



Lovely Rose Atoll rises above the azure blue sea. Jean Kenyon/USFWS

Chapter 1. Introduction and Background

Rose Atoll National Wildlife Refuge (NWR or Refuge) is located approximately 180 miles east of Tutuila in American Samoa. The next closest island to Rose is Ta'ū Island in Manu'a, 78 miles away. The 1,613-acre Refuge was established on August 24, 1973, with the American Samoa Government (ASG) by a cooperative agreement (Appendix K). It is the southernmost unit of the National Wildlife Refuge System (Refuge System) and shares the distinction with Jarvis Island NWR of being one of two NWRs located south of the equator.

One of the smallest atolls in the world, Rose Atoll consists of a perimeter reef encircling a central lagoon. The atoll is a nearly square geographical feature, with sides that are approximately 1.5 miles in length. There are two low, sandy islands—Rose and Sand—located on the coralline algal reef. A single ava (channel) links the lagoon to the sea surrounding the atoll. The lagoon is roughly 1.2 miles wide and 98 feet deep. The Refuge provides habitat for migratory seabirds and shorebirds, sea turtles, and unique marine fish, coral reefs, and other invertebrates.

Coral communities at Rose Atoll are distinct from reefs around the other islands in Samoa. The fringing reef is a striking pink hue due to the crustose coralline algae (CCA) that is the primary reef-building species at the atoll. The CCA reef plays a significant role at the atoll, stabilizing the perimeter and protecting the lagoon and islands from ocean swells. Unlike the rest of the Samoan Archipelago where they are harvested by humans, the spectacularly colored faisua (giant clams) are found in high densities at the Refuge. Similarly, fish density is very high and species diversity moderately high when compared to other reefs in the Samoan Archipelago.

Rose Atoll’s beach strand provides important nesting sites for the threatened green turtle, which migrates between American Samoa and other Pacific Island nations. As the only terrestrial rat-free areas in American Samoa, Rose Atoll’s islands are vital nesting and roosting habitat supporting 12 species of federally-protected seabirds and sea turtles. The Refuge’s tropical pu’a vai (*Pisonia grandis*) forest provides habitat for many nesting seabird species. This forest type is declining in the Pacific due to the effects of human habitation, coconut plantings, and pests such as rats and insects.

1.1 Purpose and Need for the CCP

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 if compatible. The CCP, when fully implemented, should achieve refuge purposes; help fulfill the Refuge System mission; maintain and, where appropriate, restore the biological integrity, diversity, and environmental health (BIDEH) of the refuge and the Refuge System; help achieve the goals of the National Wilderness Preservation System (NWPS); 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).

1.2 Legal and Policy Guidance

The U.S. Fish and Wildlife Service (Service), an agency within the Department of the Interior (DOI), is the principal Federal agency responsible for conserving, protecting, and enhancing fish, wildlife, and plants and their habitats. Refuge management is guided by Federal laws, Executive Orders, Service policies, and international treaties. Fundamental guidelines are found in the mission and goals of the Refuge System and the designated purposes of the Refuge as described in establishing legislation, Executive Orders, or other documents establishing, authorizing, or expanding a refuge.

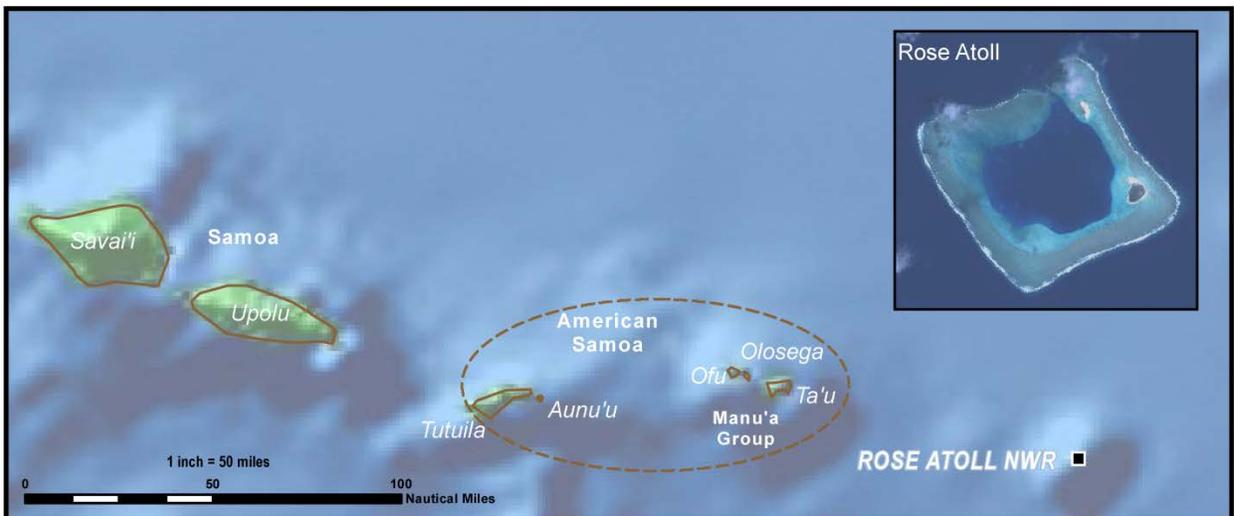
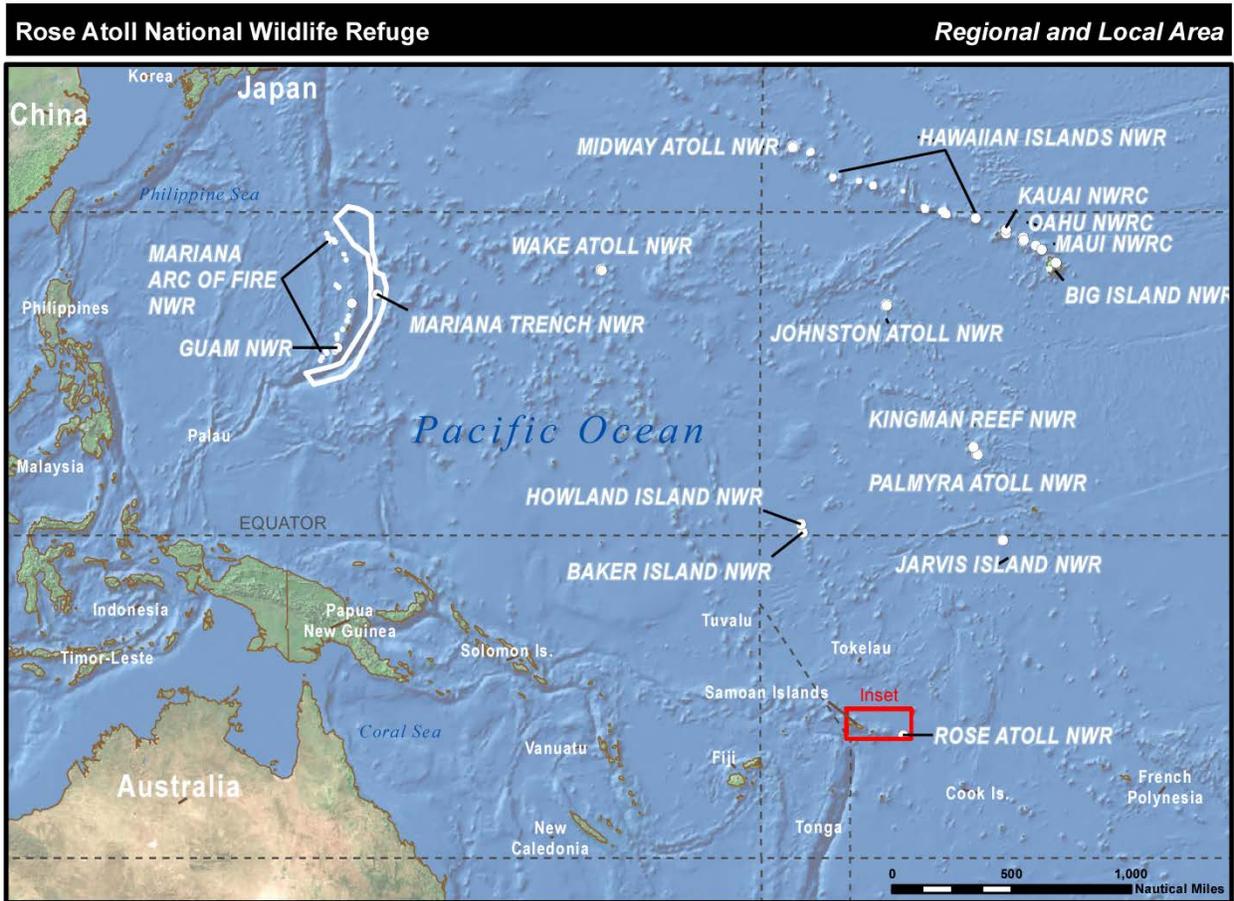
Key concepts and guidance of the Refuge System derive from the National Wildlife Refuge System Administration Act of 1966 (Administration Act), the Refuge Recreation Act of 1962 (16 U.S.C. 460k-460k-4), as amended, Title 50 of the Code of Federal Regulations (CFR), and the Fish and Wildlife Service Manual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

1.2.1 U.S. Fish and Wildlife Service

All refuges are managed by the Service, an agency within the Department of the Interior (DOI). 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 and wildlife and their habitats for the continuing benefit of the American people.” National natural resources entrusted to the Service for conservation and protection include migratory birds, endangered and threatened species, interjurisdictional fish, wetlands, and certain marine mammals.

Figure 1-1. Regional and local area.

Final CCP



Produced by USFWS Region 1
 Refuge Information Branch
 Portland, Oregon



Map Date: 3/22/2012 File: 11-088-8.mxd

The back sides of maps are blank to improve readability.

The Service also manages national fish hatcheries, enforces Federal wildlife laws and international treaties on importing and exporting wildlife, assists with State and Territorial fish and wildlife programs, and helps other countries develop wildlife conservation programs.

1.2.2 National Wildlife Refuge System

The Refuge System is the world's largest network of public lands and waters set aside specifically for conserving wildlife and protecting ecosystems. From its inception in 1903, the Refuge System has grown to encompass over 550 national wildlife refuges in all 50 States, and waterfowl production areas in 10 States, covering more than 150 million acres of public lands and waters. More than 40 million visitors annually fish, hunt, observe and photograph wildlife, or participate in environmental education and interpretive activities on national wildlife refuges.

1.2.3 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.” The goals of the Refuge System, as articulated in the Mission, Goals, and Purposes policy (601 FW1), follow:

- 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 interjurisdictional 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); and
- Foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats.



Faisia decorate the lagoon at Rose Atoll.
Mark MacDonald/ASG-DMWR

1.2.4 National Wildlife Refuge System Administration Act of 1966

Of all the laws governing activities on national wildlife refuges, the Administration Act exerts the greatest influence. The Administration Act was amended by the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act). The Improvement Act included a unifying mission for all national wildlife refuges, a new process for determining compatible uses on refuges, and a requirement that each refuge will be managed under a CCP developed in an open public process. The

Administration Act states that the Secretary shall provide for the conservation of fish, wildlife, plants, and their habitats within the Refuge System, and ensure that the biological integrity, diversity, and environmental health of the Refuge System 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.” Biological integrity, diversity, and environmental health are critical components of wildlife conservation. As later made clear in the Biological Integrity, Diversity, and Environmental Health (BIDEH) policy, “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.”

Each refuge must be managed to fulfill the Refuge System mission as well as the specific purpose for which it was established. The Administration Act requires the Service to monitor the status and trends of fish, wildlife, and plants on every refuge.

Additionally, the Administration Act identifies six wildlife-dependent recreational uses for the Refuge System. These uses are hunting, fishing, wildlife observation and photography, and environmental education and interpretation. Under the Administration Act, the Service is to grant these six wildlife-dependent public uses, when compatible, special consideration in the planning for, management of, and establishment and expansion of units of the Refuge System. The overarching goal of the wildlife-dependent public use programs is to enhance opportunities and access to quality wildlife-dependent visitor experiences on refuges while managing refuges to conserve fish, wildlife, plants, and their habitats. 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.

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) proposed or occurring on a refuge for appropriateness and compatibility. 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 purposes, the Refuge System mission, or goals or objectives described in an approved 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 purpose(s) of the refuge or the fulfillment of the Refuge System. Updated appropriate use findings and compatibility determinations for existing and planned uses for Rose Atoll NWR are in Appendices B and C of this CCP, respectively.

The Administration Act also requires that, in addition to formally established guidance, the CCP must be developed with the participation of the public. Issues and concerns articulated by the public play a role in guiding alternatives considered during the development of the CCP, and together with the formal guidance, can play a role in selection of the preferred alternative. It is Service policy that CCPs are developed in an open public process and that the Service is committed to securing public input throughout the process. Appendix J of the CCP details public involvement that has been undertaken during this CCP process.

1.2.5 Presidential Proclamation 8337

On January 6, 2009, President George W. Bush signed Presidential Proclamation 8337, designating the Rose Atoll Marine National Monument (Monument) which included the Rose Atoll NWR. The President directed that the Secretary of the Interior shall have management responsibility for the

Monument, including the Refuge, in consultation with the Secretary of Commerce, except that the Secretary of Commerce, through the National Oceanic and Atmospheric Administration (NOAA), shall have the primary management responsibility regarding the management of the marine areas of the Monument seaward of mean low water, with respect to fishery-related activities regulated pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 *et seq.*; MSFCMA), and any other applicable authorities. On January 16, 2009, Secretary of the Interior Kempthorne issued Secretarial Order 3284, delegating all his responsibilities for the Monument to the Service Director, and directed that the Refuge continue to be managed consistent with the Proclamation and within boundaries set forth in the Notice of Establishment, 71 FR 13183 (April 5, 1974).

Additionally, the President directed the Secretary of Commerce to initiate the process to add the marine areas of the Monument to the National Marine Sanctuary of American Samoa (NMSAS) in accordance with the National Marine Sanctuaries Act (16 U.S.C. 1431 *et seq.*). This process was concluded in 2012. This Rose Atoll NWR CCP is a separate plan for the conservation of the Refuge area only.

1.2.6 Other Laws and Mandates

Many other Federal laws, Executive orders, Service policies, and international treaties govern the Service and Refuge System. Examples include the Migratory Bird Treaty Act of 1918 (MBTA), Refuge Recreation Act of 1962, National Historic Preservation Act of 1966 (NHPA), and the Endangered Species Act of 1973 (ESA).

In addition, over the last few years, the Service has developed or revised numerous policies and Director's Orders to implement the mandates and intent of the Administration Act. Some of these key policies include BIDEH; Refuge Compatibility (603 FW 2); Comprehensive Conservation Planning (602 FW 3); Mission and Goals and Refuge Purposes (601 FW 1), Appropriate Refuge Uses (603 FW 1); Wildlife-Dependent Public Uses (605 FW 1-8); Wilderness Stewardship policies (610 FW 1-5), and the Director's Order for Coordination and Cooperative Work with State/Territorial Fish and Wildlife Agency representatives on management of the Refuge System.

In developing a CCP, we must consider these broader laws and policies as well as Refuge System and ecosystem goals and vision. The CCP must be consistent with these and also with the refuge purpose(s). For Rose Atoll NWR, specific examples of these broader laws include:

- ESA;
- MBTA;
- Clean Water Act;
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); and the
- MSFCMA (all waters and substrates, including corals, at Rose Atoll are identified as Essential Fish Habitat).



Sunset Butterfly Fish. Mark MacDonald/ASG-DMWR

1.3 Refuge Establishment and Purposes

Lands within the Refuge System are acquired and managed under a variety of legislative acts, administrative orders, and legal authorities. The official purpose or purposes for a refuge are specified in or derived from the law, Presidential proclamation, Executive order, agreement, public land order, donation document, or administrative memorandum establishing, authorizing, or expanding a refuge, refuge unit, or refuge subunit. The Service defines the purpose of a refuge when it is established or when new land is added to an existing refuge. When an addition to a refuge is acquired under an authority different from the authority used to establish the original refuge, the addition takes on the purposes of the original refuge, but the original refuge does not take on the purposes of the addition. Refuge managers must consider all of the purposes. However, purposes dealing with the conservation, management, and restoration of fish, wildlife, and plants and their habitats take precedence over other purposes in the management and administration of a refuge.

1.3.1 Refuge Establishment

Rose Atoll is part of the Territory of American Samoa and was established as a National Wildlife Refuge by cooperative agreement between the Government of American Samoa and the Bureau of Sport Fisheries and Wildlife (a predecessor of the U.S. Fish & Wildlife Service) on August 24, 1973. The establishment authority for the Refuge is the Fish and Wildlife Act of 1956, as amended.

1.3.2 Purpose

The purposes for Rose Atoll NWR are "... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4); and "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956, 16 U.S.C. §742(a)-754, as amended).

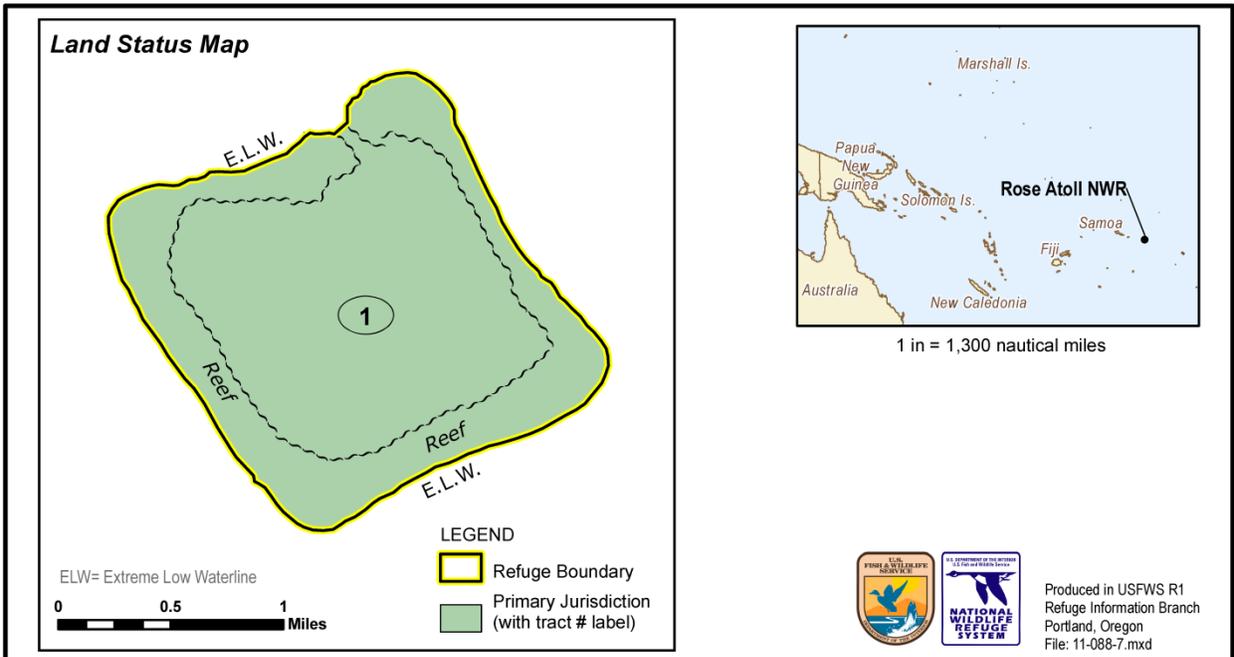
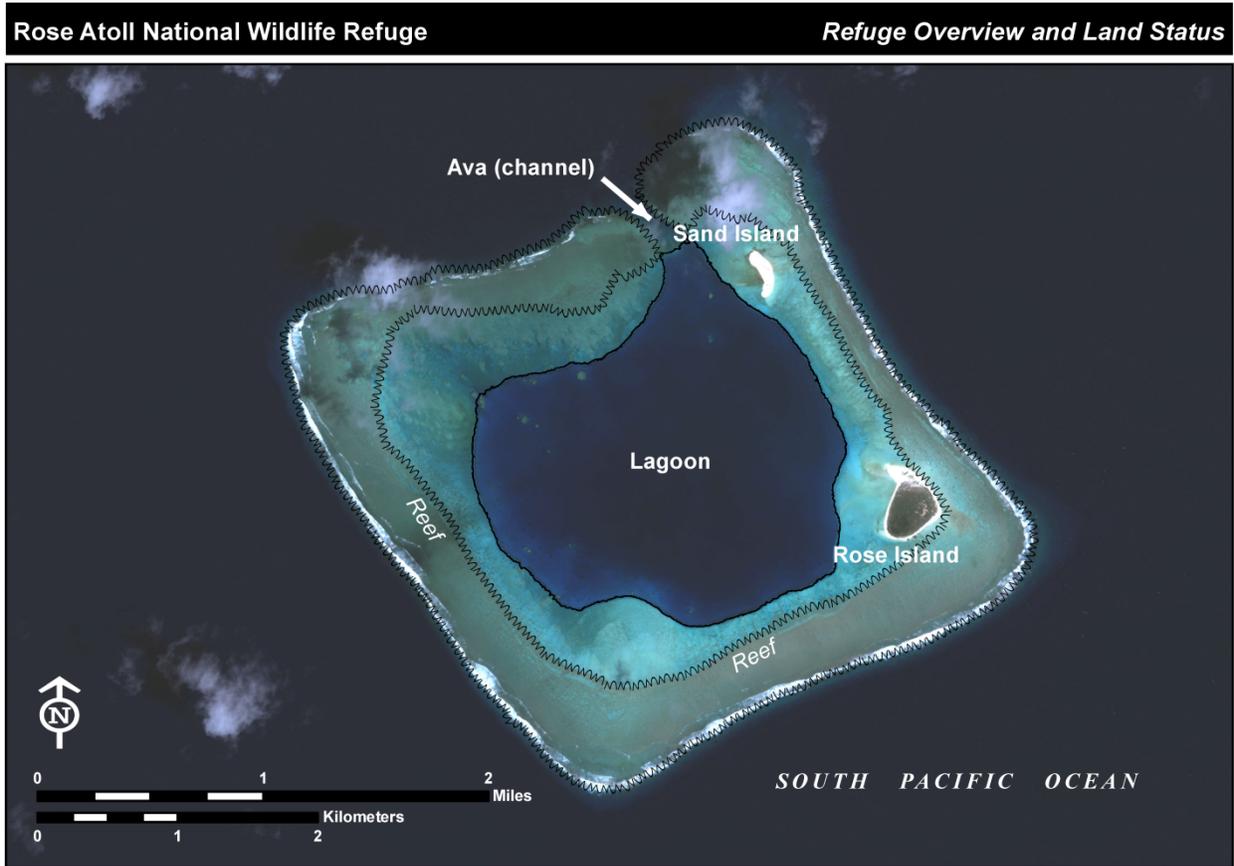
1.3.3 Land Status and Ownership

Rose Atoll is managed by the Service in cooperation with the ASG as a National Wildlife Refuge under a cooperative agreement with the Government of American Samoa. The American Samoa Legislature (Fono) officially approved of the cooperative agreement with the passage of Senate Concurrent Resolution No. 14 in August 1973 (see Appendix K). Per Presidential Proclamation 4347, the U.S. government maintains jurisdiction over the submerged lands and waters of the atoll and surrounding territorial seas.

The exterior boundary of the Refuge is the extreme low waterline outside the perimeter reef, except at the entrance ava where the boundary is a line extended between the extreme low waterlines on each side of the entrance ava (*Figure 1-2*, page 1-9).

Figure 1-2. Refuge overview and land status.

Final CCP



Map Date: 4/3/2013
 Data: USFWS Land Status, 2012; GeoEye imagery, 9/16/11

The back sides of maps are blank to improve readability.

1.4 Refuge Goals

Goals are the unifying elements of successful refuge management. They identify and focus management priorities, resolve issues, and link to refuge purposes, Service policy, and the Refuge System mission. A CCP describes management actions that help bring a refuge closer to its vision. The Rose Atoll NWR vision is described on the inside front cover of this document. A vision broadly reflects refuge purposes, Refuge System mission and goals, other statutory requirements, and larger-scale plans as appropriate. Goals define general targets in support of the vision, followed by objectives that direct efforts into incremental and measurable steps toward achieving those goals. Finally, strategies identify specific tools and actions to accomplish objectives. The following are our goals in both Samoan and English language versions.

Manulauti o le Faasao mo Meaola

1. Puipuia ma toe faaleleia nofoaga 'ainā i le aloalo ina ia o gatasi ma tulaga moomia na iai ituaiga olaga faamauina o meaola eseese i lea lotoifale.
2. Fa'af'o'isia, puipui, ma toe faaleleia le si'omaga e ola ai le ituaiga limu e ta'ua o le "crustose coralline algae" i le a'au ina ia 'ausia tulaga moomia tau le faaolaolaga o meaola i ituaiga eseese o lo o i lea itulagi.
3. Puipui ma toe faaleleia foliga ma tulaga masani o le ava e puipuia uma isi nofoaga ua 'ainā e meaola o le Faasao ma le aafia o le pala mātū ona o le fogāsami o lo o si'omia ai le aloalo.
4. Fa'af'o'isia, puipui, ma toe faaleleia le gataifale o lo o fai ma nofoaga o meaola o lea si'omaga ina ia o gatasi ma tulaga moomia na iai se ituaiga olaga faamauina o meaola eseese i lea lotoifale.
5. Fa'af'o'isia, puipui, ma toe faaleleia nofoaga o lo o folasia i le oneone o le gataifale ina ia o gatasi ma tulaga moomia na iai se ituaiga olaga faamauina o meaola eseese i lea lotoifale e aofia ai laau, manufelelei o le sami, manufelelei e masani ona aumau i le nofoaga oneonea o le matafaga, manufelelei o le laueleele, manufelelei e aumau i se vai o i le laueleele, o ituaiga manu fetolofi e i le faatulagaga e faaperetania o "reptiles", ma pa'a e maua i le pala mātū.
6. Faamaopoopo faamatalaga faasaienitisi (faamaumauga tau tamaoaiga, vaavaaiga o le itu i fafo ma totonu, laulilūga, ma su'esu'ega) e lagolagoa fa'ai'uga fai a le taupulega e pei ona folasia mai e manulauti 1-5.
7. Fa'atāua le faatoetoe o alagaoa ma opogi faatasi le faiva faatausimea e va'ava'alua ai ma tagata lautele e tusa ai o le si'osi'omaga o meaola uma, su'esu'ega tau le eleele, ma le tele o le tamaoaiga fa'aleaganu'u o le Faasao e ala i le faafoega o polokalama e feso'ota'i atu ai ma tagata lautele, o galuega tau faaliliu upu, ma a'oa'oga tau le si'osi'omaga.
8. Faailoa ma'oti, puipui, faatoetoe, ma faaliliu tulaga tau alagaoa fa'aleaganu'u o le Faasao ma faafaigofie, pe a talafeagai ai, faagaioiga fa'aleaganu'u.



Fua'o. Frank Pendleton/USFWS

Refuge Goals

1. Protect and maintain the lagoon habitats to meet the life-history needs of native species in this community.
2. Restore, protect, and maintain the perimeter crustose coralline algal reef to meet the life-history needs of native species in this community.
3. Protect and maintain the natural state of the ava (channel) to protect all other Refuge habitats and the hydrology of the lagoon.
4. Restore, protect, and maintain the beach strand habitat to meet the life-history needs of native species in this community.
5. Restore, protect, and maintain littoral forest to meet the life-history needs of native species in this community including plants, seabirds, shorebirds, land birds, waterbirds, reptiles, and land crabs.
6. Gather scientific information (inventories, monitoring, assessments, and research) to guide adaptive management decisions in support of Goals 1-5.
7. Strengthen resource conservation and the public's shared stewardship of the ecological, geologic, and cultural richness of the Refuge by providing outreach, interpretation, and environmental education opportunities.
8. Identify, protect, preserve, and interpret the Refuge's Samoan cultural resources and, where appropriate, facilitate cultural practices.

1.5 Relationship to Other Planning Efforts

When developing a CCP, the Service considers the goals and objectives of existing national, regional, State/Territorial, 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 this CCP.

Final Restoration Plan for Rose Atoll National Wildlife Refuge (USFWS and DMWR 2001). The *Jin Shiang Fa* fishing vessel ran aground on the western reef of the atoll in 1993 and broke up before a salvage tug could reach the atoll, resulting in the release of over 100,000 gallons of diesel and lube oil across the reef killing a large area of CCA near the wreck site. Invasive species of cyanobacteria and articulated coralline algae immediately began colonizing those areas of the reef. This plan covered removal of vessel debris and monitoring the recovery of the injured reef community.

Recovery Plan for U.S. Pacific Populations of the Green Turtle (NMFS and USFWS 1998a). The green turtle is listed as threatened throughout its Pacific Range, except for the endangered population nesting on the Pacific coast of Mexico, which is covered under the Recovery Plan for the East Pacific green turtle. By far, the most serious threat to these green turtles is from direct take of turtles and eggs, both within U.S. jurisdiction and on shared stocks that are killed when they migrate out of U.S. jurisdiction. Human development is also having an increasingly serious impact on nesting beaches.

Recovery Plan for U.S. Pacific Populations of the Hawksbill Turtle (NMFS and USFWS 1998b). The Hawksbill turtle is listed as endangered throughout its range. Threats to these turtles include harvest of species for meat, eggs, and the tortoiseshell and stuffed curio trade and increasing human populations and subsequent destruction of habitat. Actions identified to recover the species include addressing harvesting and development threats, reducing incidental mortalities by commercial and artisanal fisheries, better surveying and monitoring, supporting management in areas that have existing populations, identifying stock home ranges and primary nesting and foraging areas, and controlling nonnative predators.

U.S. Pacific Islands Regional Shorebird Conservation Plan (Engilis and Naughton 2004). Conservation and restoration of shorebird habitats is essential for the protection of endangered and declining shorebird populations. Monitoring and research needs include assessment of population sizes and trends; assessment of the timing and abundance of birds at key wintering and migration stopover sites; assessment of habitat use and requirements at wintering and migration areas; exploration of the geographic linkages between wintering, stopover, and breeding areas; and evaluation of habitat restoration and management techniques to meet the needs of resident and migratory species. Education and public outreach are critical components of this plan. Resource management agencies of Federal, Territorial, Commonwealth, and State governments will need to work together with military agencies, nongovernmental organizations, and the scientific community. On a larger scale, coordination at the international level will be key to the conservation of vulnerable species, both migratory and resident.

1.6 Planning and Issue Identification

1.6.1 Issues Addressed in the CCP

The planning process for the CCP is described in detail in Appendix J. Summary of Public Involvement. The following key issues were identified in the planning process:

Wildlife and Habitat Resources: How can habitat and species management be improved? How can we maximize the ability of habitats and species to adapt and resist effects of climate change and ocean acidification? What are our priority research and survey needs to support management?

Cultural/historic resources: How is Rose Atoll connected to Samoan culture and what is its significance? How can we facilitate and support cultural connections to Rose Atoll? How can they be woven together with public interpretation? How can historic resource management be enhanced?

Visitor services and wildlife-dependent recreation: What are appropriate and compatible uses in relation to on-site levels of environmental education and interpretation?

Law enforcement: How can trespass, illegal activity, and human-caused disturbance to wildlife be managed more effectively given limited personnel and remoteness of the Refuge?

1.6.2 Issues outside the Scope of the CCP

Management of the Monument: While CCPs are very comprehensive plans, no single plan can cover all issues. Management of the Monument is complex, with two Federal agencies (the Service and NOAA) and two Government of American Samoa Territorial departments (Department of

Commerce (ASDOC) and Department of Marine and Wildlife Resources (DMWR)) working together. The Secretary of the Interior through the Service has management responsibility for the Monument, including Rose Atoll NWR. However, the Secretary of Commerce, through NOAA NMFS has primary management responsibility regarding the management of the marine areas of the Monument seaward of mean low water, with respect to fishery-related activities. Additionally, the area in the Monument excluding the Refuge is part of the National Marine Sanctuary of American Samoa.

Fishing: Commercial fishing is prohibited in the Monument according to the Proclamation and all fishing is prohibited within 12 nautical miles (nmi) of the Refuge. Non-commercial fishing is allowed in the Monument outside of the 12 nmi no-fishing zone. Non-commercial fishing includes subsistence fishing and recreational fishing. The prohibition on all fishing within 12 nmi of the Refuge will be reviewed by the Western Pacific Regional Fisheries Council and NOAA's National Marine Fisheries Service (NMFS) in 2016. Additionally, the areas of the Monument that are outside of the Refuge became part of the National Marine Sanctuary of American Samoa in 2012. In developing and implementing any management plans, the Secretaries of the Interior and the Commerce shall involve as cooperating agencies the agencies with jurisdiction or special expertise, including the U.S. Department of Defense, U.S. Department of Commerce, and other agencies, through scoping in accordance with National Environmental Policy Act (42 U.S.C. 4321 *et seq.*; NEPA), its implementing regulations, and with Executive Order 13352, and shall treat as a cooperating agency the American Samoa Government through the DMWR and ASDOC consistent with the above authorities.