Draft Compatibility Determination

Use: Amateur Radio Operations

Refuge Name: Rose Atoll National Wildlife Refuge (NWR) and Rose Atoll Marine National Monument (RAMNM or Monument).

Location: U.S. Territory of American Samoa

Rose Atoll is within the U.S. Territory of American Samoa at 14°32'44.45"S, 168° 9'12.93"W, and is approximately 160 nautical miles (nm) East of Pago Pago Harbor.

Refuge and Monument Establishing and Acquisition Authorities:
On April 5, 1973, Rose Atoll was established as a National Wildlife Refuge by cooperative agreement between the Government of American Samoa (ASG) and the Bureau of Sport Fisheries and Wildlife (a predecessor of the U.S. Fish & Wildlife Service). The establishment authority for the Refuge is the Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742a-742m).

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. 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.

On January 6, 2009, President George W. Bush signed Presidential Proclamation 8337 (74 F.R. 1577-1580) establishing RAMNM under the authority of the Antiquities Act (34 Stat. 225, 16 U.S.C. 431). This proclamation included the existing Refuge and further protected marine resources out 50-nm from the mean low water line of Rose Atoll. These resources are administered by the Secretary of the Interior, in consultation with the Secretary of Commerce, through the National Oceanic and Atmospheric Administration, which has primary responsibility, in consultation with DOI, with respect to fishery-related activities.

Additionally, the Muliava Unit of the National Marine Sanctuary of American Samoa overlays the marine areas of the Monument outside of the Refuge. The Service is building a partnership with ONMS and ASDMWR regarding management of the Sanctuary/Monument overlay area.

Refuge Purpose(s):
"...for the development, advancement, management, conservation, and protection of fish and wildlife resources..." 16 U.S.C.§742f(a)(4)

"... for the benefit of the United States Fish & Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C.§742f(b)(I)(Fish & Wildlife Act of 1956

National Wildlife Refuge System Mission:
The mission of the National Wildlife Refuge System (NWRS) 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.

Additional Management Direction:

Rose Atoll Marine National Monument
Presidential Proclamation 8337
"… for the purposes of protecting the objects identified in the above preceding paragraphs …" "For the purposes of protecting the objects identified above, the Secretaries of the Interior and Commerce, respectively, shall not allow or permit any appropriation, injury, destruction, or removal of any feature of this monument except as provided for by this proclamation or as otherwise provided for by law."

Secretarial Order 3284
"… For each of the areas subject to this delegation, the [Fish and Wildlife Service] Director shall provide for the proper care and management of the monument, including all objects of scientific and historic interest therein; the conservation of fish and wildlife; and the development of programs to assess and promote national and international monument-related scientific exploration and research" (Section 4.a.(2)).

"… The Director shall manage the emergent and submerged lands and waters out to 50 nautical miles from the mean low water line at Rose Atoll as the Rose Atoll Marine National Monument. The Director shall continue to manage the existing wildlife refuge at Rose Atoll within the boundaries set forth in the Notice of Establishment, 71 F.R. 13183 (April 5, 1974) (Section 4.c)."

Description of Use:
Public access to Rose Atoll NWR is managed through refuge-issued USFWS Special Use Permits (SUP). The SUP authorizing this use will include stipulations, and additional conditions and restrictions to ensure compatibility and mitigate for potential anticipated impacts to refuge resources.

Amateur radio (also called ham radio, or DX) is the use of radio frequency spectrum for purposes of establishing non-commercial communication between radio hobbyists. Operators use radio transmitters and receivers to communicate with other amateur radio operators all over the world as a hobby. The demand for this use within the NWRS is linked to the facet of contests in the hobby, where amateur radio operators are frequently in a contest to be the first, within a set period of time, to travel to a location where amateur radio activity is infrequent or uncommon and broadcast, and make contact, with other operators around the world. Generally, a group of 6–12 amateur radio operators will travel to the remote site. The group will then transmit for a period of time during which they will attempt to contact as many other operators as possible. This interchange is documented on a postcard (QSL card) that is then sent to the other operators to document their success at establishing contact with the remote site. The activity involves striving for both the highest number of contacts possible and achieving the most distant contact. The rules of the amateur radio require that any transmissions from these remote sites be done legally with the proper permits. Amateur radio operation is not a wildlife-

dependent public use although it does have some value as a source of public information about wildlife resources and to bring public attention to the Refuge.

Located 160 nm east of Pago Pago Harbor, it is a 1-day ship voyage from Pago Pago to Rose Atoll. Deployment and break-down of the camp and radio equipment usually takes 2-days on each end of the trip. Access to the island would be gained by small boats capable of beach landings as there is no moorage for larger vessels. An example of an amateur radio expedition may include amateur radio operators, accompanied by a Service representative, who board a vessel in Pago Pago, American Samoa; transit to Rose Atoll NWR; transfer equipment and personnel to a smaller boat; land ashore and set up camp in a location on the beach approved by the Service representative.

Camp would be set up no further than 30 feet from the seasonal high water mark so that ground wires may be run from the antennae to the water. The water itself acts as the ground plane for the antennae, which is a crucial component to transmitting via radio waves over long distances. The substrate in the area within 30 feet of the water line is typically coral rubble and sand and supports very little plant life. Generally, there are no nesting seabirds in this area and the location of the camp would avoid know turtle nesting sites.

When on island, a sizeable amount of cargo is required for such an expedition which would typically include: working, sleeping and cooking facilities for up to 6 personnel; electric generators (solar powered preferred or with 20 5-gallon cans of fuel for gasoline generators); 35-40 5-gallon jugs of drinking water (2-gallons per person per day); enough food for on-island meals and emergency meals in case departure is delayed; camping equipment; radio antennae and equipment; sanitation equipment; and backups for essential gear.

Once the camp is deployed, the amateur radio operators would attempt to make contact with as many other operators around the world as possible. Anticipated number of successful contacts can be as high as 5,000 per day. Expeditions could be as long as 14-days on the atoll giving 12 days of transmission effort. The radio operators transmit in shifts while alternating sleeping and providing support services such as cooking, cleaning and fueling of generators. The vessel that delivered the group will remain anchored in the lagoon or if a larger vessel, offshore with its crew members for the entire length of time the camp is ashore.

Amateur radio operator expeditions would be considered only as requested and then only when it is logistically possible and safe for humans to visit Rose Atoll.

Need and Availability of Resources:
Additional resources are needed to support this use of the Rose Atoll NWR. Each expedition would require a Service staff member or Service-approved resource monitor to prepare for and join the expedition, which could take up to 1 day travel time. Sufficient quarantine supplies for the refuge staff would need to be procured as well. Additional resources would be needed to review, prepare, and administer the Special Use Permit (SUP) required for each expedition.

	Category and Itemization	One-time (FY19$)
Resource Monitor, daily salary and benefits for GS-5 to GS-12* ≤ $450/day		
	5-days of pre-trip preparation	≤ $2,250
	2-days of post-trip clean up and trip report	≤ $900
	{(# of days in transit)+ (# of days on island) } x $450 = ~{30 days}	≤ $13,500
Travel Costs for Resource Monitor, airfare, hotel, taxi's, per diem. (if needed)		TBD
Quarantine Field Gear/Supplies per trip.		$1,000
Permit Administration per trip, GS-6 to GS-12 salary and benefits for 40 hours		≤ $2,250
	Total	**>$19,900**

*GS rate dependent on grade of qualified staff member available for expedition.

Special equipment, facilities, or improvements necessary to support the use: All equipment to be supplied by the permittee and must meet quarantine protocol requirements stipulated in the SUP.

Maintenance costs: None

Offsetting revenues: Costs for SUP preparation, compliance requirements, consultations with the permittee, managerial and/or technical SUP consultations, administration, monitoring, and completion will be recovered from the permittee. In addition, if Service employees are available to participate as a Resource Monitor during the proposed expedition, the Permittee would be required to cover certain staff costs associated with administering and managing the trip. Costs would include salary, travel expenses if flights are required and quarantine equipment for the trip. Permittee would cover all costs on the island and in transit including room and board.

If Service employees are not available during the proposed expedition dates, the Permittee would be required to cover certain staff costs associated with administering and managing the trip and the Permittee would also be required to contract with a Service-approved biologist to perform Resource Monitor duties; contractor costs to include salary, travel expenses, quarantine equipment for the duration of the project, and a final trip report. Staff time cost recovery and location fees would be paid by the permittee either directly to the Service, or to a source that will directly benefit the refuge.

Anticipated Impacts of the Use:
The camp is temporary, and everything brought to the atoll would be removed from the atoll, including all waste generated by the individuals unless an approved latrine system is used in combination with dietary restrictions.

Short-term impacts: One may only access Rose Atoll NWR by ocean-going vessel and then ship to shore via small boat. The most destructive short-term impacts resulting from a visit would be bird disturbance or mortality due to the direct influence of the camp or radio antennae. Other potential impacts to marine resources also include, potential fuel spills and disturbance of fish and wildlife.Any potential damage to coral by anchoring would be avoided as the anchor would be required to be placed in an area that is devoid of live coral. Short term impacts are anticipated to be negligible. See Stipulation No. 14 below for .

Rose Atoll consists of a perimeter reef encircling a central lagoon. There are two low-lying islands—Rose and Sand—located on the coralline algal reef. A single ava (channel) links the lagoon to the sea surrounding the atoll. Rose Island is vegetated by littoral forest, while Sand Island can be dominated by shrubs but experiences long periods of time when there is nothing but sand (due to over-wash events). Both islands are surrounded by beaches on all sides composed of sand or coral shingle. Rose Atoll is the most important seabird colony in the region, since approximately 97 percent of the seabird population of American Samoa resides on Rose. The two islands provide important nesting and roosting habitat for 12 species of federally protected migratory seabirds.

Anthropogenic light sources from ships or from the camp may cause disturbance to both sea turtles and seabirds. Sea turtles are attracted to lights, and may become disoriented if they are swimming or crawling toward a light. Additionally, seabirds are attracted to lights, and may be susceptible to flying into ships, poles, or tents if lighting is not controlled. Therefore the use of lights at night will be strictly controlled, and campfires would be prohibited.

Rose Atoll NWR is a breeding ground for large seabird populations, and seabird activity occurs year round. Potential disturbance may be in the form of bird collisions with the radio antennae or guy-lines, interactions between human visitors and the seabirds, and presence of humans causing burrow cave-ins, disruption of chick feeding, and birds to leave their nests and expose eggs or small chicks to extreme heat or predation by other wildlife. Complete avoidance of seabird colonies will minimize nest disturbance and prevent burrow nest cave-ins. The Resource Monitor assigned to permittee group will help ensure that participants are aware of potential disturbance to birds and will keep individual and group impacts to a minimum.

Activities on Rose Atoll will always attract the land crabs that inhabit this location. All efforts must be taken to avoid inadvertently feeding or entrapping these animals.

Marine trash and debris pose a threat to fish, marine mammals, sea turtles, and other marine animals. Collisions between marine animals and vessels could cause death or traumatic injury. The following Threatened and Endangered (T&E) species have the potential to occur in the area: Central South Pacific green turtle (distinct population segment, DPS); hawksbill turtles; leatherback turtles; olive Ridley turtles; and South Pacific loggerhead turtle (DPS). Other T&E species that could potentially occur in the waters around Rose Atoll include: blue whales; fin whales; sei whales; sperm whales; the Indo-West Pacific distinct population segment of the scalloped hammerhead shark; giant manta ray; and oceanic whitetip shark; and the coral species *Acropora globiceps*, *A. jacquelineae*, *A. retusa*, *A. speciose, Euphyllia paradivisa, and Isopora crateriformis*. All efforts should be made to avoid any contact with these species in transit or on shore in the case of the green turtle and hawksbill turtle.

Long-term impacts: No long-term impacts to the wildlife or habitat are anticipated, as long as the Permittee complies with the stipulations in their SUP. The most destructive potential impacts would be caused if: (1) a release of invasive species or contaminants to the terrestrial or marine environments occurred; or (2) a ship grounding took place, causing the release of invasive species, contaminants, direct damage due to the impact and ship debris, as well as indirect coral reef damage from the presence of the grounded vessel (e.g. changes to the water chemistry of the environment, dissolved nutrients, circulation patterns, etc). Such impacts could cause extreme changes to the environment both in the short-term and the long-term.

***Cumulative impacts*:** Through proper education and management of the use, there would be no cumulative impacts associated with infrequent amateur radio operations at Rose Atoll

NWR.Public Review and Comment:
During the 30-day public comment period ending _____, the U.S. Fish and Wildlife Service (Service) received written comments, with ___ e-mail letters in strong support of allowing Amateur Radio Operations at Rose Atoll National Wildlife Refuge (Refuge). No comments opposing the activity were received. The Service's response to comments is posted on the Webpage at https://www.fws.gov/refuge/rose_atoll/

Determination: (check one below)

_____Use is Not Compatible
_____Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

1) Those wishing to access Rose Atoll NWR must apply to do so through the NWRS SUP process. Proposals will be considered once submitted to the RAMNM Superintendent and will be evaluated based on impacts to wildlife, habitat, facilities, operational capacities and other authorized uses of the refuge. The SUP authorizing this use will include stipulations, conditions and restrictions to ensure compatibility and mitigate for potential anticipated impacts to refuge resources.

2) Those wishing to access Rose Atoll NWR are notified from the outset that they must be accompanied by a Service approved Resource Monitor. All costs associated with travel, food, lodging, and quarantine measures associated with a Service Resource Monitor will be paid by the permittee either directly to the Service, or to a source that will directly benefit the refuge.

3) If no Service personnel are available, the permit applicant must hire a biologist that is pre-approved by the Service to fulfil the duties of the Resource Monitor. The biologist must have previous experience at the site, or a Service-approved suitable proxy habitat, toperform the resource monitor duties. All expenses of biologists contracted to accompany the group will be paid by the group through their contract with the biologist.

4) The trip itinerary should accommodate the requirement for the Resource Monitor to inspect, embark on and disembark from the transport vessel from a U.S. port. The transport vessel must meet all biosecurity protocols and all U.S. Coast Guard requirements that may applyto the transportation of Federal employees and operation in waters of the United States. The Service cannot guarantee the availability of Resource Monitors authorized to travel to foreign ports.

5) All small boats and engines, all anchors and lines will be visually inspected by the Service representative for any algal remnant or other alien species that must be removed by the permittee prior to departure for Rose Atoll NWR. Small boats must be washed and if necessary fumigated prior to departure. All vessels used to access the Refuge must carry a minimum amount of Wreck Removal and Pollution insurance, specifically targeted and sufficient to provide for the vessel's full extraction and removal from the Refuge should it

run aground or experience difficulties with the vessel, any of its equipment or small boats, or crew and passengers or to address release of contaminants such as fuel or oil. Any extraction or recovery methods must meet with the approval of the Service and any other appropriate federal resource trustee, prior to it being carried out.

The group will be permitted to be on the island for up to 14 days, with no more than 12 days of broadcasting allowed. If environmental conditions do not allow for a safe departure from the island at the scheduled time the RAMNM superintendent must be notified in order to discuss authorization for remaining until conditions improve. Sufficient emergency food and water for the entire group for an additional 7 days must be maintained onshore in case inclement weather prohibits safe landing during the group's stay. Biosecurity requirements for access to Rose are strictly enforced and the Permittee will be required to follow all General and Special Conditions in the SP. These include but are not limited to: Clothing and personal effects must be new and unused and carefully sealed and stored prior to access to the island. Because of the possibility of importing alien insects and fungi, all foods used in camp should be frozen, canned or dried. Supplies should be packed in plastic buckets with tight fitting lids.

6) The Service-approved Resource Monitor will be responsible for choosing a site on the island that will cause minimal disturbance to the wildlife, and to ensure the footprint of the camp is kept to a minimum. The Resource Monitor will accompany the radio operators on tours to other parts of the island to observe wildlife, habitats, and historic sites.

7) Antennae will be a maximum of 3-inches in diameter and a maximum of 43-feet tall vertically. They may stand on a tripods or use guy-lines but only when and if wind conditions require them. Antennae, poles and guy-lines must be flagged every 2-feet to provide a strong visual cue to flying birds. Radials should be less than 150 feet in length and may terminate in the ocean. All equipment should be inspected every 4 hours for evidence of bird collisions or entanglement. A 75-ft wire antenna supported by a kite may be used on an experimental basis if the Resource Monitor deems it safe for wildlife. The kite apparatus may only be used in daylight hours, the entire length of the kite line and/or antenna must be flagged every 2 feet to provide a visible cue for birds to avoid it. If any take of seabirds or shorebirds occurs, steps must immediately follow to avoid any additional takes. This may include taking the antennas down if no other methods of mitigation are considered effective by the Resource Monitor.

8) Fuel brought to the island to support the generation of electrical power will be transported in U.S. Department of Transportation-approved containers that have been tested for leaks and weigh less than 50 pounds each. No more than 100 gallons of fuel will be stored on Rose Atoll at any one time. All fuel storage containers must be contained within a secondary containment. Sufficient spill prevention and clean up kits must be maintained on island during the expedition. Any fuel that is not used during the expedition must be removed from the island. Generators and any other equipment requiring fueling must be placed upon a suitable containment area that will capture any and all potential spillage during the fueling process.

9) No more than 6 people may be ashore on Rose Atoll NWR at one time (five radio operators and one Resource Monitor). A Service- approved Resource Monitor will accompany the amateur radio group ashore at all times. The Resource Monitor will have the authority to manage activities and modify procedures, including halting activities that have the potential

to cause harm to wildlife.

10) An approved latrine system and/or all sanitation equipment must be designed to exclude access by birds and crabs. The location and digging of any latrine must be approved by the Resource Monitor. Latrine construction and dismantling protocols as well as dietary restrictions required for use of a latrine will be included in the SUP. Human waste that is not contained in an approved latrine and all other waste that is produced by the group will be removed from the island and properly disposed of or recycled outside of Rose Atoll NWR.

11) Gas camp stoves may be used for cooking. No campfires are permitted. All artificial light emissions must be kept to a minimum and shielded from pointing skyward to minimize bird collisions with camp structures.

12) Showering or bathing will occur within the camp footprint or at the water's edge adjacent to camp. Only biodegradable soap and reef safe sunscreen will be permitted for use on the Refuge.

13) The transport vessel may not expel or discharge any treated or untreated sewage and gray water within 12-nm of Rose Atoll NWR and once beyond 12-nm may only do so if the currents will carry the waste away from the Refuge waters.

14) All General Conditions of the SUP would apply to amateur radio operator expeditions. This includes the Special Conditions that stipulate stringent quarantine procedures, vessel inspections and certifications, anchoring and landing requirements, wildlife avoidance measures, zero-impact requirements, and reporting requirements. Biosecurity requirements will be part of the SUP.

15) Rose Atoll NWR and out to 12 nm are no-take marine and terrestrial reserves unless otherwise permitted, and Permittees are responsible for themselves and the crew of the charter vessel to ensure there is no fishing or collecting within the refuge or surrounding waters.

16) A maximum of one (1) amateur radio operator group will be permitted to visit Rose Atoll NWR within a 3-year period.

17) If QSL postcards are distributed an informative or educational statement about the Refuge must be included. The content of QSL cards pertaining to the Refuge must be reviewed and approved by the RAMNM Superintendent before printing and distribution.

Justification:

While this is not a wildlife dependent public use according to National Wildlife Refuge Administration Act of 1966, as amended, amateur radio operation is a use that assists in the management of the resources indirectly. By allowing amateur radio operators to visit Rose Atoll NWR, the refuge benefits through the ability of staff to visit remote island sites to monitor wildlife populations, habitats, detect invasive species introductions, and perform management actions that would otherwise require the Service to charter a vessel. A vessel charter to any of these sites with a 14 day layover typically costs at least $30,000, so Rose Atoll NWR is rarely

visited due to budget constraints.

Additionally, part of the procedure of such an expedition is the mailing of cards with a photograph of the site to each person who contacts the group during the visit. A statement about the Refuge is required to be included on the card, and it reaches a wide audience. This can be a valuable outreach tool.

Mandatory 10 - or 15 - Year Re-evaluation Date:

_____Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

____Mandatory 10-year reevaluation date (for all uses other than wildlife-dependent public uses)

However, any recommendation to include areas of the Refuge in the National Wilderness Preservation System would require Compatibility of this activity to be re-evaluated.

NEPA Compliance for Refuge Use Decision: (check one below)

____Categorical Exclusion without Environmental Action Statement

____Categorical Exclusion and Environmental Action Statement

___Environmental Assessment and Finding of No Significant Impact

____Environmental Impact Statement and Record of Decision

References:

U.S. Fish & Wildlife Service (USFWS). 2014. Rose Atoll National Wildlife Refuge Comprehensive Conservation Plan.

Signatures for Compatibility Determination, Amateur Radio Operations at Rose Atoll National Wildlife Refuge:

Refuge Manager
Approval: _____ _____
Signature Date

Concurrence

Regional Chief,
National Wildlife
Refuge System: _____ _____
Signature Date