

Appendix E. Wilderness Review for Rose Atoll National Wildlife Refuge

E.1 Policy and Direction for Wilderness Reviews

U.S. Fish and Wildlife Service policy (Part 602 FW 3.4 C.(1) (c)) requires that wilderness reviews be completed as part of the CCP process. This review includes the re-evaluation of refuge lands existing during the initial 10-year review period of The Wilderness Act of 1964, as amended (16 U.S.C. 1131-1136) as well as new lands and waters added to the Refuge System since 1974. A preliminary inventory of the wilderness resources is to be conducted during pre-acquisition planning for new or expanded refuges (341 FW 2.4 B., “Land Acquisition Planning”). Refuge System policy on Wilderness Stewardship (610 FW 1-5) includes guidance for conducting wilderness reviews (610 FW 4 – Wilderness Review and Evaluation).

A wilderness review is the process of determining whether the Service should recommend Refuge System lands and waters to Congress through the Department of the Interior and President for wilderness designation. The wilderness review process consists of three phases: wilderness inventory, wilderness study, and wilderness recommendation.

E.1.1 Wilderness Inventory

The inventory is a broad look at a refuge to identify lands and waters that meet the minimum criteria for wilderness: size, naturalness, and outstanding opportunities for solitude or primitive and unconfined type of recreation. All areas meeting the criteria are preliminarily classified as Wilderness Study Areas (WSA). If WSA are identified, the review proceeds to the study phase.

E.1.2 Wilderness Study

During the study phase, WSAs are further analyzed:

- 1) For all values ecological, recreational, cultural, economic, symbolic;
- 2) For all resources, including wildlife, vegetation, water, minerals, soils;
- 3) For existing and proposed public uses;
- 4) For existing and proposed refuge management activities within the area; and
- 5) To assess a refuge’s ability to manage and maintain the wilderness character in perpetuity, given the current and proposed management activities. Factors for evaluation may include, but are not limited to staffing and funding capabilities, increasing development and urbanization, public uses, and safety.

We evaluate at least an “All Wilderness Alternative” and a “No Wilderness Alternative” for each WSA to compare the benefits and impacts of managing the area as wilderness as opposed to managing the area under an alternate set of goals, objectives, and strategies that do not involve wilderness designation. We may also develop “Partial Wilderness Alternatives” that evaluate the benefits and impacts of managing portions of a WSA as wilderness.

In the alternatives, we evaluate:

- 1) The benefits and impacts to wilderness values and other resources;
- 2) How each alternative would achieve the purposes of the Wilderness Act and the National

- Wilderness Preservation System (NWPS);
- 3) How each alternative would affect achievement of refuge purpose(s) and the Refuge System mission;
 - 4) How each alternative would affect maintaining and, where appropriate, restoring BIDEH at various landscape scales;
 - 5) Other legal and policy mandates; and
 - 6) Whether a WSA can be effectively managed as wilderness by considering the effects of existing private rights, land status and Service jurisdiction, refuge management activities and refuge uses and the need for or possibility of eliminating Section 4(c) prohibited uses.

E.1.3 Wilderness Recommendation

If the wilderness study demonstrates that a WSA meets the requirements for inclusion in the NWPS, a wilderness study report should be written that presents the results of the wilderness review, accompanied by a Legislative Environmental Impact Statement (LEIS). The wilderness study report and LEIS that support wilderness designation are then transmitted through the Secretary of the Interior to the President of United States, and ultimately to the Congress for action. Refuge lands recommended for wilderness consideration by the wilderness study report would retain their WSA status and be managed as "... wilderness according to the management direction in the final CCP until Congress makes a decision on the area or we amended the CCP to modify or remove the wilderness recommendation" (610 FW 4.22B). When a WSA is revised or eliminated, or when there is a revision in "wilderness stewardship direction, we include appropriate interagency and tribal coordination, public involvement, and documentation of compliance with NEPA" (610 FW 3.13).

The following constitutes the wilderness inventory phase of the wilderness review for the Rose Atoll NWR.

E.2 Wilderness Inventory

E.2.1 Criteria for Evaluating Lands for Possible Inclusion in the National Wilderness Preservation System

The Wilderness Act of 1964, as amended (16 U.S.C. 1131-1136) provides the following description of wilderness:

"A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act as an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions..."

The following criteria for identifying areas as wilderness are outlined in Section 2(c) of the Act and are further expanded upon in NWRS policy (610 FW 4). The first three criteria are evaluated during the wilderness inventory phase; the fourth criterion is evaluated during the wilderness study phase:

- 1) Generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable;
- 2) Has outstanding opportunities for solitude or a primitive and unconfined type of recreation;
- 3) Has at least 5,000 acres of land or is of a sufficient size as to make practicable its preservation

- and use in an unimpaired condition; and
- 4) May also contain ecological, geological, or other features of scientific, educational, scenic, or historic value.

Criterion 3 is further defined in Section 3(c) of the Act as 1) a roadless area of 5,000 contiguous acres or more, or 2) a roadless island. Roadless is defined as the absence of improved roads suitable and maintained for public travel by means of four-wheeled, motorized vehicles that are intended for highway use.

E.3 Process of Analysis

The following evaluation process was used in identifying the suitability of refuge units for wilderness designation:

- Determination of refuge unit sizes;
- Assessment of the units' capacity to provide opportunities for solitude or primitive and unconfined recreation; and
- Assessment of "naturalness" of refuge units.

More detail on the actual factors considered and used for each assessment step follows.

Unit Size: Roadless areas meet the size criteria if any one of the following standards apply:

- An area with over 5,000 contiguous acres solely in Service ownership.
- A roadless island of any size. A roadless island is defined as an area surrounded by permanent waters or an area that is markedly distinguished from the surrounding lands by topographical or ecological features.
- An area of less than 5,000 contiguous Federal acres that is of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management.
- An area of less than 5,000 contiguous Federal acres that is contiguous with a designated wilderness, recommended wilderness, or area under wilderness review by another Federal wilderness managing agency such as the Forest Service, National Park Service, or Bureau of Land Management.

Inventory Unit A consists of the entire Rose Atoll NWR (Figure E-1) at 1,613 acres. As a low-lying atoll with two roadless islands, Rose Atoll NWR meets the size criteria for a wilderness study area.

Outstanding Solitude or Primitive or Unconfined Recreation.

A designated wilderness area must provide outstanding opportunities for solitude, or a primitive and unconfined type of recreation. Possession of only one of these outstanding opportunities is sufficient for an area to qualify as wilderness, and it is not necessary for one of these outstanding opportunities to be available on every acre. Furthermore, an area does not have to be open to public use and access to qualify under these criteria.

Opportunities for solitude refer to the ability of a visitor to be alone and secluded from other visitors in the area. Primitive and unconfined recreation means non-motorized, dispersed outdoor recreation activities that are compatible and do not require developed facilities or mechanical transport. Primitive

recreation activities may provide opportunities to experience challenge and risk, self-reliance, and adventure.

Solitude is an overwhelming force that visitors experience on Rose Atoll. The atoll is over 2,700 miles to Sydney, Australia; 4,700 to Los Angeles, California; and 6,000 miles to Peru. The closest inhabited area is Ta'u Island at almost 80 miles away. Expanses of open ocean with no other landform are visible from every angle. Since its establishment as a refuge, Rose Atoll has been closed to general public access in order to conserve the unique and valuable fish and wildlife resources. Research, survey, and management activities involving human presence are infrequent and temporary and thus would not detract from opportunities for solitude or primitive and unconfined recreation. With no freshwater or facilities, a challenging channel crossing, extreme isolation, and sharks present in the lagoon, opportunities to experience challenge and risk, self-reliance, and adventure are present.

The Rose Atoll NWR inventory unit thus meets the criteria for solitude as well as primitive and unconfined recreation.

Naturalness and Wildness: the area generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable.

This criterion must be evaluated in the context of current natural conditions and societal values and expectations without compromising the original intent of the Wilderness Act. It is well recognized that there are few areas remaining on the planet that could be truly classified as primeval or pristine, with even fewer, if any, existing in the conterminous U.S. Likewise, few areas exist that do not exhibit some impact from anthropogenic influences, be it noise, light, or air pollution; water quality or hydrological manipulations; past and current land management practices; road or trails, suppression of wildfires; invasions by pest species of plants and animals; or public uses. While allowing for the near-complete pervasiveness of modern society on the landscape, the spirit of the Wilderness Act is to protect lands that still retain the wilderness qualities of: 1) natural, 2) untrammeled, 3) undeveloped. These three qualities are cornerstones of wilderness character. For areas proposed or designated as wilderness, wilderness character must be monitored to determine baseline conditions and thereafter be periodically monitored to assess the condition of these wilderness qualities. Proposed and designated wilderness areas by law and policy are required to maintain wilderness character through management and/or restoration in perpetuity.

Defining the first two qualities (natural and untrammeled) requires a knowledge and understanding of the ecological systems which are being evaluated as potential wilderness. Ecological systems are comprised of three primary attributes: composition, structure, function. Composition is the components that make up an ecosystem, such as the habitat types, native species of plants and animals, and abiotic (physical and chemical) features. These contribute to the diversity of the area. Structure is the spatial arrangement of the components that contribute to the complexity of the area. Composition and structure are evaluated to determine the naturalness of the area. Function is the processes that result from the interaction of the various components both temporally and spatially, and the disturbance processes that shape the landscape. These processes include but are not limited to predator-prey relationships, insect and disease outbreaks, nutrient and water cycles, decomposition, fire, windstorms, flooding, and both general and cyclic weather patterns. Ecological functions are evaluated to determine the wildness or untrammeled quality of the area.

The third quality assessment is whether an area is undeveloped. Undeveloped refers to the absence of permanent structures such as roads, buildings, dams, fences, and other human alterations to the landscape. Exceptions can be made for historic structures or structures required for safety or health considerations, providing they are made of natural materials and relatively unobtrusive on the landscape.

General guidelines used for evaluating areas for wilderness potential during this wilderness inventory process include:

- 1) The area should provide a variety of habitat types and associated abiotic features, as well as a nearly complete complement of native plants and wildlife indicative of those habitat types. Pest species should comprise a negligible portion of the landscape.
- 2) The area should be spatially complex (vertically and/or horizontally) and exhibit all levels of vegetation structure typical of the habitat type, have an interspersed of these habitats, and provide avenues for plant and wildlife dispersal.
- 3) The area should retain the basic natural functions that define and shape the associated habitats including but not limited to flooding regimes, fire cycles, unaltered hydrology and flowage regimes, and basic predator-prey relationships including herbivory patterns.
- 4) Due to their size, islands may not meet the habitat guidelines in 1 and 2 above. Islands should, however, exhibit the natural cover type with which it evolved and continue to be shaped and modified by natural processes. Islands should be further analyzed during the study portion of the review, if they provide habitat for a significant portion of a population, or key life cycle requirements for any resources of concern, or listed species.
- 5) Potential wilderness areas should be relatively free of permanent structures or human alterations. Areas may be elevated to the study phase if existing structures or alterations can be removed or remediated within a reasonable timeframe, and prior to wilderness recommendation to the Secretary of the Interior.

Rose Atoll's remote location and difficult access have allowed nature to remain the primary sculpting force of the atoll's resources, leaving ecological composition, structure, and function intact. Crustose coralline algae continue to build up the reef crest on the perimeter reef. The littoral forest and beach strand host colonies of seabirds and migratory shorebirds and nesting green turtles. Underwater, patch coral reefs and pinnacles support a dense community of fish, foraging green and hawksbill turtles, and faisua. There is a complete complement of native plants and wildlife indicative of habitat types with pest species comprising a negligible portion of the landscape.

The 1993 grounding of the longliner *Jin Shiang Fa* and resultant oil spill and wreckage have not affected the Refuge's overall naturalness, despite damages on the southwestern side of the perimeter reef. All visible debris from the grounding has been removed as of 2007 and the atoll continues to recover. Other forms of marine debris have been rarely observed and do not constitute a significant visual presence in the atoll. There is only one monument, which cannot be seen from the lagoon.

Physical evidence of management and research activities are limited to a few monitoring plots on Rose Island and in reef areas, composed of PVC and steel, as well as infrequent, temporary field camps. These features are substantially unnoticeable in the Refuge as a whole.

The Rose Atoll NWR meets the naturalness criteria for a wilderness study area.

Evaluation of Supplemental Values

Supplemental values are defined by the Wilderness Act as "ecological, geological, or other features of scientific, educational, scenic, or historic value."

One of the smallest atolls in the world, Rose supports the largest populations of giant clams, nesting sea turtles, nesting seabirds, and rare species of fish in American Samoa. The diversity of coral species in the atoll is significant given its small size. Rose Island is home to the only remaining *Pisonia* forest community in Samoa, and is also the most important seabird colony in the region due to the rat-free

habitat. These resources, along with the atoll’s small size, well-defined boundaries, and limited anthropogenic influence make it of significant value for studying the processes of atoll systems. Healthy crustose coralline algae, the primary reef-building species, give Rose a striking pink hue. More water pours into the lagoon over the reef crest than exits the lagoon and causes the reef crest to grow higher, which makes it one of the few atolls with an elevated lagoon and enriches its scenic quality. The Refuge has ecological, geological, or other features of scientific and educational values which enhance wilderness characteristics.

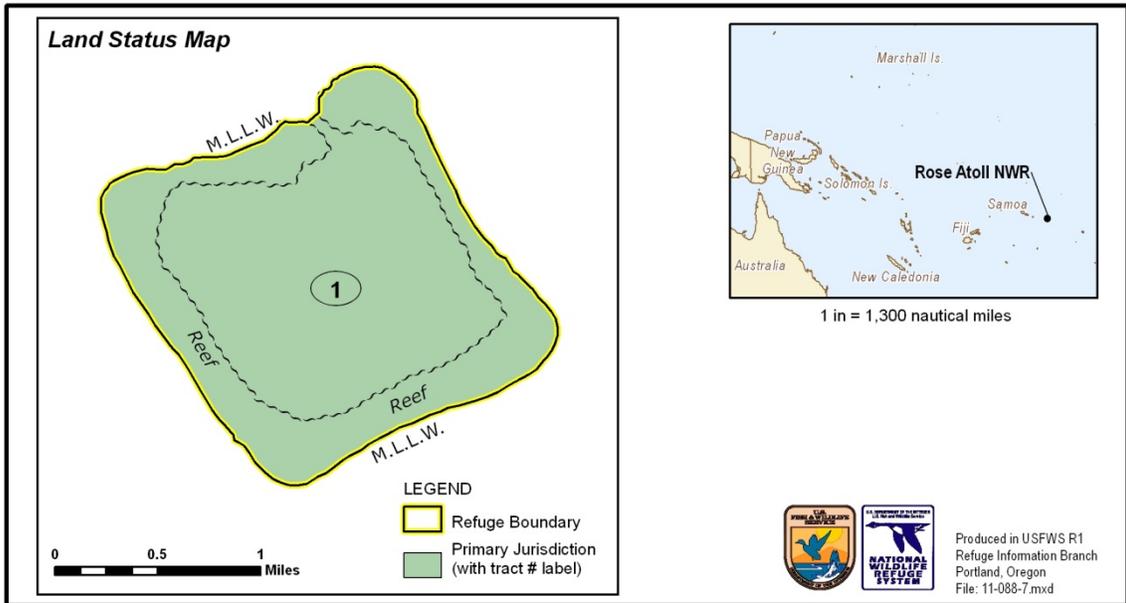
E.4 Inventory Summary and Conclusion

Based on the analysis conducted above, Unit A meet the wilderness inventory criteria, therefore a wilderness study is recommended.

Wilderness Inventory Analysis	Inventory Unit A: Rose Atoll NWR (1,613 ac)
(1) Has at least 5,000 acres of land or is of sufficient size to make practicable its preservation and use in an unconfined condition, or is a roadless island.	Yes
(2) Generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable.	Yes
(3a) Has outstanding opportunities for solitude.	Yes
(3b) Has outstanding opportunities for a primitive and unconfined type of recreation.	Yes
(4) Contains ecological, geological, or other features of scientific, educational, scenic, or historical value.	Yes (ecological, geologic, scientific, educational value)
Parcel qualifies as a wilderness study area (meets criteria 1, 2 & 3a or 3b).	Yes

Figure E-1. Wilderness Inventory Unit A, Rose Atoll NWR.

Draft CCP



Map Date: 5/29/2012
 Data: USFWS Land Status, 2012; GeoEye imagery, 9/16/11

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