with the Nestucca Landowners Association.

The Nestucca Bay NWR Refuge Management Plan (USFWS 1993b) contains a detailed listing of establishing authorities as well as historical uses of the area, land ownership status, associated agreements and easements, and a description of habitat and wildlife resource changes through time, up to the date of publication. Goals, objectives and management strategies detailed in the Refuge Management Plan provided direction for the management of the new refuge and were utilized in developing updated goals and objectives for this CCP. Information useful for the Physical Environment (Chapter 3), Biological Environment (Chapter 4), and Socioeconomic Environment (Chapter 5) was found in the Wildland Fire Management Plan (USFWS 2004). The Fire Plan contains climate data, plant and wildlife species and community descriptions, refuge facilities and infrastructure information updated through 2004, information on wildfire risk and suppression options, and identification of sensitive habitats to be considered in planning for fire risk reduction and suppression actions. The Environmental Assessment and Public Use Plan for the Development of Public Use Program and Associated Facilities on Cannery Hill (USFWS 2007a) was consulted for specific information pertaining to the establishment of public use on Cannery Hill, including the need for action and a thorough evaluation of potential effects to wildlife, habitat, and the community.

The Preliminary Project Proposal for the Proposed Addition of the Neskowin Marsh Unit (USFWS 1997a) provided basic habitat and wildlife information as well as the relationship of the proposed addition to ecosystem management goals and objectives. The Environmental Assessment, Land Protection Plan, and Conceptual Management Plan for the Neskowin Marsh Unit Addition (USFWS 2000a) provided much greater detail on the unique biological resources of the marsh. This EA also contained an evaluation of the biological, social, and economic effects of establishing this new refuge unit.

1.7.2 Other Plans and Assessments

When developing a CCP, the Service considers the goals, objectives, strategies, and other information available in existing national, regional, and ecosystem plans, state fish and wildlife conservation plans, and other landscape-scale plans developed for the same watershed or ecosystem in which the refuges are located. To the extent possible, the CCP is expected to be consistent with the existing plans and assist in meeting their conservation goals and objectives. The following list identifies some of the key plans and assessments which were reviewed by members of the core team while developing the CCP.

- Birds of Conservation Concern (USFWS 2008a)
- Birds of Management Concern (BMC) – Region1 (USFWS 2005)
- Vegetation monitoring and mapping, 2008-2009: Little Nestucca tidal wetland restoration site, Nestucca Bay National Wildlife Refuge (Brophy 2010)
- Development of a Salt Marsh Assessment Tool to Monitor System Integrity and Provide Management Priorities for Wildlife Conservation in Response to a Hierarchy of Threats: Global Change, Invasive Species and Local Stressors (Guntenspergen et al. 2009)
- Rising to the Challenge: Strategic Plan for Responding to Accelerating Climate Change (USFWS 2010a)
- Strategic Plan for Inventories and Monitoring on National Wildlife Refuges: Adapting to Environmental Change (USFWS 2010b)
- Important Fish and Wildlife Habitats in Oregon (USFWS 1980)
- Nestucca Bay National Wildlife Refuge Remnant Prairie Site Assessment (Institute of Applied Ecology [IAE] 2011)
- Plant Communities and Succession in Oregon Coastal Salt Marshes (Jefferson 1975)
- Coastal Coho Habitat Factors for Decline and Protective Efforts in Oregon (National Marine Fisheries Service [NMFS] 1997a)
- Endangered and Threatened Species: Final Threatened Listing Determination, Final Protective Regulations, and Final Designation of Critical Habitat for the Oregon Coast Evolutionarily Significant Unit of Coho Salmon (National Oceanic and Atmospheric Administration [NOAA] 2008)
- North American Waterfowl Management Plan (NAWMP Plan Committee 2004)
- North American Waterbird Conservation Plan (Kushlan et al. 2002)
- Northern Pacific Coast Regional Shorebird Management Plan (Drut and Buchanan 2000)
- Oregon's Salt Marshes (Oberrecht 1997)
- Living with Nutria (Oregon Department of Fish and Wildlife [ODFW] 2011a)
- Oregon Biodiversity Information Center (ORBIC 2010)
- Pacific Flyway Management Plan for the Dusky Canada Goose (Pacific Flyway Council [PFC] 2008)
- Partners In Flight Species Assessment Database (PIF 2010)
- 2005 Survey for the Presence of Oregon Silverspot Butterfly, *Speyeria zerene hippolyta*, on the Clatsop Plains, Oregon (Patterson 2005)
- State of Oregon Conservation Strategy (ODFW 2006)
- White-cheeked Geese Surveys at Nestucca, Nehalem, and Tillamook Bays, Oregon 2010-11 (Stephensen and Horton 2011)
- Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon (ODFW 2012a)

- Identifying Resources of Concern and Management Priorities for a Refuge: A Handbook (USFWS 2008b)

1.8 Special Designation Lands

1.8.1 Important Bird Areas (IBA)

The Important Bird Areas (IBA) program is a global effort to identify the most important areas for maintaining bird populations and focusing conservation efforts on protecting these sites. Within the U.S., the program has been promoted and maintained by the American Bird Conservancy (ABC) and the National Audubon Society (Audubon). The ABC is coordinating the identification of nationally significant IBAs while Audubon is working to identify sites in individual states. Audubon is working within each state to identify a network of sites across the U.S. that provide critical habitat for birds. This effort recognizes that habitat loss and fragmentation are the most serious threats to birds across North America and around the world. By working through partnerships, principally the North American Bird Conservation Initiative, to identify those places that are critical to birds during some part of their life cycle (breeding, wintering, feeding, migrating), the intent is to minimize the effects that habitat loss and degradation have on bird populations. The IBA program has become a key component of many bird conservation efforts. More information is available at <http://www.audubon.org/bird/iba/index.html>.

The goals of the IBA program are to identify the sites that are the most essential for long-term conservation of birds and to take action to ensure the conservation of these sites (Cullinan 2001). An IBA is a site that provides essential habitat for one or more species of birds. The IBA selection process examines sites based on the presence and abundance of birds and/or the condition and quality of habitat. IBAs are chosen using standard biological criteria and expert ornithologists' review. All sites nominated as potential IBAs are rigorously evaluated to determine whether they meet the necessary qualifications. IBAs represent discrete sites, both aquatic and terrestrial, that are critically important to birds during their annual life cycle (e.g., breeding, migration, and/or wintering periods).

The 1,010-acre Nestucca Bay NWR IBA includes the Bay and the adjacent lowlands as well as Neskowin Marsh. This designated IBA contains a wealth of habitats including lowland pastures, grasslands, woodlands, tidal marsh and mudflats, freshwater bogs, and forested lagg. It is considered to be within the Northern Pacific Rainforest Bird Conservation Region. The ornithological significance of this IBA is centered around Nestucca Bay's importance to Aleutian and dusky Canada geese. Audubon Society's IBA website notes that during winter months the pastures around Nestucca Bay host the entire Semidi Islands population (about 145 birds) of Aleutian Canada geese (Federal Register 2001:Table 1, Roy Lowe personal communication), and from 8-16% of the entire dusky Canada goose population. The IBA description also notes that this is one of the few coastal wintering populations of dusky Canada geese.

1.9 Planning Process and Issue Identification

1.9.1 Planning Process

Planning Team: The core planning team for Nestucca Bay NWR consists of the project leader, deputy project leader, refuge manager, visitor services manager, wildlife biologist, and natural resource planner. An extended team consisting of biologists; cultural resource, public use, and realty

specialists; economists; and law enforcement officers from the Regional Office, other Federal agencies, State agencies, the Confederated Tribe of the Grand Ronde, the Nature Conservancy, and a private environmental consultant assisted in the development of this CCP, particularly in providing comments at key milestones. The full list of core and extended team members and their roles is provided in Appendix I.

Resources of Concern: The planning process began when the planning team reviewed refuge purposes and considered other plans and reports, and sought input from Oregon State conservation agencies and non-governmental organizations. The planning team then identified the top priority species, groups, and communities for the Refuge. A comprehensive list of potential resources of concern was compiled based upon review of the plans referenced above, many of which highlight priority species or habitats for conservation. From this list, those species and habitats that are most representative of refuge purposes and habitats, BIDEH, as well as other FWS and ecosystem priorities, were chosen as priority resources of concern (habitat types) and focal resources (plant and animal species). This list was then provided to participants in the Wildlife and Habitat Review, which was held on the Refuge on March 17, 2010, and included the extended team as well as Oregon Department of Fish and Wildlife biologists. The participants raised important issues and provided feedback that was used to refine the Priority Resources of Concern table. This table includes focal species, also called conservation targets, which were selected as representatives or indicators for the overall condition of important refuge habitats. Most of the biological emphasis of the CCP is focused on protecting and restoring these species. See Appendix E for the Comprehensive Resources of Concern and Priority Resources of Concern.

Public Use Planning: Public use planning centered on developing goals, objectives and strategies around the six wildlife-dependent recreational uses that are defined in Service policy as priority, appropriate public uses for refuge lands. A Visitor Services Review for Nestucca Bay NWR was held on the Refuge on April 14, 2010, with representatives from the extended team and public use specialists from Oregon Parks and Recreation Department. A background document including existing uses and visitor facilities was provided to participants prior to the Visitor Services Review. The participants' input was used by the planning team to assess past, current, and future management issues surrounding public use while developing objectives and strategies during the Comprehensive Conservation Plan process. In addition, the Service hired a contractor to conduct a Facilities Review which provided insight and conceptual plans for the future of administrative and visitor facilities at Nestucca Bay NWR. This information was also incorporated into the alternatives and some ideas were included as strategies to achieve broader goals for future management of this Refuge.

Public Involvement: Public scoping began in November 2010 with a notice in the Federal Register [November 29, 2010, Volume 75, Number 228] and a public meeting November 30, 2010, in Pacific City. Public input was also solicited through distribution of planning updates to our mailing list and meetings with key stakeholder groups. The comments and suggestions made through this process helped further develop and refine the management alternatives for the CCP, including the preferred alternative. A second planning update containing preliminary draft alternatives was distributed in November 2011 and another public open house meeting was held on November 16, 2011, in Pacific City to explain the alternatives and take comments. The Nestucca Bay National Wildlife Refuge Draft Comprehensive Conservation Plan and Environmental Assessment (DCCP/EA) was issued for public review and comment on September 17, 2012. The availability of the plan was announced through a notice in the Federal Register [September 17, 2012, Volume 77, Number 180] and via direct contact with approximately 600 people on our mailing list. The plan was made available for downloading on the Oregon Coast National Wildlife Refuge Complex Planning website and was

made available upon request in CD or printed format. Printed copies of the DCCP/EA were available at local public libraries, and upon request. All changes made as a result of public and agency comments were documented. A summary of public involvement is included in Appendix J; public comments on the DCCP/EA and the Service's responses to comments are included in Appendix K.

1.9.2 Key Issues Addressed in the CCP

The core planning team evaluated the issues and concerns raised during public scoping. The Service defines an issue as "Any unsettled matter that requires a management decision, e.g., an initiative, opportunity, resource management problem, threat to the resources of the unit, conflict in uses, public concern, or the presence of an undesirable resource condition (602 FW 1 1.6 K)." Issues are important to the planning process because they identify topics to be addressed in the CCP, pinpoint the types of information to gather, and help define alternatives for the CCP. It is the Service's responsibility to focus planning and the analysis on the major issues. Major issues typically suggest different actions or alternative solutions, are within the Refuge's jurisdiction, and have a positive or negative effect on the resource. The following issues are within the scope of the CCP and were considered by the Service to be the major issues to address in this planning process:

Wildlife and Habitat Management: What actions should the Service take to sustain and restore priority species and habitats over a period of 15 years? Given the importance of lowland pasture habitats to sensitive goose populations within the Nestucca Bay estuary, what priority should the Service place on restoring hydrologic function, historic water flows, tidal flows and floodplain functions on the refuge? How can the Service accomplish pasture maintenance and habitat restoration and still maintain a balance between diverse habitat types including some rare habitats that are least well-represented? Are there opportunities to restore upland forest, forested wetlands, and riparian areas? How much emphasis should the Service place on restoring coastal prairie to the standards required to support reintroduction of the threatened Oregon silverspot butterfly? How will the Service prioritize inventory, control, and monitoring of invasive species?

Climate Change: What actions should the Service take to address anticipated impacts to refuge resources from climate change/sea level rise, including species range shifts, phenological changes, decoupling of species assemblages, hydrological changes, ocean acidification, and changes in disturbance regimes? Are there focal species that will be adversely affected (directly or indirectly) by climate change, and what might be done to mitigate for that? How can cumulative stresses be reduced (e.g., among climate stress and other anthropogenic stresses, which do we have most control over)? Many of these threats are much larger in scope than just Nestucca Bay NWR. They will be addressed at various scales depending on available information and what is most appropriate and relevant to the Refuge.

Public Uses: What public use opportunities best support refuge purposes and increase visitor awareness of the Service's and Refuge System mission and goals? Should the Service consider opening new areas of the Refuge to public access, and what activities should be allowed in these areas? Where would new trails and other wildlife observation facilities be compatible and desirable on Nestucca Bay NWR, and if constructed, how can these be designed to enhance public enjoyment, understanding, appreciation, and stewardship of refuge resources? Should the Service consider opening portions of the Refuge to waterfowl hunting and fishing, and if so, where?

Facilities: Is there a need for a Service-owned visitor and education center at Nestucca Bay NWR? Should the Service place high priority on constructing a visitor center at Nestucca Bay NWR, or

would it better serve the resources and the public to replace the existing volunteer residence with a combination bunkhouse and small office? Does the potential exist for redesigning and expanding the parking capabilities to accommodate an increase in public use?

1.10 Refuge Vision and Goals

1.10.1 Vision Statement

Coastal prairie, wooded uplands, managed pastures, and salt marsh provide a mosaic of habitats for fish and wildlife at Nestucca Bay National Wildlife Refuge. The verdant pastures lining Nestucca Bay are a winter haven for thousands of Canada geese while the restored tidal marshes are nursery habitat for salmonids.

Through refuge trails and overlooks and hands-on environmental education programs we will strive to inspire visitors to act wisely to preserve the wide diversity of healthy habitats and the abundance of wildlife that characterize the Refuge.

Deep in Neskowin Marsh rare sedge fen, shrub carr, and sphagnum bogs are surrounded by a forested lagg and shelter endemic plants. The rich soils of the marsh, with their alternating layers of peat and sand, harbor a well preserved history of tsunami activity. With minimal human influence, the rare habitats of the marsh will continue to recover and evolve.

Working together with our partners, friends, and volunteers, the future of this Refuge will reflect a commitment to adapt to the realities of climate change and a dedication to wildlife conservation.

1.10.2 Refuge Goals

Refuge management goals are descriptive, open-ended, and often broad statements of desired future conditions that convey a purpose, but do not define measurable units. Goals must support the refuge vision and describe the desired end result.

Wildlife and Habitat Goals:

1. Protect and maintain agricultural lands supporting wintering migratory birds.
2. Restore, protect, and maintain upland prairie and grasslands characteristic of the North Pacific Coastal Ecosystem.
3. Protect and maintain upland forests characteristic of the North Pacific Coastal Ecosystem.
4. Enhance, protect, and maintain estuarine habitats characteristic of the Pacific Coastal Ecosystem.
5. Protect and maintain freshwater habitats characteristic of the North Pacific Coastal Ecosystem.
6. Protect and maintain forested wetlands and stream-riparian habitat characteristic of the North Pacific Coastal Ecosystem.
7. Promote the recovery of the federally threatened Oregon silverspot butterfly.
8. Enhance, protect, and maintain instream aquatic habitat for all dependent species including anadromous and estuary-dependent fish.
9. Research and monitoring. Gather scientific information (surveys, research, and assessments) to support adaptive management decisions.

Public Use Goals:

10. Provide and manage quality opportunities for visitors of all abilities to observe and/or photograph a variety of subspecies of Canada geese and other wildlife using lowland pastures along with coastal wetlands, grasslands and mixed hardwood forest thus promoting the protection and preservation of coastal ecosystems.
11. Offer hands-on environmental education programs to communities that promote life-long learning about coastal wildlife and their habitats.
12. In cooperation with partners and volunteers offer year-round interpretive opportunities to visitors of all ages and abilities to learn about and experience a range of coastal habitats including coastal prairie, estuary, and tidal marsh thus instilling an ethic of conservation and resource protection for coastal wildlife adapted to these habitats.
13. Provide and manage safe, enjoyable, and quality hunting and fishing opportunities for people of varying ages and resources that furthers the tradition of wildlife conservation and stewardship.
14. Provide facilities and materials that welcome and orient children and adults to Nestucca Bay National Wildlife Refuge so they can easily and safely learn about its fish and wildlife resources.

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