

Appendix E

Compatibility Determinations

- E-1 Waterfowl Hunting – Sonny Bono Salton Sea NWR*
- E-2 Recreational Fishing – Sonny Bono Salton Sea NWR*
- E-3 Wildlife Observation, Photography, and Interpretation – Sonny Bono Salton Sea NWR*
- E-4 Environmental Education – Sonny Bono Salton Sea NWR*
- E-5 Research– Sonny Bono Salton Sea NWR (with Finding of Appropriateness)*
- E-6 Environmental Education – Coachella Valley NWR*
- E-7 Research – Coachella Valley NWR (with Finding of Appropriateness)*
- E-8 Equestrian/Hiking Trail – Coachella Valley NWR (with Finding of Appropriateness)*

Appendix E-1

***Waterfowl Hunting
Compatibility Determination***

Sonny Bono Salton Sea National Wildlife Refuge

Compatibility Determination **(Final, January 2014)**

Use: Waterfowl Hunting

Refuge Name: Sonny Bono Salton Sea National Wildlife Refuge

Establishing and Acquisition Authorities:

The Sonny Bono Salton Sea National Wildlife Refuge, located in Imperial County, California was established on November 25, 1930 by Executive Order 5498. Subsequent acquisitions were established by the Migratory Bird Conservation Act (16 U.S.C. § 715d), the Lea Act of 1948 (16 U.S.C. § 695), and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j).

Refuge Purposes:

For lands acquired under the Executive Order 5498 in 1930, the purpose of the acquisition is ". . . as a refuge and breeding ground for birds and wild animals;"

For lands acquired under the Migratory Bird Treaty Act (16 U.S.C., Section 715d), the purpose is ". . . for use as an inviolate sanctuary, or for any other management purpose for migratory birds;"

For lands acquired by the Lea Act of 1948 (16 U.S.C. § 695), the purpose is ". . . for the management and control of migratory waterfowl and other wildlife;" and

For the lands leased from the State of California, Department of Fish and Game acquired under the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), the purpose is ". . . primarily for the production of crops to provide wintering feed for waterfowl and to aid and assist in the control of depredation by waterfowl to commercial crops in the area."

National Wildlife Refuge System Mission:

The mission of the National Wildlife 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-668ee]).

Description of Use:

Hunting is identified in the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 668dd-ee) as a priority use for refuges when it is compatible with the refuge purposes and mission of the Refuge System. As a result, the Service is proposing to continue its current waterfowl hunting program that occurs on approximately 480 acres in Unit 2 of the Sonny Bono Salton Sea NWR (Figure 1).

The Refuge's hunting program provides high quality, safe, and cost-effective hunting opportunities, and is carried out consistent with State regulations. The guiding principles of the Refuge System's hunting programs (Service Manual 605 FW 2) are to manage wildlife populations consistent with Refuge System-specific management plans approved after 1997 and, to the extent practicable, State fish and wildlife conservation plans; to promote visitor understanding of and increase visitor appreciation for America's natural resources; to provide opportunities for quality recreational experiences; to encourage participation in this tradition deeply rooted in America's natural heritage and conservation history; and to minimize conflicts with visitors participating in other compatible wildlife-dependent recreational activities.

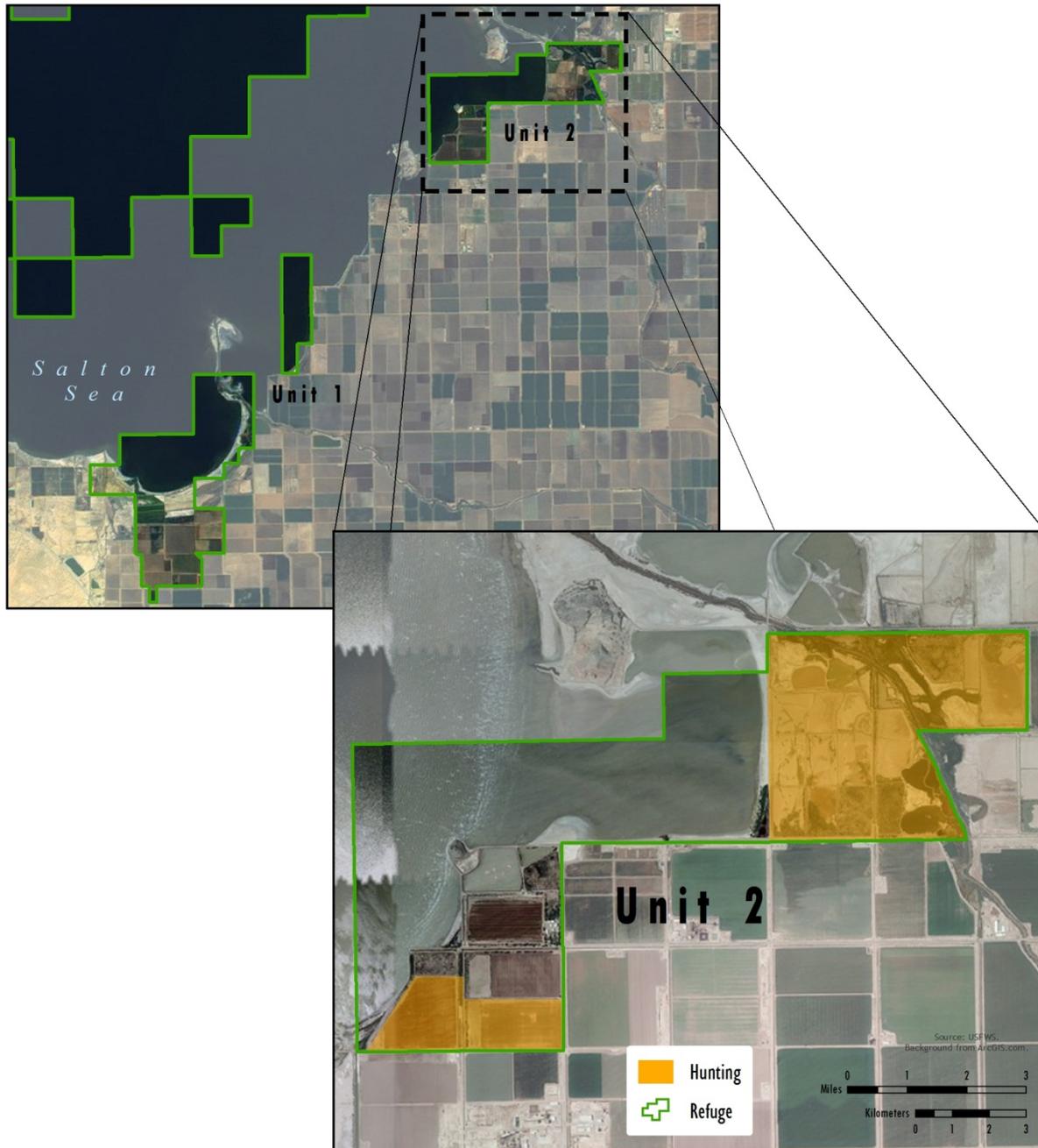


Figure 1. Hunting Areas on the Sonny Bono Salton Sea NWR

The Refuge’s waterfowl hunting program is conducted pursuant to Title 50, Section 32.1 of the Code of Federal Regulations and managed in accordance with Service Manual 605 FW2. Hunting is and will continue to be permitted in accordance with State regulations and seasons for waterfowl, American coot (*Fulica americana*), and common gallinule (also referred to as a common moorhen) (*Gallinula chloropus*). Table 1 provides an example of annual State hunt seasons for areas within the Refuge.

Table 1
Hunting Season and Bag and Possession Limits for 2012-2013
on the Sonny Bono Salton Sea NWR

| Species | Dates | Limits |
|--|--|--|
| Waterfowl – Ducks Including but not limited to: Mallard (<i>Anas platyrhynchos</i>) Northern Pintail (<i>Anas acuta</i>) Canvasback (<i>Aythya valisineria</i>) Redhead (<i>Aythya americana</i>) Lesser Scaup (<i>Aythya affinis</i>) Greater Scaup (<i>Aythya marila</i>) | From Oct 20 to Jan 27 on Saturdays, Sundays, and Wednesdays only | Daily Bag Limit: 7 ducks total with no more than: - 2 female mallards, - 2 pintails (either sex) - 1 canvasback (either sex) - 2 redheads (either sex) - 7 scaup (either sex) Possession Limit: double the daily bag limit |
| Waterfowl – White Geese Ross's Goose (<i>Chen rossii</i>) Snow Goose (<i>Chen caerulescens</i>) | From Nov 3 to Jan 27 on Saturdays, Sundays, and Wednesdays only | Daily Bag Limit: 6 Possession Limit: double the daily bag limit |
| American Coot (<i>Fulica americana</i>) and Common Gallinule (Moorhen) (<i>Gallinula chloropus</i>) | From Oct 20 to Jan 27 on Saturdays, Sundays, and Wednesdays only | Daily Bag Limit: 25, either all of one species or a mixture of these species Possession Limit: 25 |
| Black Brant (<i>Branta bernicla</i>) | From Nov 10 through Dec 9 on Saturdays, Sundays, and Wednesdays only | Daily Bag Limit: 2 Possession Limit: double the daily bag limit |
| Youth Waterfowl Hunting Days (for youth 15 years of age or younger, accompanied by a non-hunting adult 18 years of age or older) | The Saturday and Sunday following the closing of waterfowl season | Daily Bag Limit and Possession Limit Same as Regular Season |

Hunters must register and acquire a permit from the Imperial Wildlife Area's Wister Unit check station prior to entering the Refuge's designated parking areas. The kill record portion of the permit must be carried at all times, and filled out and returned to the check station immediately after leaving the hunt area. All equipment is carried in and out each day. Currently, 22 spaced blinds are available, three of which are universally accessible. Eighteen of the blind sites are in traditional duck pond habitats on the Hazard Tract. The remaining four blinds are in the Union Tract in agricultural fields planted with crops intended to provide forage for wintering geese. Other than the accessible blinds, the remaining blinds, with the exception of sites H12 and H13, are concrete pit blinds large enough to accommodate two hunters per blind with two blinds per site.

Hunting is only permitted on the Refuge in designated areas and hunters are required to park in the numbered parking space corresponding to the blind or assigned pond they are going to hunt. The area is open for waterfowl hunting on Wednesdays, Saturdays and Sundays, and a total of 80 hunters can be accommodated per hunting day. Up to four hunters may apply on an application (except for H12 and H13, which are limited to two hunters per site). Each hunting party may bring up to two junior hunters.

A separate drawing is conducted for the three universally accessible blind sites. Non-reserved blinds are available on a first come first serve basis to all hunters. Field checks by Federal wildlife officers will be planned, conducted, and coordinated with Refuge staff and other agencies to maintain compliance with regulations and assess species and numbers harvested.

The use of retrieving dogs is permitted and encouraged in all areas open to waterfowl hunting. These dogs must be kept on a leash, except when engaged in authorized hunting activities, at which time they must be under the immediate control of a licensed hunter. Any hunter who allows his/her dog to disturb wildlife is not well received by other hunters who do not want waterfowl disturbed on the ponds that they are hunting. When present, game wardens and Federal wildlife officers will enforce regulations requiring owners to maintain control over their dogs while on the Refuge. Although the use of dogs is not a form of wildlife-dependent recreation, they do in this case support a priority wildlife-dependent use.

Availability of Resources:

Direct costs to administer the hunt program on the Sonny Bono Salton Sea NWR are primarily in the form of staff time. The day-to-day administration of the hunt program during the hunting season is implemented by the California Department of Fish and Wildlife (CDFW) through a Cooperative Agreement. Refuge staff communicates with CDFW about the hunting conditions at the various blinds within the Refuge, and provides updates on any changes in blind conditions that may occur throughout the season. The Refuge is responsible for checking and emptying parking lot trashcans and paying a sanitation company to pump out the portable toilets that are provided at each parking lot during the hunt season. Outside of the hunt season, staff develop habitat in the wetlands where the blinds are located, work with volunteers to clean blinds, replace directional signs, and, as necessary, maintain access roads and parking lots. Approximately \$50,000 is spent each year to maintain this program. The Refuge currently has adequate funding and staff to manage the hunt program.

The Refuge does not currently have a full time Federal wildlife officer on staff, but the Refuge does receive assistance from the Southern California Federal Wildlife Zone Officer, who periodically monitors activities within the hunting areas to ensure compliance with applicable regulations. As part of the planning process for the Complex's Comprehensive Conservation Plan, the Refuge Complex has identified the need for a dual function refuge manager/Federal wildlife officer whose responsibilities would include regular monitoring of the hunt program, ensuring compliance with applicable regulations, and allowing for a better assessment of species and numbers harvested during the season.

Anticipated Impacts of the Use:

Direct effects of hunting include mortality, wounding, and disturbance of target and non-target species (*De Long 2002*). Hunting can alter behavior (e.g., foraging time), population structure, general health (e.g., weight loss), and distribution patterns of all wildlife within the hunt area (Owens 1977, Raveling 1979, White-Robinson 1982, Thomas 1983, Bartelt 1987, Madsen 1985, Cole and Knight 1990). The level of disturbance associated with hunting can be high due to the loud noises produced by shotguns and the rapid movement of both hunters and hunting dogs within the hunt area. This disturbance, especially when repeated over a period of time, compels waterfowl and other species to change foraging habits (e.g., foraging at night) or abandon areas of disturbance (Madsen 1995, Wolder 1993). In fact, studies indicate that prolonged and extensive disturbances can cause large numbers of waterfowl to leave disturbed areas and migrate elsewhere (Madsen 1995, Paulus 1984).

Various studies indicate an inverse relationship between the numbers of birds using an area and hunting intensity (DeLong 2002). In Connecticut, lesser scaup were observed to forage less in areas that were heavily hunted (Cronan 1957). In California, the numbers of northern pintails on Sacramento Refuge non-hunt areas increased after the first week of hunting and remained high until the hunting season was over (Heitmeyer and Raveling 1988). Following the close of hunting season, ducks generally increased their use of the hunt area on the Refuge, but use of this area was lower than before the hunting season began.

Impacts to waterfowl and other species can be reduced by providing adjacent sanctuary areas where hunting does not occur and where birds can feed and rest relatively undisturbed. Sanctuaries or non-hunt areas have been identified as the most common solution to disturbance problems caused from hunting (Havera et. al 1992). In Denmark, hunting disturbance effects were experimentally tested by establishing two sanctuaries (Madsen 1995). Over a 5-year period, these sanctuaries became two of the most important staging areas for coastal waterfowl. Numbers of dabbling ducks and geese increased four to 20 fold within the sanctuary (Madsen 1995). Thus, non-hunt areas are very important to waterfowl populations subject to hunting as they ensure the continued presence of the affected species within the general vicinity of the hunt area.

Intermittent hunting can also be a means of minimizing disturbance, especially if rest periods in between hunting events are weeks rather than days (Fox and Madsen 1997). It is common for refuges to manage hunt programs with non-hunt days. At Sacramento Refuge, three to 16 percent of northern pintails were located on hunted units during non-hunt days, but were almost entirely absent in those same units on hunt days (Wolder 1993). In addition, northern pintails, American wigeons (*Anas americana*), and northern shovelers reduced time spent feeding on days when hunting occurred on public shooting areas, as compared to non-hunt days (Heitmeyer and Raveling 1988). Although the intermittent hunting program of three hunt days per week at Sacramento Refuge resulted in lower pintail densities on hunt areas during non-hunt days than non-hunt areas (Wolder 1993), they continued to be present on the Refuge. The hunt program on the Sonny Bono Salton Sea NWR is implemented in a similar manner, with hunting only permitted on Wednesdays, Saturdays, and Sundays during the hunting season. In addition, large areas of the Refuge are set aside to provide undisturbed foraging and resting habitat for waterfowl and other migratory birds.

Potential Effects to Target Species. The hunting of waterfowl in the United States is based upon a thorough regulatory setting process that involves numerous sources of waterfowl population and harvest monitoring data. In recent years, California hunter's estimated harvest has been about 1.5 million ducks, which totals approximately 12 percent of the estimated U.S. harvest of 12.3 million, and 55 percent of the Pacific Flyway's 2.65 million harvest estimates (USFWS 2007). Comparative numbers for estimated goose harvest yield percentages of 4.1 percent and 33 percent of the U.S. and Pacific Flyway totals, respectively. The harvest of ducks and geese on the Sonny Bono Salton Sea NWR is well below .001 percent of the estimated harvest within the Pacific Flyway. The average harvest of coot on the Refuge between 1999/2000 and 2011/2012 hunting seasons is 24, which represents less than 0.1 percent of the harvest in 2009 and 2010.

Based on the estimated harvest numbers for the Refuge over the years, the Service believes that the continuation of waterfowl hunting on the Sonny Bono Salton Sea NWR will not have a significant impact on local, regional, or Pacific Flyway duck, goose, coot, or common gallinule populations. Additional analysis is provided Chapter 5 of the draft Sonny Bono Salton Sea NWR Complex Comprehensive Conservation Plan and Environmental Assessment (USFWS 2013).

To minimize the effects of disturbance on hunted and non-hunted species, large areas of the Refuge are closed to hunting and other public uses to provide relatively undisturbed areas for birds and other wildlife to forage and rest. In addition, hunting is only permitted on Saturday, Sunday, and Wednesday during the hunting season, giving all wildlife on the Refuge a respite from the effects of hunting during the hunting season.

Potential Effects to Non-Target Species. Waterfowl hunting on the Refuge can result in direct and indirect adverse effects to non-hunted wildlife ranging from mortality and wounding to disturbance (DeLong 2002). Field checks of the Hazard Tract at the end of hunt days have resulted in the discovery of dead shorebirds, unintentionally or intentionally shot during the course of the hunting day. Although the loss of non-target species is documented annually on the Refuge, the number of non-target species lost is low and does not represent a significant adverse effect to non-target species.

Non-target species are subject to the same disturbance levels as targeted species. To minimize these impacts, quality foraging and loafing habitat is provided elsewhere on the Refuge that is not subject to hunting. These lands, which include areas adjacent to permitted hunt areas and all of the habitat areas within Unit 1, allow birds and other wildlife to feed and rest relatively undisturbed (Havera et al. 1992). These protected areas provide sanctuary for waterfowl, coots, and common gallinules, and the managed agricultural lands in Unit 1 provide alternative foraging areas for geese.

Potential Effects to Listed and Sensitive Species. The hunting activities occurring on the Refuge are unlikely to pose more than a negligible impact to the listed species. Habitat for the federally endangered Yuma Ridgway's rail (*Rallus obsoletus yumanensis*) does occur in the vicinity of the hunting blinds on the Hazard Tract, and therefore could be subject to some disturbance as a result of shotgun blasts. This disturbance is minimized by the presence of dense cattail vegetation within the rail habitat. In addition, hunters are not permitted to enter the rail habitat, and no hunting is permitted during the rail's breeding season.

The potential for impacts to other listed species, primarily the desert pupfish (*Cyprinodon macularius macularius*), which may be present on the Refuge during hunting season, is very low because there is little if any suitable habitat for these species in proximity to designated hunt areas.

Potential Conflicts with Other Wildlife-Dependent Recreational Uses. Conflicts between hunting and other public uses on the Refuge have been minimized in the past by physically separating non-hunting and hunting areas to spatially divide the activities. This practice would continue with the exception of a new birding trail proposed on the Hazard Tract, a designated hunting area. To avoid any conflicts between the two uses, the new birding trail will only be opened for use outside of the hunting season.

Other measures implemented to avoid conflicts include:

- Maintaining boundary and hunting area signs to clearly define the designated hunting areas.
- Restricting all vehicle traffic on the Refuge to designated roads and parking areas.
- Permitting only pedestrian hunter access to hunting areas, with the exception of allowing pick up and drop off of disabled hunters at accessible blind locations.

- Implementing periodic field checks of hunting areas to monitoring activities and maintain compliance with all applicable regulations.
- Providing information about hunting regulations pertinent to the Refuge, where and when hunting occurs on the Refuge, and when associated trails are available for public use, by maintaining and updating signs and kiosks, producing and distributing brochures, and updating the Refuge's website (www.fws.gov/saltonsea).
- Prohibiting camping and overnight parking on the Refuge.

Public Review and Comment:

The hunting program implemented on the Sonny Bono Salton Sea NWR was addressed during the public scoping process for the Sonny Bono Salton Sea NWR Complex Comprehensive Conservation Plan (CCP). To initiate the CCP process, a Notice of Intent was published in the Federal Register on October 15, 2010 (65 FR 39172). At that time, written comments were solicited. In September 2010, two scoping meetings were held, one in Palm Desert and one in Calipatria, to receive input from the public on issues related to the future management of the Sonny Bono Salton Sea and Coachella Valley NWRs. Approximately 20 people attended the scoping meeting held in Palm Desert and 10 people attend the scoping meeting in Calipatria.

A CCP web page (www.saltonsea.fws.gov) was created to provide the public with specific information regarding the topics addressed at the scoping meetings and to present information regarding when and where to provide comments. Two Planning Updates were also prepared to summarize the progress of the CCP and to discuss specific issues related to the planning process. Planning Updates were distributed to more than 100 entities representing interested members of the public, conservation organizations, hunting, fishing and boating organizations, public agencies, municipalities, special districts, Tribes, and adjoining property owners. We received more than 50 letters, emails, and phone calls between October 2010 and March 2012.

This Compatibility Determination for waterfowl hunting on the Sonny Bono Salton Sea NWR was made available for public review and comment as Appendix A of the Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment (USFWS 2013). No comments related to the draft Compatibility Determination were received.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

To minimize the potential for adverse effects to Refuge resources and to avoid conflicts with other public uses, the following measures will be implemented as part of the Refuge hunt program:

- Hunting on the Refuge is only permitted in designated hunting areas for the purpose of hunting geese, ducks, coots, and common gallinules in accordance with State regulations specific to this Refuge.
- Hunters may enter the hunting area no earlier than 1½ hours before legal sunrise and must leave no later than 1 hour after sunset.
- Hunters must possess and carry a Refuge permit issued through the CDFW Wister Unit check station.

- In the Hazard Tract, hunters must remain within 100 feet of their assigned blind except to retrieve birds.
- In the Union Tract, hunters must hunt from their blind site.
- Youth hunters 15 years of age and younger must be accompanied by a non-hunting adult age 18 or older.
- Only the use of shotguns and steel or other nontoxic shot, as approved by the Service, may be used on the Refuge, and a hunter may not possess more than 25 shot shells while in the field.
- Firearms must be unloaded when being transported between parking areas and blind sites.
- Hunters must remove all blinds, decoys, shell casings, other personal equipment, and refuse from the Refuge at the end of each day.
- Provide sanctuary areas in Unit 1 to support all target species, and provide four non-hunt days within the hunt area to provide opportunities for undisturbed foraging and resting.
- Preserve a minimum of 77 acres of cattail habitat within the Hazard Unit to ensure no net loss of habitat for major life history requirements (i.e., breeding, feeding, resting cover) of Yuma clapper rail and to provide sanctuary for other secretive marsh birds, songbirds, and associated wildlife.
- Prohibit hunting in proximity to rail occupied territories during the breeding and molting seasons (March 15–September 1).
- Conduct annual protocol surveys of Yuma Ridgway’s rail on the Refuge to monitor population size and allow for quantitative comparisons of population size within occupied rail sites on the Refuge both within the Hazard Tract and outside the designated hunting area to discern any potential effects of disturbance on rails occupying the marsh habitat within the Hazard Tract. If declines in the overall rail population are detected, adaptively manage the hunt program to further minimize disturbance in cattail marsh habitats.
- Ensure periodic law enforcement presence in the area throughout the hunt season to minimize excessive harvest and other infractions (e.g., illegal use of lead shot, take of non-game species, littering, illegal access into closed areas).
- Post information about the importance of protecting non-target species at kiosks, on the Refuge website, and in handouts related to hunting on the Refuge.

In addition, all hunting activities and operations will be reviewed annually to ensure compliance with applicable laws, regulations, and policies. Target species population censuses will be reviewed annually with CDFW to ensure that harvest from hunting is not unacceptably affecting targeted populations. If impacts are identified, modification to the hunt program would be implemented.

Justification:

Under the National Wildlife Refuge System Administration Act, as amended, hunting is a wildlife-dependent recreational activity, which receives enhanced consideration in the Comprehensive Conservation Planning process and is to be encouraged on National Wildlife Refuges if compatible with refuge purposes. Despite the direct and indirect impacts associated with hunting waterfowl, waterfowl populations on the Sonny Bono Salton Sea NWR and throughout the flyway are unlikely to be adversely affected by the continuation of the Refuge’s current hunting program. Waterfowl population objectives and allowable harvests are determined on a flyway basis utilizing an established annual regulatory process. Limited hunt seasons, defined hunting areas, and the provision of sanctuary areas where hunting is not permitted ensure that wintering and migrating waterfowl, as well as non-target species, can find adequate food and rest areas on the Refuge even

during the hunting season. In fact, of the acreage available on the Refuge for managing high quality habitat, approximately 1,375 acres (74 percent) will be closed to hunting and 1,249 acres (67 percent) will be closed to all public use to ensure an adequate amount of high-quality feeding and resting habitat for migratory and resident birds and other wildlife.

Allowing waterfowl hunting to continue on the Refuge under the stipulations described above will not materially interfere with or detract from fulfilling the Refuge purposes or the mission of the National Wildlife Refuge System (System) and is therefore considered a compatible use on the Refuge. The National Wildlife Refuge System Improvement Act (the Act) states, "Compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System, directly related to the mission of the System . . . and through which the American public can develop an appreciation for fish and wildlife. . ." Waterfowl hunting is a priority public use of the System, as defined by the Act, that when found to be compatible, should be facilitated.

Mandatory Re-Evaluation Date:

- Mandatory 15-year Re-Evaluation Date (for priority public uses)
- Mandatory 10-year Re-Evaluation Date (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision:

- 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

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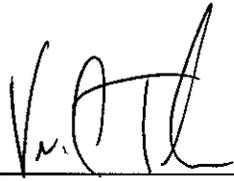
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Refuge Determination:

Prepared by:



(Signature)

1/3/14
(Date)

Project Leader
Approval:

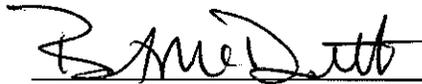


(Signature)

1/6/14
(Date)

Concurrence:

Refuge Supervisor:

 **Acting**

(Signature)

2/27/14
(Date)

Assistant Regional
Director, Refuges:

 **Acting**

(Signature)

2/28/2014
(Date)

Appendix E-2

Recreational Fishing Compatibility Determination

Sonny Bono Salton Sea National Wildlife Refuge

Compatibility Determination **(Final, January 2014)**

Use: Recreational Fishing

Refuge Name: Sonny Bono Salton Sea National Wildlife Refuge

Establishing and Acquisition Authorities:

The Sonny Bono Salton Sea National Wildlife Refuge, located in Imperial County, California was established on November 25, 1930 by Executive Order 5498. Subsequent acquisitions were established by the Migratory Bird Conservation Act (16 U.S.C. § 715d), the Lea Act of 1948 (16 U.S.C. § 695), and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j).

Refuge Purposes:

For lands acquired under the Executive Order 5498 in 1930, the purpose of the acquisition is ". . . as a refuge and breeding ground for birds and wild animals;"

For lands acquired under the Migratory Bird Treaty Act (16 U.S.C., Section 715d), the purpose is ". . . for use as an inviolate sanctuary, or for any other management purpose for migratory birds;"

For lands acquired by the Lea Act of 1948 (16 U.S.C. § 695), the purpose is ". . . for the management and control of migratory waterfowl and other wildlife;" and

For the lands leased from the State of California, Department of Fish and Game acquired under the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), the purpose is ". . . primarily for the production of crops to provide wintering feed for waterfowl and to aid and assist in the control of depredation by waterfowl to commercial crops in the area."

National Wildlife Refuge System Mission:

The mission of the National Wildlife 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-668ee]).

Description of Use:

Fishing is identified in the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 668dd-ee) as a priority use for refuges when it is compatible with the refuge purposes and mission of the Refuge System. As a result, the Service is proposing to continue fishing on approximately 35,161 acres of Sonny Bono Salton Sea National Wildlife Refuge (NWR or Refuge).

The guiding principles of the Refuge System's fishing programs (Service Manual 605 FW 3) that apply to the Sonny Bono Salton Sea NWR include promoting visitor understanding of, and increase visitor appreciation for, America's natural resources; providing opportunities for quality recreational and educational experiences; encouraging participation in this tradition deeply rooted in America's natural heritage and conservation history; and minimizing conflicts with visitors participating in other compatible wildlife-dependent recreational activities. The Refuge's fishing program provides safe and cost-effective fishing opportunities, and is carried out consistent with State regulations.

Fishing activities permitted on the Refuge are limited to boat fishing, which may occur on open-water portions of the Refuge in the Salton Sea during daylight hours from April 1 through September 30. This area is closed to all access during the remainder of the year (October 1 through March 31) to reduce disturbance to wintering, resting, foraging, and breeding birds and other wildlife and their habitats. A boat launch that provides boating access to the Refuge's portion of the Salton Sea is located on the south shore of the Salton Sea at Obsidian Butte.

Fishing is not permitted on the remainder of the Refuge, including along the shoreline of the Salton Sea and New and Alamo Rivers, within open water wetland habitat, and in drainage and irrigation channels located within the Refuge boundaries.

The Refuge adopts harvest regulations set by the State, which uses the best available population information. Anglers are required to comply with all State fishing regulations, however, at present the only known game fish species that remains in the Salton Sea is Mozambique Tilapia (*Oreochromis mossambicus*). There is currently no limit to the quantity of this species that an angler may take, although the California Office of Environmental Health Hazard Assessment (OEHHA) has issued safe eating guidelines for fish from the Salton Sea. These guidelines recommend that consumption of fish from the Salton Sea be limited to no more than two servings per week (http://oehha.ca.gov/fish/so_cal/, accessed July 30, 2012). This guidance is provided in response to elevated levels of selenium that have been identified in fish from the Salton Sea.

Availability of Resources:

Refuge resources needed to monitor tilapia fishing on the Salton Sea are minimal. Nearly all fishing that occurs on the Salton Sea is shore fishing in areas located outside of the Refuge boundaries where anglers can find abundant opportunities for fishing. Without the lure of larger recreational game fish of the past (e.g., corvina, sargo, croaker), there is very little reason for anglers to use a boat to fish for tilapia. Consequently, staff time and funds needed to monitor angling in the Salton Sea is less than \$1,000 annually. Therefore, adequate funding and staff time is available to manage this use.

Anticipated Impacts of Use:

Although a solitary and stationary activity that tends to be less disturbing to wildlife than hunting or motorized boating (Tuite et al 1983), fishing has the potential to influence the composition of bird communities, as well as the distribution, abundance, and productivity of waterbirds (Tydeman 1977, Bouffard 1982, Bell and Austin 1985, Bordignon 1985, Edwards and Bell 1985, Cooke 1987). Shoreline activities during launching, such as human and engine generated noises, can cause some birds to flush and go elsewhere. Boating associated with fishing can alter bird distribution, reduce use of particular habitats or entire areas by waterfowl and other waterbirds, alter feeding behavior and nutritional status, and cause premature departure from areas (Knight and Cole 1995).

Huffman (1999) studied the effects of watercraft on wintering birds in the southern end of San Diego Bay and observed that operating any watercraft within the Bay resulted in some level of disturbance to surrounding birds. The degree of disturbance depended upon the vessel's speed, proximity to rafting birds, proximity to the shoreline, and amount of noise produced during operation (Huffman 1999). Of all the types of watercraft used in the bay, Huffman observed that powerboats resulted in the greatest disturbances to the avian community, and in cases in which motorized watercraft were within 100 meters of the shoreline, all waterfowl between the boat and shore and any shorebirds along the shoreline would flush regardless of the speed of the watercraft.

Frequent disturbance to foraging and loafing shorebirds and other migratory waterbirds can reduce an individual bird's ability to meet its energy requirements by causing the bird to expend energy in the process of flying away from the disturbance. If disturbance becomes too frequent, those birds that do not habituate could permanently leave the area (West et al. 2002).

Potential Impacts to Listed Species. The fishing activities permitted on the Refuge are unlikely to pose any potential for impacts to listed species because of restrictions in where fishing can occur on the Refuge. No fishing is permitted in proximity to habitat that supports the federally endangered Yuma Ridgway's rail (*Rallus obsoletus yumanensis*), nor would fishing occur in the vicinity of habitats with the potential to support nesting California least tern (*Sternula antillarum browni*), least Bell's vireo (*Vireo bellii pusillus*), or southwestern willow flycatcher (*Empidonax traillii extimus*). In addition, there is little, if any, potential for impacts to the endangered desert pupfish (*Cyprinodon macularius macularius*) as a result of permitted boat fishing in the Salton Sea.

Potential Conflicts with Other Wildlife-dependent Recreational Uses. With respect to potential conflicts between the permitted fishing activities on the Refuge and other permitted uses, Refuge staff has observed little, if any, conflicts between anglers and other wildlife-dependent recreational uses permitted on the Refuge.

Public Review and Comment:

Opportunities for recreational fishing on the Sonny Bono Salton Sea NWR were addressed during the public scoping process for the Sonny Bono Salton Sea NWR Complex Comprehensive Conservation Plan (CCP). To initiate the CCP process, a Notice of Intent was published in the Federal Register on October 15, 2010 (65 FR 39172). At that time, written comments were solicited. In September 2010, two scoping meetings were held, one in Palm Desert and one in Calipatria, to receive input from the public on issues related to the future management of the Sonny Bono Salton Sea and Coachella Valley NWRs. Approximately 20 people attended the scoping meeting held in Palm Desert and 10 people attend the scoping meeting in Calipatria.

A CCP web page (www.saltonsea.fws.gov) was created to provide the public with specific information regarding the topics addressed at the scoping meetings and to present information regarding when and where to provide comments. Two Planning Updates were also prepared to summarize the progress of the CCP and to discuss specific issues related to the planning process. Planning Updates were distributed to more than 100 entities representing interested members of the public, conservation organizations, hunting, fishing and boating organizations, public agencies, municipalities, special districts, Tribes, and adjoining property owners. We received more than 50 letters, emails, and phone calls between October 2010 and March 2012.

This Compatibility Determination for recreational fishing on the Sonny Bono Salton Sea NWR was made available for public review and comment as Appendix A of the Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment (USFWS 2013). No comments related to the draft Compatibility Determination were received.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

The measures presented here will be implemented to ensure that recreational fishing is compatible with purposes for which this Refuge was established.

- Fishing is limited to boat fishing within the open waters of the Salton Sea; no shoreline fishing is permitted anywhere on the Refuge.
- Fishing is permitted during daylight hours from April 1 through September 30; the Refuge is closed to fishing between October 1 and March 31 to reduce disturbance to birds and other wildlife.
- Information about the Refuge fishing program is posted on informational signs/kiosks, included in brochures distributed to the public, and presented on the Refuge’s website (www.fws.gov/saltonsea); and regulatory and directional signs are posted to clearly mark designated routes of travel and areas closed to the public.
- Periodic law enforcement by game wardens and Federal wildlife officers will help ensure compliance with State fishing regulations and Refuge regulation compliance.
- Refuge staff will conduct regular surveys of fishing activities on the Refuge; the data will be analyzed and used by the Refuge Manager to develop future modifications if necessary to ensure compatibility of the fishing program.
- Anglers using boats are required to abide by the stipulations described in the State and Coast Guard regulations on boating.

Justification:

The Refuge Manager has determined that recreational fishing within Sonny Bono Salton Sea NWR, as described herein, will not materially interfere with or detract from the purposes for which the Refuge was established or the mission of the National Wildlife Refuge System (Refuge System). As the public engages in activities on the Refuge, including fishing, many will go away with a greater appreciation for the wildlife and habitat supported on the Refuge. In addition, the overall benefits of facilitating fishing on the Refuge include developing public support for and appreciate of the Refuge actions implemented on the Refuge and throughout the Refuge System to manage, conserve, and protect fish and wildlife resources. The National Wildlife Refuge System Improvement Act (the Act) states, “Compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System, directly related to the mission of the System . . . and through which the American public can develop an appreciation for fish and wildlife. . .” Fishing is one of the six priority public uses of the Refuge System, as defined by the Act, that when found to be compatible, should be facilitated.

Mandatory Re-Evaluation Date:

- Mandatory 15-year Re-Evaluation Date (for priority public uses)
- Mandatory 10-year Re-Evaluation Date (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision:

- 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

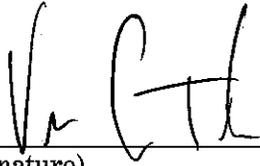
References Cited:

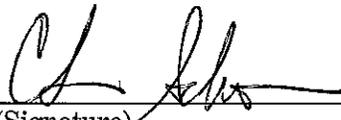
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Refuge Determination:

Prepared by:  1/3/14
(Signature) (Date)

Project Leader Approval:  1/6/14
(Signature) (Date)

Concurrence:

Refuge Supervisor:  2/27/14
(Signature) (Date)
Acting

Assistant Regional Director, Refuges:  2/28/2014
(Signature) (Date)
Acting

Appendix E-3

Wildlife Observation, Photography, and Interpretation Compatibility Determination

Sonny Bono Salton Sea National Wildlife Refuge

Compatibility Determination **(Final, January 2014)**

Use: Wildlife Observation, Photography, and Interpretation

Refuge Name: Sonny Bono Salton Sea National Wildlife Refuge

Establishing and Acquisition Authorities:

The Sonny Bono Salton Sea National Wildlife Refuge, located in Imperial County, California was established on November 25, 1930 by Executive Order 5498. Subsequent acquisitions were established by the Migratory Bird Conservation Act (16 U.S.C. § 715d), the Lea Act of 1948 (16 U.S.C. § 695), and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j).

Refuge Purposes:

For lands acquired under the Executive Order 5498 in 1930, the purpose of the acquisition is ". . . as a refuge and breeding ground for birds and wild animals;"

For lands acquired under the Migratory Bird Treaty Act (16 U.S.C., Section 715d), the purpose is ". . . for use as an inviolate sanctuary, or for any other management purpose for migratory birds;"

For lands acquired by the Lea Act of 1948 (16 U.S.C. § 695), the purpose is ". . . for the management and control of migratory waterfowl and other wildlife;" and

For the lands leased from the State of California, Department of Fish and Game acquired under the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), the purpose is ". . . primarily for the production of crops to provide wintering feed for waterfowl and to aid and assist in the control of depredation by waterfowl to commercial crops in the area."

National Wildlife Refuge System Mission:

The mission of the National Wildlife 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-668ee]).

Description of Use:

Wildlife Observation. The majority of the visitors to the Sonny Bono Salton Sea National Wildlife Refuge (NWR or Refuge) participate in wildlife observation, primarily birdwatching. Situated along the Pacific Flyway, the Salton Sea provides year round opportunities for observing birds. The area supports significant numbers of migratory shorebirds, waterfowl, and other waterbirds, and provides nesting areas for summer visitors including terns and gulls and foraging areas for winter visitors such as geese and lesser (*Grus canadensis canadensis*) and greater sandhill cranes (*Grus canadensis tabida*). Also supported on the Refuge are secretive marshbirds, including the Federal endangered Yuma Ridgway's rail (*Rallus obsoletus yumanensis*), and a variety of resident and migratory upland birds. Over 400 species of birds have been observed at the Sea and surrounding area, making the Sea and its environs a birding area of year-round international importance.

To support wildlife observation, the Refuge provides two elevated observation platforms, an interpretive loop trail, and two photo blinds in Unit 1, and an elevated observation platform and interpretive trail in Unit 2. The Comprehensive Conservation Plan for the Sonny Bono Salton Sea NWR Complex also proposes additional facilities to support wildlife observation in

both Units 1 and 2. In Unit 1, a parking lot and bird blind would be provided near a recently restored willow scrub area. From this vantage point, visitors would have the opportunity to observe birds utilizing the willow habitat, as well as view the geese and sandhill cranes present during the winter in the Refuge's adjacent managed agricultural fields. In Unit 2, a birding trail would be constructed on the eastern berm of the Red Hill Bay restoration project and a seasonal birding trail would be developed around a portion of the wetlands included within the Hazard Tract. The seasonal birding trail would be available for use outside of the hunting season. There is no admission fee for using the trails, which are open to the public from sunrise to sunset, daily.

Photography. The birding trails, observation platforms, and blinds described under wildlife observation are also available for use by photographers who come to the Refuge year-round to capture the images of the many birds present on the Refuge.

Interpretation. Interpretation on Unit 1 and Unit 2 is currently provided through a series of interpretive panels installed on existing trails, including the Rock Hill Trail located near the Refuge headquarters in Unit 2 and along the Hardenberger Trail in Unit 1. These interpretive panels provide general information about the wildlife, habitats, and geological resources protected within the Refuge. Many of these interpretive panels are in need of refurbishment and/or replacement, as discussed in the Comprehensive Conservation Plan (CCP) prepared for the Sonny Bono Salton Sea NWR Complex (USFWS 2013).

Additional interpretive materials are available in the visitor contact station at the Refuge headquarters, and guided interpretive walks are provided to organized groups who make reservations in advance. These interpretive walks are usually requested by adult groups (e.g., local Kiwanis, garden, women's clubs) interested in learning factual information about the Salton Sea.

Interpretive panels that address the restoration of shallow, open water habitat in Red Hill Bay are proposed for installation along the proposed birding trail when funding is identified. The CCP also describes in one of the alternatives a proposal to work with other partners in developing an auto tour route that would interpret various resources and activities occurring in and around south end of the Salton Sea, including Refuge lands.

Availability of Resources:

Direct costs to administer the current wildlife observation, photography, and interpretive uses on the Refuge are in the form of staff time. Adequate staff is available to manage these wildlife-dependent recreational uses; however, funding has not been allocated to support the proposed expansion of these uses, as described in the CCP. Minimal funding would be required to prepare a birding trail on the eastern berm of the Red Hill Bay restoration site, while other proposals, such as replacing the interpretive signs and building a new bird blind in Unit 1, as well as constructing a seasonal birding trail on the Hazard Tract, would require significantly greater funding. Therefore, these facilities would be provided as funding is secured. Potential funding sources include Federal cost share grants, interagency partnerships, state and private grants, and donations. Volunteer labor could also offset some of the costs of new trails and interpretive sign installation. The addition of a future Outdoor Recreation Planner/Interpretive Specialist position is also proposed for the Refuge in the CCP to support existing and future wildlife-dependent recreational uses on the Refuge. As always, discretionary use of staff time to implement new projects and provide guided interpretive walks would be weighed through a cost-benefit analysis.

Table 1 describes the level of involvement by Refuge staff that will be required annually to manage and monitor public uses related to wildlife observation, photography, and interpretation. The funding needs for new construction projects (e.g., interpretive elements, new trails, bird blind) are presented in Table 2.

| Table 1 Annual Staff Time Required to Manage Activities and Facilities Associated with Wildlife Observation, Photography, and Interpretation | |
|--|--|
| Staff Responsibilities | Annual Administrative/Management Staff Time |
| Refuge Manager – Oversight of wildlife-dependent recreational uses | 0.02 FTE ¹ |
| Outdoor Recreation Planner/Interpretive Specialist (new position) – Manage and monitor public use areas and activities; assist in the development of interpretive materials; train volunteers to conduct interpretive walks and other programs | 0.80 FTE ² |
| Park Ranger – Maintain public use areas; work with volunteers to improve and maintain trails, signage, and visitor parking areas | 0.20 FTE |
| Wildlife Biologist – Conduct periodic visits to public use areas to identify any potential effects to wildlife related to disturbance | 0.02 FTE |
| REQUIRED ANNUAL STAFF TIME | 1.04 FTE |

¹FTE (full time equivalent)

²New Position

| Table 2 New Facilities Costs Associated with Managing Proposed Wildlife Observation, Photography, and Interpretive Facilities on the Sonny Bono Salton Sea NWR | | |
|---|--|-------------|
| Material/Facility Required | Explanation of Need | Cost |
| Improve the Accessibility of the Refuge's Interpretive Trails | Providing a firm and stable trail surface will improve accessibility for all users wishing to engage in wildlife observation, photography, and interpretation. | \$65,000 |
| Update and Expand Interpretive Signage in Unit 1 | Updated, site specific interpretive signage will provide the public with a better understanding the need for the highly managed habitats on the Refuge, as well as inform the public of the changes occurring in the Salton Sea and the effects these changes could have on migratory birds. | \$29,500 |

| Table 2 New Facilities Costs Associated with Managing Proposed Wildlife Observation, Photography, and Interpretive Facilities on the Sonny Bono Salton Sea NWR | | |
|---|--|-------------------|
| Material/Facility Required | Explanation of Need | Cost |
| Construct a New Parking Area and Bird Blind in Unit 1 off Vendel Road | This facility will provide opportunities to observe migratory and resident songbirds within the restored willow scrub habitat, as well as wintering geese and sandhill cranes in the adjacent managed agricultural field. | \$85,000 |
| Update and Expand Interpretive Signage in Unit 2 | Update interpretive signage along the Red Hill Trail to coordinate the interpretive messages with the goals of the Refuge's environmental education program to d benefit students and teachers, as well as improve the experience of all trail users, as provide interpretation along the proposed Red Hill Bay observation trail. | \$28,000 |
| Construct a Seasonal Birding Trail, Kiosk, and Associated Parking Lot in the Hazard Tract (Unit 2) | This 1.5-mile-long loop trail will improve the public's opportunities for observing and photographing migratory waterfowl and other waterbirds. | \$60,000 |
| Total Cost For Facilities | | \$267,5000 |

Anticipated Impacts of the Use:

Recreational uses such as wildlife observation, nature photography, and interpretation can negatively impact wildlife by altering wildlife behavior, reproduction, distribution, and habitat (Purdy et al. 1987, Knight and Cole 1995). Purdy et al. (1987) and Pomerantz et al. (1988) described six categories of impacts to wildlife as a result of visitor activities:

- direct mortality (i.e., immediate, on-site death of an organism);
- indirect mortality (i.e., eventual, premature death of an organism caused by an event or agent that predisposed the organism to death);
- lowered productivity (i.e., reduced fecundity rate, nesting success, or reduced survival rate of young before dispersal from nest or birth site);
- reduced use of refuge (i.e., wildlife not using the refuge as frequently or in the manner they normally would in the absence of visitor activity);
- reduced use of preferred habitat on the refuge (i.e., wildlife use is relegated to less suitable habitat on the refuge due to visitor activity); and
- aberrant behavior/stress (i.e., wildlife demonstrating unusual behavior or signs of stress likely to result in reduced reproductive or survival rates).

Wildlife and native plants may be disturbed by human contact to varying degrees. Human disturbance in the form of trampling can result in the loss of sensitive plants, reptiles, and invertebrates. Human activities on trails can result in direct effects on wildlife through harassment, a form of disturbance that can cause physiological effects, behavioral modifications, or death (Smith and Hunt 1995). Many studies have shown that birds can be affected by human activities on trails when they are disturbed and flushed from feeding, resting, or nesting areas.

Flushing, especially repetitive flushing, can strongly affect habitat use patterns of many bird species. Flushing from an area can cause birds to expend more energy, be deterred from using desirable habitat, change resting or feeding patterns, increase exposure to predation, or abandon sites with repeated disturbance (Smith and Hunt 1995).

Nest predation for songbirds (Miller et al. 1998), raptors (Glinski 1976), colonial nesting species (Buckley and Buckley 1976), and waterfowl (Boyle and Samson 1985) also tends to increase in areas more frequently visited by people.

Depending on the species (especially migrants vs. residents), some birds may habituate to some types of recreation disturbance and either are not disturbed or will immediately return after the initial disturbance (Hockin et al. 1992, Burger et al. 1995, Knight and Temple 1995, Madsen 1995, Fox and Madsen 1997). Rodgers and Smith (1997) calculated buffer distances that minimize disturbance to foraging and loafing birds based on experimental flushing distances for 16 species of waders and shorebirds. They recommended 100 meters as an adequate buffer against pedestrian traffic; however, they suggest this distance may be reduced if physical barriers (e.g., vegetation screening) are provided, noise levels are reduced, and traffic is directed tangentially rather than directly toward birds.

Of the wildlife observation techniques, wildlife photographers tend to have the largest disturbance effects (Klein 1993, Morton 1995, Dobb 1998). While wildlife observers frequently stop to view species, wildlife photographers are more likely to approach wildlife (Klein 1993). Even a slow approach by wildlife photographers tends to have behavioral consequences to wildlife species (Klein 1993). Other impacts include the potential for photographers to remain close to wildlife for extended periods of time in an attempt to habituate the wildlife subject to their presence (Dobb 1998) and the tendency of casual photographers, with low-power lenses, to get much closer to their subjects than other activities would require (Morton 1995), including wandering off trails.

Interpretive materials can help make visitors aware that their actions can have negative impacts on Refuge species, and will increase the likelihood that visitors will abide by restrictions on their actions. For example, Klein (1993) demonstrated that visitors who had spoken with refuge staff or volunteers were less likely to disturb birds. Monitoring is recommended to adjust management techniques over time, particularly because it is often difficult to generalize about the impacts of specific types of recreation in different environments. Local and site-specific knowledge is necessary to determine effects on birds and other species and to develop effective management strategies (Hockin et al. 1992, Klein et al. 1995, Hill et al. 1997).

The construction and maintenance of trails, interpretive elements, bird blinds, and parking lots will have minor impacts on soils and vegetation. This could include an increased potential for erosion, soil compaction (Liddle 1975), reduced seed emergence (Cole and Landres 1995), alteration of vegetative structure and composition, and sediment loading (Cole and Marion 1988). However, the construction of trails to direct access will concentrate foot traffic, allowing the vegetation surrounding them to remain undisturbed. To avoid impacts to water quality and adjacent native habitat during the construction of facilities proposed to support wildlife-dependent recreational uses, the CCP (USFWS 2013) includes a range of best management practices that would be followed prior to, during, and following construction.

Disturbance of wildlife, primarily listed and migratory bird species, is the primary concern related to wildlife observation, photography, and interpretation on this Refuge. To reduce the overall effect of these uses on Refuge resources, large areas of the Refuge are closed to public use. Where public use is permitted, disturbance would be limited to areas adjacent to designated trails, observation platforms, and roadways; therefore, this disturbance would be localized and intermittent. To provide some additional respite for birds and other wildlife utilizing the Hazard Tract, the seasonal birding trail proposed for this area would be open on March 1 of each year, one month after the close of the hunting season, and would remain open until September 30.

Activities associated with wildlife observation and interpretation generally support the Refuge's purposes and impacts can be minimized (Goff et al. 1988). The minor resource impacts attributed to these activities are generally outweighed by the benefits gained by educating present and future generations about refuge resources. Interpretation is a public use management tool that can be effectively used to develop a resource protection ethic within society. This tool allows us to educate refuge visitors about the need to protect listed and sensitive species and provide high quality habitat to support migratory and resident bird species.

Potential Effects to List and Sensitive Species. As noted above, human activity can have adverse impacts to wildlife species, particularly when reproductive or foraging activities are disrupted. Of particular concern are potential disturbances to the federally endangered Yuma Ridgway's rail, which is supported by the cattail marsh habitat that occurs on the Refuge. Maintaining designated trails to accommodate wildlife observation and photography, as well as regulatory and interpretive signage to keep authorized users out of these sensitive areas, has minimized disturbance to this species, as well as other secretive marsh birds species such as the State listed California black rail (*Laterallus jamaicensis ssp. coturniculus*).

Due to the limited access that the public has to areas that could support the endangered desert pupfish (*Cyprinodon macularius macularius*), existing and proposed uses related to wildlife observation, photography, and interpretation are unlikely to adversely affect this species.

Seabirds of concern such as the federally endangered California least tern (*Sternula antillarum browni*) when present occur in the managed open water habitats on the Refuge, on the nesting islands within this managed water habitats, and in and along the shoreline of the Salton Sea. Because these areas are not open to the public and nearby public uses, including trails, are adequately separated from these areas, these birds are unlikely to be affected by current or future public use activities on the Refuge.

Other Federal and/or State listed species such as the least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and little willow flycatcher (*Empidonax traillii brewsteri*) periodically occur on the Refuge during migration and have the potential to nest on the Refuge in areas where suitable habitat is present. Suitable nesting habitat is however very limited within those areas of the Refuge that are open for public use and nesting by these species has not been observed. If nesting of listed or sensitive species is documented, the nesting area and a suitable buffer zone around the nesting area would be closed to public access during the nesting season.

Potential Effects to Migratory Birds. Existing and proposed trails on the Refuge provide access to the perimeter of managed habitats. No access into the habitat is permitted. This design provides significant acreage of undisturbed habitat within habitat management areas. Managed agricultural fields that support wintering populations of geese and sandhill cranes are not open to general public access and wildlife observation is only permitted from a few perimeter roads and trails. Therefore, the potential for disturbance is limited. In other areas, access would be provided along the edges of wetland habitat areas, providing migratory birds with large expanses of undisturbed habitat away from public viewing areas. To minimize off-trail activity in some of these areas, gates, vegetative barriers, and signs have been provided.

Public Review and Comment:

Opportunities for wildlife observation, photography, and interpretation on the Sonny Bono Salton Sea NWR were addressed during the public scoping process for the Sonny Bono Salton Sea NWR Complex Comprehensive Conservation Plan (CCP). To initiate the CCP process, a Notice of Intent was published in the Federal Register on October 15, 2010 (65 FR 39172). At that time, written comments were solicited. In September 2010, two scoping meetings were held, one in Palm Desert and one in Calipatria, to receive input from the public on issues related to the future management of the Sonny Bono Salton Sea and Coachella Valley NWRs. Approximately 20 people attended the scoping meeting held in Palm Desert and 10 people attend the scoping meeting in Calipatria.

A CCP web page (www.saltonsea.fws.gov) was created to provide the public with specific information regarding the topics addressed at the scoping meetings and to present information regarding when and where to provide comments. Two Planning Updates were also prepared to summarize the progress of the CCP and to discuss specific issues related to the planning process. Planning Updates were distributed to more than 100 entities representing interested members of the public, conservation organizations, hunting, fishing and boating organizations, public agencies, municipalities, special districts, Tribes, and adjoining property owners. We received more than 50 letters, emails, and phone calls between October 2010 and March 2012.

This Compatibility Determination for continuing wildlife observation, photography, and interpretation on the Sonny Bono Salton Sea NWR was made available for public review and comment as Appendix A of the Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment (USFWS 2013). No comments related to the draft Compatibility Determination were received.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

The measures presented here will be implemented to ensure that wildlife observation, photography, and interpretation are compatible with purposes for which this Refuge was established.

- Public access on the Refuge will be managed to ensure that adequate areas remain free of human disturbance to support the foraging, resting, and nesting needs of the migratory and resident birds and other wildlife found on the Refuge.

- Regulations and wildlife friendly behavior (e.g., requirements to stay on designated trails, dogs must be kept on leash) will be posted on kiosks and at the visitor contact station and will be described in brochures.
- All public access onto the Refuge will be restricted to the hours between sunrise and sunset.
- Areas of the Refuge may be restricted seasonally to reduce impacts during breeding or nesting season or to avoid conflicts with other wildlife-dependent uses, primarily hunting.
- All activities associated with wildlife observation, photography, and interpretation will be restricted to designated trails, approved access roads, observation platforms, and photo blinds.
- Interpretive signage, displays, kiosks, and brochures will be maintained and updated as necessary to ensure that the public is receiving the message about the need to protect Refuge resources.
- Regular monitoring of public activities on the Refuge will be conducted by Refuge staff and monitoring results will be analyzed and used by the Refuge Manager to develop future modifications, if necessary, to ensure compatibility of wildlife observation, photography, and interpretive programs.
- Appropriate BMPs to protect water and air quality, as presented in Chapter 6 of the Sonny Bono Salton Sea NWR Complex CCP, will be implemented during the construction of new public use facilities such as trails and parking lots, as well as during general maintenance of trails and public access roads.

Justification:

The continuation of activities related to wildlife observation, photography, and interpretation on the Sonny Bono Salton Sea NWR, as well as the proposed expansion of facilities to support these uses, would not adversely affect the Refuge’s ability to achieve its purposes. These uses are therefore considered to be compatible with purposes for which the Refuge was established. In addition, as the public engages in these types of activities on the Refuge, many will go away with a greater understanding of the importance of protecting native habitats and their associated wildlife species.

The overall benefits of facilitating these uses is developing public support for and appreciate of the Refuge actions implemented on the Refuge and throughout the Refuge system to manage, conserve, and protect fish and wildlife resources. In the same manner, presenting the public with information about the importance of the resources supported on the Refuge without materially interfering with their daily activities supports the fulfillment the National Wildlife Refuge System (System) conservation mission. The National Wildlife Refuge System Improvement Act (the Act) states, “Compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System, directly related to the mission of the System . . . and through which the American public can develop an appreciation for fish and wildlife. . .” Wildlife observation, photography, and interpretation are three of the six priority public uses of the System, as defined by the Act, that when found to be compatible, should be facilitated.

Mandatory Re-Evaluation Date:

Mandatory 15-year Re-Evaluation Date (for priority public uses)

Mandatory 10-year Re-Evaluation Date (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision:

- _ 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

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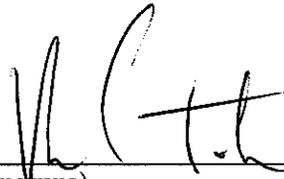
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Refuge Determination:

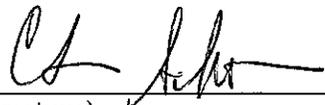
Prepared by:



(Signature)

1/3/14
(Date)

Project Leader
Approval:

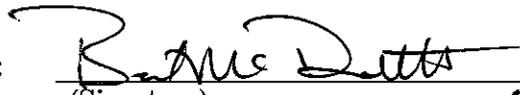


(Signature)

1/6/14
(Date)

Concurrence:

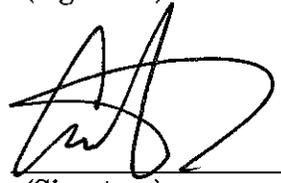
Refuge Supervisor:



(Signature) **Acting**

2/27/14
(Date)

Assistant Regional
Director, Refuges:



(Signature) **Acting**

2/28/2014
(Date)

Appendix E-4

***Environmental Education
Compatibility Determination***

Sonny Bono Salton Sea National Wildlife Refuge

Compatibility Determination **(Final, January 2014)**

Use: Environmental Education

Refuge Name: Sonny Bono Salton Sea National Wildlife Refuge

Establishing and Acquisition Authorities:

The Sonny Bono Salton Sea National Wildlife Refuge, located in Imperial County, California was established on November 25, 1930 by Executive Order 5498. Subsequent acquisitions were established by the Migratory Bird Conservation Act (16 U.S.C. § 715d), the Lea Act of 1948 (16 U.S.C. § 695), and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j).

Refuge Purposes:

For lands acquired under the Executive Order 5498 in 1930, the purpose of the acquisition is ". . . as a refuge and breeding ground for birds and wild animals;"

For lands acquired under the Migratory Bird Treaty Act (16 U.S.C., Section 715d), the purpose is ". . . for use as an inviolate sanctuary, or for any other management purpose for migratory birds;"

For lands acquired by the Lea Act of 1948 (16 U.S.C. § 695), the purpose is ". . . for the management and control of migratory waterfowl and other wildlife;" and

For the lands leased from the State of California, Department of Fish and Game acquired under the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), the purpose is ". . . primarily for the production of crops to provide wintering feed for waterfowl and to aid and assist in the control of depredation by waterfowl to commercial crops in the area."

National Wildlife Refuge System Mission:

The mission of the National Wildlife 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-668ee]).

Description of Use:

The environmental education program implemented on the Sonny Bono Salton Sea National Wildlife Refuge (NWR or Refuge) currently hosts elementary and high students from schools throughout the Imperial Valley. The program provides instruction related to the Salton Sea and various habitats and resources managed on the Refuge. Coordination of the Refuge's environmental education program is frequently accomplished through the Imperial Valley Regional Occupational Program (IVROP) to ensure schools are able to meet certain educational curricula when they visit the Refuge.

Approximately 1,000 students and their teachers visit the Refuge each year to meet some portion of their environmental education needs. Usually schools visit the headquarters area (Unit 2) and make observations along the Rock Hill Trail, gathering information about the native desert habitat, studying conditions and resources along the edge of the Salton Sea, viewing the wetland resources in "D" Pond, and observing the changes in geological conditions along the path. The majority of the activities associated with the Refuge's environmental education program occur in the fall and spring months of each year to coincide with cooler weather conditions and an increased abundance of birdlife. Trips to Unit 1 to implement the environmental education program are far less frequent.

Although not essential to the continuation of the program, the Refuge’s environmental education program would benefit from proposals to update the existing interpretive signage and improve trail accessibility, as described in the Comprehensive Conservation Plan (CCP) for the Sonny Bono Salton Sea NWR Complex (USFWS 2013). The Refuge is also working with partners on the development and publication of a Naturalist Activity Guide for students and visitors to the Refuge and nearby New River Wetlands Project. Project partners (IVROP, the Desert Protective Council, and the Refuge) continue to seek funding to complete this project. Once completed, this self-guided activity pamphlet will improve the field trip experience by providing new activities that explore the Refuges’ natural history, conservation values and challenges, and stewardship opportunities. The guide will also address the resources and conservation values present with the entire Salton Basin. The target audience will be local school groups (grades 4 to 6), and their families.

Availability of Resources:

Direct costs to administer the current environmental education program are in the form of staff time and funding for materials. The estimated annual cost to the Refuge for this program is under \$7,000, and includes material costs and some staff time for occasional oversight of the programs, periodic updates to the current curriculum, and participation in teacher training sessions.

Adequate staff positions and financial resources are currently available and committed to manage the continuation of existing program. However, funding to implement improvements that would benefit the overall quality of the program (e.g., upgrading the interpretive elements along the Red Hill Trail to better coordinate the interpretive messages with the goals of the environmental education program, improving trail accessibility) and to develop and publish a Naturalist Activity Guide has not yet been secured. Potential sources for additional funding include Federal cost share grants, other Federal, State, local, and non-profit grants that focus on environmental education, and private funding sources.

Table 1 describes the level of involvement by Refuge staff that will be required annually to manage the Refuge’s current environmental education program. The funding needs to implement projects that could benefit the environmental education program are presented in Table 2.

| Table 1 Annual Staff Time Required to Manage the Refuge’s Environmental Education Program | |
|--|--|
| Staff Responsibilities | Annual Administrative/Management Staff Time |
| Refuge Manager – Oversight of EE program | 0.01 FTE ¹ |
| Wildlife Refuge Specialist – Provide occasional assistance with EE program | 0.04 FTE |
| Biological Technician – Assist in coordination of EE program and in EE presentations and outings on the Refuge | 0.30 FTE |
| REQUIRED ANNUAL STAFF TIME | 0.35 FTE |

¹FTE (full time equivalent)

| Table 2 Improvements and Projects to Benefit Environmental Education Activities on the Sonny Bono Salton Sea NWR | | |
|---|---|------------------|
| Material/Facility Required | Explanation of Need | Cost |
| Improve the Accessibility of the Refuge's Interpretive Trails ¹ | Providing a firm and stable trail surface will improve accessibility for all users engaging in environmental education and other activities on the Refuge. | \$65,000 |
| Update Interpretive Signage in Unit 2 ¹ | Updated interpretive signage along the Red Hill Trail and interpretation along the proposed Red Hill Bay Trail would coordinate interpretive messages with the goals of the Refuge's environmental education program to benefit students and teachers, as well as improve the experience of all trail users. | \$28,000 |
| Develop and Publish a Naturalist Activity Guide | This activity pamphlet will enable students and their families, teachers, and other visitors, to conduct and enjoy self-guided walks on the Refuge. The pamphlet will improve the field trip experience by providing new activities that explore the Refuges' natural history, conservation values and challenges, and stewardship opportunities. | \$10,000 |
| Total Cost For Facilities | | \$103,000 |

¹This material/facility is also described for Wildlife Observation, Photography, and Interpretation

Anticipated Impacts of the Use:

Human activity that occurs in proximity to wetlands and other wildlife habitat can negatively impact wildlife by altering wildlife behavior, reproduction, distribution, and habitat (Purdy et al. 1987, Knight and Cole 1995). The disturbance to wildlife association with noise and movement that occurs adjacent to habitat areas, as well as occasional intrusion into habitat areas, can result in direct mortality (i.e., immediate, on-site death of an organism); indirect mortality (i.e., eventual, premature death of an organism caused by an event or agent that predisposed the organism to death); lowered productivity (i.e., reduced fecundity rate, nesting success, or reduced survival rate of young before dispersal from nest or birth site); reduced use of a habitat area (i.e., wildlife not using an area as frequently or in the manner they normally would in the absence of visitor activity); and aberrant behavior/stress (i.e., wildlife demonstrating unusual behavior or signs of stress likely to result in reduced reproductive or survival rates) (Purdy et al. 1987, Pomerantz et al. 1988).

Wildlife can be disturbed by human contact to varying degrees. Many studies have shown that birds can be affected by human activities on trails when they are disturbed and flushed from feeding, resting, or nesting areas. Flushing, especially repetitive flushing, can strongly affect habitat use patterns of many bird species. Flushing from an area can cause birds to expend more energy, be deterred from using desirable habitat, change resting or feeding patterns, increase exposure to predation, or abandon sites with repeated disturbance (Smith and Hunt 1995).

Potential impacts to Refuge resources associated with the environmental education program would result in some disturbance to birds and other wildlife, due primarily to noise levels associated with larger groups. Because these programs generally confine their activities to established trails on the Refuge, any disturbance would occur around the perimeter of large established habitat areas,

reducing the overall effect to birds and other wildlife present in these areas. In addition, the majority of this activity occurs outside of the nesting season, therefore, the potential for impacts to nesting seabirds, shorebirds, waterfowl, and other species is limited. Additional measures such as designing environmental education programs to minimize the potential for impacts related to disturbance; providing adequate Refuge oversight of program design and implementation, as well as supervision of educational activities occurring on the Refuge; and ensuring coordination among partners also assist in reducing the potential for adverse impacts to Refuge resources.

Potential Effects to Listed and Sensitive Species. No adverse effects to listed or sensitive species are anticipated as a result of ongoing environmental education programs, because activities associated with these programs have limited access to areas that support these species. In addition, the majority of the environmental education activities that occur on the Refuge take place outside of the nesting season.

Potential Effects to Migratory Birds. Existing trails used by participants in the Refuge's environmental education program provide access to the perimeter of managed habitats, with no access permitted within the managed habitat areas. As such, significant acreage of undisturbed habitat within habitat management areas is available to avoid adverse effects to most species. To minimize the potential for off-trail activity, adequate adult supervision is provided during environmental education outings.

Public Review and Comment:

Implementation of an environmental education program on the on the Sonny Bono Salton Sea NWR was addressed during the public scoping process for the Sonny Bono Salton Sea NWR Complex Comprehensive Conservation Plan (CCP). To initiate the CCP process, a Notice of Intent was published in the Federal Register on October 15, 2010 (65 FR 39172). At that time, written comments were solicited. In September 2010, two scoping meetings were held, one in Palm Desert and one in Calipatria, to receive input from the public on issues related to the future management of the Sonny Bono Salton Sea and Coachella Valley NWRs. Approximately 20 people attended the Palm Desert scoping meeting and 10 people attend the scoping meeting in Calipatria.

A CCP web page (www.saltonsea.fws.gov) was created to provide the public with specific information regarding the topics addressed at the scoping meetings and to present information regarding when and where to provide comments. Two Planning Updates were also prepared to summarize the progress of the CCP and to discuss specific issues related to the planning process. Planning Updates were distributed to more than 100 entities representing interested members of the public, conservation organizations, hunting, fishing and boating organizations, public agencies, municipalities, special districts, Tribes, and adjoining property owners. We received more than 50 letters, emails, and phone calls between October 2010 and March 2012.

This Compatibility Determination for conducting environmental education programs on the Sonny Bono Salton Sea NWR was made available for public review and comment as Appendix A of the Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment (USFWS 2013). No comments related to the draft Compatibility Determination were received.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

The measures presented here will be implemented to ensure that the activities occurring on the Refuge in association with environmental education are compatible with purposes for which this Refuge was established.

- Participants in the Refuge’s environmental education program will be restricted to the designated trail system, visitor contact station, established environmental education areas, and other designated sites.
- Groups participating in the Refuge’s environmental education program will be required to have a sufficient number of adults to supervise their groups, a minimum of one adult per 12 students, and the teacher and adult supervisors will be responsible for ensuring that students follow wildlife observation etiquette.
- Periodic monitoring of environmental education program activities will be conducted by Refuge staff to ensure that these activities are not resulting in unforeseen impacts to Refuge resources, and if necessary, Refuge staff will work with its partners to correct such problems.

Justification:

The continuation of environmental education on Sonny Bono Salton Sea NWR is not expected to adversely affect the Refuge’s wildlife or habitat. The program is therefore considered to be compatible with purposes for which the Refuge was established. In addition, the goal of the Refuge’s environmental education program is to provide participants with a greater understanding of the importance of protecting native habitats and their associated wildlife species.

The overall benefits of facilitating this use include educating the public about the importance of the resources supported on the Refuge and the need for continued support of the many activities conducted on the Refuge to provide essential habitat for migratory birds and other wildlife. The National Wildlife Refuge System Improvement Act (the Act) states, “Compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System, directly related to the mission of the System . . . and through which the American public can develop an appreciation for fish and wildlife. . .” Environmental education is one of the six priority public uses of the System, as defined by the Act, that when found to be compatible, should be facilitated.

Mandatory Re-Evaluation Date:

Mandatory 15-year Re-Evaluation Date (for priority public uses)

Mandatory 10-year Re-Evaluation Date (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision:

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 Cited:

Knight, R. L. and D. N. Cole. 1995. Wildlife responses to recreationists. In *Wildlife and recreationists*, edited by R. L. Knight and K. J. Gutzwiller. Covelo, California: Island Press.

Pomerantz, G. A., D. J. Decker, G. R. Goff, and K. G. Purdy. 1988. Assessing impact of recreation on wildlife: A classification scheme. *Wildlife Society Bulletin* 16:58-62.

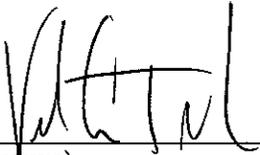
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Smith, L. and J. D. Hunt. 1995. Nature tourism: Impacts and management. In *Wildlife and recreationists: Coexistence through management and research*, edited by R. L. Knight and K. J. Gutzwiller. Washington, D.C., Island Press.

U.S. Fish and Wildlife Service. 2013. Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment.

Refuge Determination:

Prepared by:



(Signature) 1/3/14
(Date)

Project Leader
Approval:



(Signature) 2/23/14
(Date)

Concurrence:

Refuge Supervisor:

 Acting 2/28/14

(Signature) (Date)

Assistant Regional
Director, Refuges:

 Acting 2/28/2014

(Signature) (Date)

Appendix E-5

Research Compatibility Determination and Finding of Appropriateness

Sonny Bono Salton Sea National Wildlife Refuge

Compatibility Determination (Final, January 2014)

Use: Research

Refuge Name: Sonny Bono Salton Sea National Wildlife Refuge

Establishing and Acquisition Authorities:

The Sonny Bono Salton Sea National Wildlife Refuge, located in Imperial County, California was established on November 25, 1930 by Executive Order 5498. Subsequent acquisitions were established by the Migratory Bird Conservation Act (16 U.S.C. § 715d), the Lea Act of 1948 (16 U.S.C. § 695), and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j).

Refuge Purposes:

For lands acquired under the Executive Order 5498 in 1930, the purpose of the acquisition is ". . . as a refuge and breeding ground for birds and wild animals;"

For lands acquired under the Migratory Bird Treaty Act (16 U.S.C., Section 715d), the purpose is ". . . for use as an inviolate sanctuary, or for any other management purpose for migratory birds;"

For lands acquired by the Lea Act of 1948 (16 U.S.C. § 695), the purpose is ". . . for the management and control of migratory waterfowl and other wildlife;" and

For the lands leased from the State of California, Department of Fish and Game acquired under the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), the purpose is ". . . primarily for the production of crops to provide wintering feed for waterfowl and to aid and assist in the control of depredation by waterfowl to commercial crops in the area."

National Wildlife Refuge System Mission:

The mission of the National Wildlife 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-668ee]).

Description of Use:

The Sonny Bono Salton Sea National Wildlife Refuge (NWR or Refuge) receives periodic requests for permission to conduct scientific research on the Refuge. Although research is not identified as a wildlife-dependent recreational use by the National Wildlife Refuge System Improvement Act of 1997, scientific research can benefit Refuge resources and facilitate informed management decisions. In so doing, scientific research conducted on the Refuge would support Refuge purposes and the mission of the National Wildlife Refuge System (Refuge System). The results of some research projects may also assist the Refuge in its inventory and monitoring responsibilities.

Research investigations can be designed to address specific Refuge management questions such as those related to habitat management techniques, wildlife and plant population monitoring, documentation of seasonal wildlife movements and habitat use, wildlife disease, and invasive species control. Pertinent results from research investigations can be incorporated into management plans and actions, and help strengthen the decision-making process.

Requests to conduct scientific research on the Refuge require approval by the Refuge Manager and the issuance of a Refuge Special Use Permit (SUP). SUPs are only issued for research that can contribute to the enhancement, protection, preservation, and management of Refuge plant and wildlife populations and their habitats. For a research project to be approved, the following information about the research proposal must be provided to the Refuge Manager:

- 1) Objectives of the study;
- 2) Justification for the study;
- 3) Detailed study methodology and schedule;
- 4) Potential impacts to Refuge wildlife and/or habitats, including short- and long-term disturbance, injury, and mortality;
- 5) Research personnel required and their qualifications/experience;
- 6) Status of necessary permits (i.e., scientific collecting permits, endangered species permit);
- 7) Costs to Refuge and Refuge staff time requested, if any; and
- 8) Anticipated end products (i.e., reports, publications).

Research proposals are reviewed by Refuge staff or others, as appropriate. The criteria listed below, and others as necessary, are used to assess research proposals.

- 1) Does the research proposal provide data that could contribute to the enhancement, protection, and/or management of migratory birds, listed species, and/or their habitats?
- 2) Will the research address issues relevant to Refuge management, such as effective invasive species control, contaminants, forage crop productivity, water quality, or climate change?
- 3) Does the research have the potential to conflict with other ongoing research, monitoring, or management programs on the Refuge?
- 4) Is this a research project that could just as easily be conducted elsewhere (off-Refuge)?
- 5) What efforts have been made to minimize disturbance through study design (e.g., consideration of location, timing, or scope of the study, study methods, number of participants)?

Research that will contribute to specific Refuge management issues will be given higher priority over other research requests. Research projects that can be accomplished off-Refuge, have the potential to cause undue disturbance (the level and type of disturbance will be carefully evaluated when considering a request), or could conflict with ongoing research, monitoring, and Refuge management programs, are unlikely to be approved. If staffing or logistics make it impossible for the Refuge to monitor researcher activity in sensitive areas, the research request may be denied.

The duration of the project will be considered and agreed upon before approval. Open-ended research projects will not be approved. Suggestions may be made to adjust such things as the location, timing, scope, number of permittees, study methods, and number of study sites. All research projects will be reviewed annually to assess whether they continue to operate as originally proposed and to contribute to the objectives of the study.

The Refuge Manager will issue a SUP for all approved research proposals. The SUP will likely include project-specific conditions to protect trust resources and ensure compatibility with Refuge purposes.

Availability of Resources:

Adequate funding and staff exist to manage some level of scientific research on the Sonny Bono Salton Sea NWR. As always, discretionary use of staff time would be weighed through a cost-benefit analysis.

Direct costs to administer research activities are primarily in the form of staff time. Table 1 describes the level of involvement by Refuge staff that will be required annually to manage and monitor research activities on the Refuge.

| Table 1 Annual Staff Involvement Associated with Managing Scientific Research Uses on the Refuge | |
|--|--|
| Staff Responsibilities | Annual Administrative/Management Staff Time |
| Refuge Manager – Review and approval of research proposals; approval of SUP | 0.02 FTE* |
| Senior Wildlife Biologist – Assist in review of research proposals; prepare SUP; monitor ongoing research to ensure compliance with the conditions of the SUP; and conduct an annual review of ongoing research activities | 0.10 FTE |
| REQUIRED ANNUAL STAFF TIME | 0.12 FTE |

*FTE (full time equivalent)

Anticipated Impacts of the Use:

Potential negative direct and indirect effects of research conducted on the Refuge by outside entities relate primarily to disturbance of sensitive habitats, sensitive species, migratory birds, and nesting seabirds. Researcher disturbance could include flushing migratory birds during peak migration periods, causing nesting seabirds to fly off nests exposing chicks to heat and predation, altering wildlife behavior, tramping sensitive habitat to collect soil, plant, and/or invertebrate samples, or trapping and handling wildlife. Some disturbance can be avoided through SUP conditions that limit where, when, and for how long a researcher can be present in sensitive habitat areas. Other effects would be short in duration such as sampling of such things as water, soils, vegetative litter, plants, and invertebrates required for identification and/or experimentation and statistical analysis and captured and marked wildlife would be released following infield data collection and tagging or banding. Conditions included in SUPs would ensure that the long-term effects of research activities would be negligible.

Conducting management-oriented research will benefit Refuge fish, wildlife, and plant populations and their habitat. Such research will be designed to answer habitat or population management questions, thereby contributing to adaptive management of the Refuge. Expected long-term effects of such research include a growing body of science-based data and knowledge from which to draw upon to implement the best Refuge management possible.

Potential Effects to Listed and Sensitive Species. Human activity can have adverse impacts on listed species, particularly when it disrupts bird nesting or foraging activities (Carney and Sydeman 1999). Of particular concern is the potential for disturbance during the nesting season for the endangered Yuma Ridgway's rail (*Rallus obsoletus yumanensis*) and potential impacts to

desert pupfish (*Cyprinodon macularius*). The Yuma Ridgway's rail is supported by the cattail marsh habitat that occurs on the Refuge and the desert pupfish lives in the Salton Sea and some nearby associated drains and wetlands. A prerequisite of approved research would be that it ensures the information gained must contribute to the enhancement, protection, preservation or management of the Refuge's Yuma Ridgway's rail population and on and off-refuge desert pupfish populations.

To minimize disturbance to listed and sensitive bird species, research activities proposed in the vicinity of sensitive foraging and nesting habitat during the breeding season would be scrutinized and appropriate restrictions would be imposed on research activities to ensure that no adverse effects would occur. Including appropriate conditions in SUPs would ensure that no adverse effects to listed or sensitive species would result from the implementation of research projects on the Refuge.

Potential Effects to Migratory Birds. The Salton Sea and its environs are extremely important to migratory birds for foraging, loafing and, to a lesser degree, nesting. Human activity associated with scientific research projects may result in disturbance to these birds. Some level of disturbance is expected with all research activities, because most researchers would be entering areas that are normally closed to the public. Through the SUP process, project specific conditions can be placed on individual research proposals to ensure that the potential for impacts to Refuge resources are minimized.

The conditions at the Salton Sea that make this area a regional significant wetland staging ground for migratory birds is constantly changing due to receding water levels, increasing salinities, and the presence of contaminants that can alter the quality of the water. Research can play a vital role on the Salton Sea landscape to help provide factual information for scientists, land managers, and politicians to help make decisions about how to best manage the Salton Sea into the future. The Refuge will encourage research projects that can contribute to the enhancement, protection, preservation or management of the Salton Sea and Refuge habitats and species.

Public Review and Comment:

Opportunities for scientific research on the Sonny Bono Salton Sea NWR were addressed during the public scoping process for the Sonny Bono Salton Sea NWR Complex Comprehensive Conservation Plan (CCP). To initiate the CCP process, a Notice of Intent was published in the Federal Register on October 15, 2010 (65 FR 39172). At that time, written comments were solicited. In September 2010, two scoping meetings were held, one in Palm Desert and one in Calipatria, to receive input from the public on issues related to the future management of the Sonny Bono Salton Sea and Coachella Valley NWRs. Approximately 20 people attended the scoping meeting held in Palm Desert and 10 people attend the scoping meeting in Calipatria.

A CCP web page (www.saltonsea.fws.gov) was created to provide the public with specific information regarding the topics addressed at the scoping meetings and to present information regarding when and where to provide comments. Two Planning Updates were also prepared to summarize the progress of the CCP and to discuss specific issues related to the planning process. Planning Updates were distributed to more than 100 entities representing interested members of the public, conservation organizations, hunting, fishing and boating organizations, public agencies, municipalities, special districts, Tribes, and adjoining property owners. We received more than 50 letters, emails, and phone calls between October 2010 and March 2012.

This Compatibility Determination for scientific research on the Sonny Bono Salton Sea NWR was made available for public review and comment as Appendix A of the Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment (USFWS 2013). No comments related to the draft Compatibility Determination were received.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

Concerns about protecting listed and sensitive species, as well as migratory birds and their habitats require that Refuge staff closely review proposed research projects and that research activities and impacts be monitored. To minimize the potential for adverse effects to Refuge resources as a result of scientific research, the following measures would be implemented:

- All research requests will be required to provide a detailed description of the study proposal. At a minimum, the description should address the purpose of the research, the potential benefits to Refuge management and/or Refuge resources, the number of participants, the times of the year in which field studies and/or data collection would occur, how the studies or data collection will be implemented, the areas on the Refuge that would be accessed, any potential impacts to Refuge resources that could occur and the measures that would be implemented to minimize such impacts, and when study results would be made available to the Refuge Manager.
- Approval of research projects on the Refuge will be permitted at the discretion of the Refuge Manager who will consider the compatibility of the proposed research with Refuge purposes, the proximity of research activities to sensitive habitat and known nesting areas, the potential for impacts to Refuge resources, and the availability of Refuge staff to manage and monitor the research activities. All research projects will be conducted under a SUP, which will include project-specific stipulations to avoid or minimize the potential for impacts.
- Highly intrusive or manipulative research will generally not be permitted in order to protect Refuge resources.
- Proposed research methods that have the potential to adversely affect Refuge resources will generally not be permitted. However, if the researcher can adequately demonstrate the need for the research and the overall benefits in terms of achieving Refuge purposes despite the potential for some adverse effects, the Refuge Manager has the discretion to permit such research provided the researcher can identify potential impacts in advance of their occurrence. The researcher will also be required to develop mitigation measures to minimize potential impacts. Mitigation measures will be listed as conditions on the SUP.
- Refuge staff will monitor researcher activities to assess study methods, identify any potential impacts to Refuge resources, and ensure compliance with SUP conditions; this monitoring may include accompanying researchers in the field.
- Researchers will be responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project.
- Research must adhere to current species protocols for data collection.
- Research that does not involve birds will generally be conducted outside of the breeding season of the avian species using the Refuge.

- The Refuge Manager can suspend or modify conditions or terminate on-refuge research that is already permitted and in progress, should unacceptable impacts or issues arise or be noted.
- SUPs will be valid for one year only. Renewals will be subject to review and approval by the Refuge Manager, who will consider the current status of the study, the researcher's compliance with the conditions outlined in the SUP, and the extent of anticipated or unanticipated impacts, if any, that occurred as a result of the specific research project.
- All data and research results, as well as copies of any reports or articles prepared as a result of the research, shall be provided to Refuge Manager.

Justification:

This program as described is determined to be compatible with the purposes for which the Refuge was established. The anticipated level of research to be conducted on the Refuge at any given time would be compatible because the Refuge Manager would ensure through project-specific conditions in a SUP that all research proposals support the purpose of the Refuge and mission of the Refuge System. In view of the impacts research activities may have on the Service's ability to achieve the Refuge purpose, sufficient restrictions will be placed on the researcher to ensure that disturbance is kept to a minimum and that the research will not materially interfere with or detract from Refuge purposes or the wildlife-dependent recreational uses occurring on the Refuge. Further, well-designed research investigations can directly benefit and support refuge goals and objectives. Management of migratory birds, listed and sensitive species, and other native plants and wildlife can be improved and/or adapted through the application of knowledge gained from research. The implementation of wildlife-dependent, priority public uses (i.e., hunting, fishing, wildlife observation, photography, environmental education, and interpretation) may also be altered to improve conditions for wildlife and their habitats based on the results of research.

Mandatory Re-Evaluation Date:

- Mandatory 15-year Re-Evaluation Date (for priority public uses)
- Mandatory 10-year Re-Evaluation Date (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision:

- 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 Cited:

Carney, Karen M. and William J. Sydeman. 1999. A Review of Human Disturbance Effects on Nesting Colonial Waterbirds. *Waterbirds: The International Journal of Waterbird Biology* 22(1):68-79.

U.S. Fish and Wildlife Service. 2013. Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment.

Refuge Determination:

Prepared by:

WETH
(Signature)

1/3/14
(Date)

Project Leader
Approval:

Ch. Scher
(Signature)

1/6/14
(Date)

Concurrence:

Refuge Supervisor:

B. McDuff Acting
(Signature)

2/27/14
(Date)

Assistant Regional
Director, Refuges:

AA Acting
(Signature)

2/28/2014
(Date)

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Sonny Bono Salton Sea National Wildlife Refuge

Use: Research

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

| Decision Criteria: | YES | NO |
|--|-----|----|
| (a) Do we have jurisdiction over the use? | ✓ | |
| (b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)? | ✓ | |
| (c) Is the use consistent with applicable Executive orders and Department and Service policies? | ✓ | |
| (d) Is the use consistent with public safety? | ✓ | |
| (e) Is the use consistent with goals and objectives in an approved management plan or other document? | ✓ | |
| (f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed? | ✓ | |
| (g) Is the use manageable within available budget and staff? | ✓ | |
| (h) Will this be manageable in the future within existing resources? | ✓ | |
| (i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources? | ✓ | |
| (j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future? | ✓ | |

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

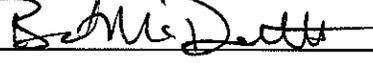
Refuge Manager: 

Date: 1/6/14

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:  Acting

Date: 2/27/14

A compatibility determination is required before the use may be allowed.

FINDING OF APPROPRIATENESS OF A REFUGE USE

Written Justification

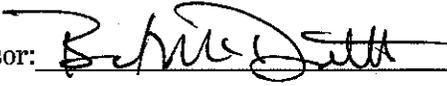
Refuge Name: Sonny Bono Salton Sea National Wildlife Refuge

Use: Research

Justification for Determining that this Use is an Appropriate Use for the Refuge:

Although scientific research is not identified as a wildlife-dependent recreational use, the information provided as a result of selectively permitting such use on the Refuge can benefit Refuge resources and facilitate informed management decisions. Based on the Refuge proposes, priority would be given to scientific research that contributes to the enhancement, protection, and management of migratory birds, listed species, and their habitats. All research applications would be reviewed to ensure that the research objectives and justification, study methodology, schedule, and anticipated end products would provide useful information to assist with resource management on the Refuge. Additionally, all proposals would be reviewed to ensure that implementation of the research proposal would not result in significant disturbance or other impacts to Refuge resources. Because sufficient restrictions can be placed on the researcher to ensure that disturbance and other potential impacts are kept to a minimum, in my professional judgment scientific research is an appropriate use on the Refuge.

Refuge Manager:  Date: 1/6/14

Refuge Supervisor:  **Acting** Date: 2/27/14

Appendix E-6

***Environmental Education
Compatibility Determination***

Coachella Valley National Wildlife Refuge

Compatibility Determination
(Final, January 2014)

Use: Environmental Education

Refuge Name: Coachella Valley National Wildlife Refuge

Establishing and Acquisition Authorities:

The Coachella Valley National Wildlife Refuge, located in Riverside County, California was established on August 28, 1985 under the authority of the Endangered Species Act of 1973 (87 Stat. 884) as amended, and the Land and Water Conservation Fund Act, dated Sept. 3, 1964 (78 Stat. 897). Additional lands have been added as a part of the active land acquisition program carried out in cooperation with the Nature Conservancy. Currently, the Refuge is composed of 3,577 acres.

Refuge Purposes:

The Refuge purpose for the Coachella Valley NWR is:

“To conserve (A) fish and wildlife which are listed as endangered species or threatened species . . . or (B) plants...” (Endangered Species Act of 1973).

National Wildlife Refuge System Mission:

The mission of the National Wildlife 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-668ee]).

Description of Use:

The Coachella Valley National Wildlife Refuge (NWR or Refuge) will host college and other interested groups from throughout the Coachella Valley to participate in limited guided educational walking tours of the Refuge. Coordination will be accomplished through the Center for Natural Lands Management (CNLM) at the Coachella Valley Preserve and University of California, Riverside (UCR), Palm Desert campus staff to ensure groups are able to meet certain educational goals when they visit the Refuge. Approximately 300 students and interested individuals are expected to visit the Refuge each year to gain a familiarity and understanding of the Refuge’s place in the natural and human community. Visits will typically originate from 38th Avenue and proceed onto the Refuge where excellent examples of remaining active dune habitat can be observed. There is also the potential to observe some of the species endemic to this habitat. The activities generally occur late fall through spring and occasionally into early summer to coincide with cooler weather conditions and species activity patterns.

Availability of Resources:

Direct costs to administer the current environmental education program are in the form of staff time. Coordinating and communicating with CNLM and UCR staff requires little time as they are both very knowledgeable and trained in the local ecosystem and habitat management issues that are discussed during program visits. Costs to the Refuge are less than \$5,000 per year.

Anticipated Impacts of the Use:

Potential impacts associated with the continued implementation of environmental education on the Coachella Valley NWR include disturbance to wildlife and trampling or damage to sensitive plant and animal species and their habitats. These types of impacts would be minimized through appropriate program design, adequate Refuge oversight, and supervision on the site by trained guides.

Potential Effects to Listed and Sensitive Species. Human activity can have adverse impacts to listed species, particularly when reptile and native plant reproduction activities are disrupted. Of particular concern is potential disturbances to the federally threatened Coachella Valley fringe-toed lizard (*Uma inornata*), the federally endangered Coachella Valley milk-vetch (*Astragalus lentiginosus var. coachellae*), and several other sensitive species identified in the Coachella Valley Multiple Species Habitat Conservation Plan (CVAG 2007), which are supported by the active dune and other aeolian sand habitats present on the Refuge.

Some negative effects would be expected as small groups of people travel through the Refuge's dune habitat, especially where groups are entering the active dunes. This disturbance could include altering wildlife behavior and damaging vegetation as a result of not following leader instructions or not staying within a specified path. To minimize such effects, participants in the guided tours are briefed on how and where to walk within the dune habitat to minimize the potential for trampling of lizards or other sensitive species and guides monitor participant actions during the tour to ensure compliance. Coachella Valley milk-vetch is easily identified so with appropriate instruction, group participants can avoid stepping on this and other native plant species.

The long-term effects of these guided walks are expected to be negligible. However to ensure that no significant adverse effects to listed or sensitive species are occurring, the Refuge will periodically monitor how these guided walks are being conducted, as well as evaluate the results of annual species monitoring, to determine if changes to the program are necessary to better protect sensitive species and/or to address changes in population size or distribution within the areas affected by the walks. In addition, Refuge staff would ensure education discussions contribute to the familiarity and understanding of the Refuge's place in the natural and human community.

Public Review and Comment:

Opportunities for environmental education on the Coachella Valley NWR were addressed during the public scoping process for the Sonny Bono Salton Sea NWR Complex Comprehensive Conservation Plan (CCP). To initiate the CCP process, a Notice of Intent was published in the Federal Register on October 15, 2010 (65 FR 39172). At that time, written comments were solicited. In September 2010, two scoping meetings were held, one in Palm Desert and one in Calipatria, to receive input from the public on issues related to the future management of the Sonny Bono Salton Sea and Coachella Valley NWRs. Approximately 20 people attended the scoping meeting held in Palm Desert and 10 people attend the scoping meeting in Calipatria.

A CCP web page (www.saltonsea.fws.gov) was created to provide the public with specific information regarding the topics addressed at the scoping meetings and to present information regarding when and where to provide comments. Two Planning Updates were also prepared to summarize the progress of the CCP and to discuss specific issues related to the planning process.

The Planning Updates were distributed to more than 100 entities representing interested members of the public, conservation organizations, hunting, fishing and boating organizations, public agencies, municipalities, special districts, Tribes, and adjoining property owners. We received more than 50 letters, emails, and phone calls between October 2010 and March 2012.

This Compatibility Determination for conducting environmental education on the Coachella Valley NWR was made available for public review and comment as Appendix A of the Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment (USFWS 2013). No comments related to the draft Compatibility Determination were received.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

To minimize the potential for adverse effects to Refuge resources from activities associated with the Refuge's environmental education program, the following measures would be implemented:

- All guided walks conducted on the Refuge by other partners must receive prior approval from Refuge staff to ensure that the number of participants will be manageable, adequate supervision will be provided, and that the frequency of guided walks is limited to no more than four walks per month to minimize disturbance to listed and sensitive species.
- Prior to entering the Refuge, all participants in guided walks will be briefed on the importance of staying with their guides at all times while on the dunes, as well as how and where to walk within the dune habitat to minimize the potential for trampling of lizards or other sensitive species.
- Guides will be responsible for ensuring that all participants act responsibly while on the Refuge.
- To ensure that no significant adverse effects to listed or sensitive species are occurring, the Refuge will periodically monitor how guided walks are being conducted, as well as evaluate the results of annual species monitoring, to determine if changes to the program are necessary to better protect sensitive species and/or to address changes in population size or distribution within the areas affected by the walks.

Justification:

As a wildlife-dependent recreational use, environmental education receives enhanced consideration in the Comprehensive Conservation Planning process. Environmental education can provide students with the joy of experiencing wildlife on their public lands, and as such, helps fulfill the mission of the National Wildlife Refuge System. The implementation of the stipulations presented here will ensure continued compatibility with Refuge purposes, and by limiting the size of groups and frequency of the walks, the use would be expected to result in only minor disturbance to sensitive species.

Allowing environmental education activities to occur on select areas of the Refuge under the stipulations described above will not materially detract from or interfere with the purposes for which this Refuge was established. In addition, as the public engages in these types of activities,

many will go away with a greater understanding of the importance of protecting unique habitats and the specialized species that rely on these habitats for their continued existence. The overall benefit of facilitating environmental education activities on the Refuge is the development of public support for and appreciation of the actions implemented on the Refuge and throughout the Refuge System to manage, conserve, and protect fish and wildlife resources.

Mandatory Re-Evaluation Date:

- Mandatory 15-year Re-Evaluation Date (for priority public uses)
- Mandatory 10-year Re-Evaluation Date (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision:

- 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 Cited:

Coachella Valley Association of Governments (CVAG). 2007. Final Recirculated Coachella Valley Multiple Species Habitat Conservation Plan. Sept.

U.S. Fish and Wildlife Service. 2013. Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment.

Refuge Determination:

Prepared by:

WHL
(Signature)

1/3/14
(Date)

Project Leader
Approval:

Ch. Aho
(Signature)

1/6/14
(Date)

Concurrence:

Refuge Supervisor:

B. McArthur Acting
(Signature)

2/27/14
(Date)

Assistant Regional
Director, Refuges:

[Signature] Acting
(Signature)

2/28/2014
(Date)

Appendix E-7

Research Compatibility Determination and Finding of Appropriateness

Coachella Valley National Wildlife Refuge

Compatibility Determination
(Final, January 2014)

Use: Research

Refuge Name: Coachella Valley National Wildlife Refuge

Establishing and Acquisition Authorities:

The Coachella Valley National Wildlife Refuge, located in Riverside County, California was established on August 28, 1985 under the authority of the Endangered Species Act of 1973 (87 Stat. 884) as amended, and the Land and Water Conservation Fund Act, dated Sept. 3, 1964 (78 Stat. 897). Additional lands have been added as a part of the active land acquisition program carried out in cooperation with the Nature Conservancy. Currently, the Refuge is composed of 3,577 acres.

Refuge Purposes:

The Refuge purpose for the Coachella Valley NWR is:

“To conserve (A) fish and wildlife which are listed as endangered species or threatened species . . . or (B) plants...” (Endangered Species Act of 1973).

National Wildlife Refuge System Mission:

The mission of the National Wildlife 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-668ee]).

Description of Use:

Two provisions of the National Wildlife Refuge System Improvement Act are to “maintain biological integrity, diversity and environmental health” and to conduct “inventory and monitoring.” Research investigations are designed to address these provisions by answering specific management questions. These include, but are not limited to, evaluation of vegetation and wildlife response to habitat management techniques, wildlife and plant population monitoring, documentation of seasonal wildlife movements and habitat use, wildlife disease investigations, and development of invasive species management techniques. Pertinent results from research investigations are incorporated into management plans and actions, and help strengthen the decision-making process.

Coachella Valley National Wildlife Refuge (NWR) receives periodic requests for permission to conduct scientific research on the Refuge. Although research is not identified as a wildlife-dependent recreational use by the National Wildlife Refuge System Improvement Act of 1997, scientific research can benefit Refuge resources and facilitate informed management decisions. In so doing, scientific research conducted on the Refuge would support Refuge purposes and the mission of the National Wildlife Refuge System. The results of some research projects may also assist the Refuge in its inventory and monitoring responsibilities.

Requests to conduct scientific research on the Refuge require approval by the Refuge Manager and the issuance of a Refuge Special Use Permit (SUP). SUPs are only issued for research that can contribute to the enhancement, protection, preservation, and management of Refuge plant and wildlife populations and their habitats.

For a research project to be approved, the following information about the research proposal must be provided to the Refuge Manager:

- 1) Objectives of the study;
- 2) Justification for the study;
- 3) Detailed study methodology and schedule;
- 4) Potential impacts to Refuge wildlife and/or habitats, including short- and long-term disturbance, injury, and mortality;
- 5) Research personnel required and their qualifications/experience;
- 6) Status of necessary permits (i.e., scientific collecting permits, endangered species permit);
- 7) Costs to Refuge and Refuge staff time requested, if any; and
- 8) Anticipated end products (i.e., reports, publications).

Research proposals are reviewed by Refuge staff or others, as appropriate. The criteria listed below, and others as necessary, are used to assess research proposals.

- 1) Does the research proposal provide data that could contribute to the enhancement, protection, and/or management of migratory birds, listed species, and/or their habitats?
- 2) Will the research address issues relevant to Refuge management, such as effective invasive species control, contaminants, forage crop productivity, water quality, or climate change?
- 3) Does the research have the potential to conflict with other ongoing research, monitoring, or management programs on the Refuge?
- 4) Is this a research project that could just as easily be conducted elsewhere (off-Refuge)?
- 5) What efforts have been made to minimize disturbance through study design (e.g., consideration of location, timing, or scope of the study, study methods, number of participants)?

Research that will contribute to specific Refuge management issues will be given higher priority over other research requests. Research projects that can be accomplished off-Refuge, have the potential to cause undue disturbance (the level and type of disturbance will be carefully evaluated when considering a request), or could conflict with ongoing research, monitoring, and Refuge management programs, are unlikely to be approved. If staffing or logistics make it impossible for the Refuge to monitor researcher activity in sensitive areas, the research request may be denied.

The duration of the project will be considered and agreed upon before approval. Open-ended research projects will not be approved. Suggestions may be made to adjust such things as the location, timing, scope, number of permittees, study methods, and number of study sites. All research projects will be reviewed annually to assess whether they continue to operate as originally proposed and to contribute to the objectives of the study.

The Refuge Manager will issue a SUP for all approved research proposals. The SUP will likely include project-specific conditions to protect trust resources and ensure compatibility with Refuge purposes.

Availability of Resources:

Adequate funding and staff exist to manage some level of scientific research on the Coachella Valley NWR. As always, discretionary use of staff time would be weighed through a cost-benefit analysis. Direct costs to administer research activities are primarily in the form of staff time. Table 1 describes the level of involvement by Refuge staff that will be required annually to manage and monitor research activities on the Refuge.

| Table 1 Annual Staff Involvement Associated with Managing Scientific Research Uses on the Refuge | |
|--|--|
| Staff Responsibilities | Annual Administrative/Management Staff Time |
| Refuge Manager – Review and approval of research proposals; approval of SUP | 0.02 FTE* |
| Senior Wildlife Biologist – Assist in review of research proposals; prepare SUP; monitor ongoing research to ensure compliance with the conditions of the SUP; and conduct an annual review of ongoing research activities | 0.15 FTE |
| REQUIRED ANNUAL STAFF TIME | 0.17 FTE |

*FTE (full time equivalent)

Anticipated Impacts of the Use:

Potential negative direct and indirect effects of research conducted on the Refuge by outside entities relate primarily to disturbance of sensitive habitats and sensitive species and potential damage to or loss of sensitive plants and wildlife. Researcher disturbance could alter wildlife behavior, tramping sensitive habitat to collect soil, plant, and/or invertebrate samples, or trapping and handling wildlife. Some disturbance can be avoided through SUP conditions that limit where, when, and for how long a researcher can be present in sensitive habitat areas. Other effects would be short in duration such as sampling of such things as water, soils, vegetative litter, plants, and invertebrates required for identification and/or experimentation and statistical analysis and captured and marked wildlife would be released following infield data collection and tagging or banding. Conditions included in SUPs would ensure that the long-term effects of research activities would be negligible.

Conducting management-oriented research will benefit Refuge wildlife and plant populations and their habitat. Such research will be designed to answer habitat or population management questions, thereby contributing to adaptive management of the Refuge. Expected long-term effects of such research include a growing body of science-based data and knowledge from which to draw upon to implement the best Refuge management possible.

Endangered and Threatened Species. Human activity can have adverse impacts to listed species, particularly when disturbance occurs in harsh environments such as the aeolian sand habitats present on the Refuge. Of particular concern are potential disturbances to the endangered Coachella Valley milk-vetch (*Astragalus lentiginosus var. coachellae*) and the threatened Coachella Valley fringe-toed lizard (*Uma inornata*). Both species are supported by the active desert dune habitat that occurs on the Refuge, as are a number of other sensitive species identified in the Coachella Valley Multiple Species Habitat Conservation Plan (CVAG 2007). A prerequisite of approved research would be that it ensures the information gained will contribute to the enhancement, protection, preservation, or management of these species.

Public Review and Comment:

Opportunities for scientific research on the Coachella Valley NWR were addressed during the public scoping process for the Sonny Bono Salton Sea NWR Complex Comprehensive Conservation Plan (CCP). To initiate the CCP process, a Notice of Intent was published in the Federal Register on October 15, 2010 (65 FR 39172). At that time, written comments were solicited. In September 2010,

two scoping meetings were held, one in Palm Desert and one in Calipatria, to receive input from the public on issues related to the future management of the Sonny Bono Salton Sea and Coachella Valley NWRs. Approximately 20 people attended the scoping meeting held in Palm Desert and 10 people attend the scoping meeting in Calipatria.

A CCP web page (www.saltontsea.fws.gov) was created to provide the public with specific information regarding the topics addressed at the scoping meetings and to present information regarding when and where to provide comments. Two Planning Updates were also prepared to summarize the progress of the CCP and to discuss specific issues related to the planning process. Planning Updates were distributed to more than 100 entities representing interested members of the public, conservation organizations, hunting, fishing and boating organizations, public agencies, municipalities, special districts, Tribes, and adjoining property owners. We received more than 50 letters, emails, and phone calls between October 2010 and March 2012.

The draft Compatibility Determination for scientific research conducted on the Coachella Valley NWR was made available for public review and comment as Appendix A of the Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment (USFWS 2013). No comments related to the draft Compatibility Determination were received.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

Concerns about protecting listed and sensitive species and their habitats require that Refuge staff closely review proposed research projects and that research activities and impacts be monitored. To minimize the potential for adverse effects to Refuge resources as a result of scientific research, the following measures would be implemented:

- All research requests will be required to provide a detailed description of the study proposal. At a minimum, the description should address the purpose of the research, the potential benefits to Refuge management and/or Refuge resources, the number of participants, the times of the year in which field studies and/or data collection would occur, how the studies or data collection will be implemented, the areas on the Refuge that would be accessed, any potential impacts to Refuge resources that could occur and the measures that would be implemented to minimize such impacts, and when study results would be made available to the Refuge Manager.
- Approval of research projects on the Refuge will be permitted at the discretion of the Refuge Manager who will consider the compatibility of the proposed research with Refuge purposes, the proximity of research activities to sensitive habitat and areas known or believed to support listed or sensitive species, the potential for impacts to Refuge resources, and the availability of Refuge staff to manage and monitor the research activities. All research projects will be conducted under a SUP, which will include project-specific stipulations to avoid or minimize the potential for impacts.
- Highly intrusive or manipulative research will generally not be permitted in order to protect Refuge resources.

- Proposed research methods that have the potential to adversely affect Refuge resources will generally not be permitted. However, if the researcher can adequately demonstrate the need for the research and the overall benefits in terms of achieving Refuge purposes despite the potential for some adverse effects, the Refuge Manager has the discretion to permit such research provided the researcher can identify potential impacts in advance of their occurrence. The researcher will also be required to develop mitigation measures to minimize potential impacts. Mitigation measures will be listed as conditions on the SUP.
- Refuge staff will monitor researcher activities to assess study methods, identify any potential impacts to Refuge resources, and ensure compliance with SUP conditions; this monitoring may include accompanying researchers in the field.
- Researchers will be responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project.
- Research must adhere to current species protocols for data collection.
- The Refuge Manager can suspend or modify conditions or terminate on-refuge research that is already permitted and in progress, should unacceptable impacts or issues arise or be noted.
- SUPs will be valid for one year only. Renewals will be subject to review and approval by the Refuge Manager, who will consider the current status of the study, the researcher's compliance with the conditions outlined in the SUP, and the extent of anticipated or unanticipated impacts, if any, that occurred as a result of the specific research project.
- All data and research results, as well as copies of any reports or articles prepared as a result of the research, shall be provided to Refuge Manager.

Justification:

This program as described is determined to be compatible. The anticipated level of research to be conducted on the Refuge at any given time would be compatible because the Refuge Manager would ensure through project-specific conditions in a SUP that all research proposals support the purpose of the Refuge and mission of the System. In view of the impacts research activities may have on the Service's ability to achieve the Refuge purpose, sufficient restrictions will be placed on the researcher to ensure that disturbance is kept to a minimum and that the research will not materially interfere with or detract from the purposes for which the Refuge was established. Further, well-designed research investigations can directly benefit and support refuge goals and objectives. Management of listed and sensitive species, and other native plants and wildlife can be improved and/or adapted through the application of knowledge gained from research. The implementation of wildlife-dependent, priority public uses (i.e., hunting, fishing, wildlife observation, photography, environmental education, and interpretation) may also be altered to improve conditions for wildlife and their habitats based on the results of research.

Mandatory Re-Evaluation Date:

- Mandatory 15-year Re-Evaluation Date (for priority public uses)
- Mandatory 10-year Re-Evaluation Date (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision:

- 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

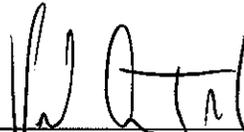
References Cited:

Coachella Valley Association of Governments (CVAG). 2007. Final Recirculated Coachella Valley Multiple Species Habitat Conservation Plan. Sept.

U.S. Fish and Wildlife Service. 2013. Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment.

Refuge Determination:

Prepared by:



(Signature) 1/3/14

(Date)

Project Leader
Approval:

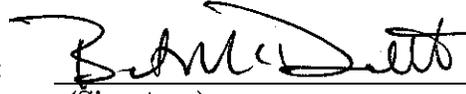


(Signature) 1/6/14

(Date)

Concurrence:

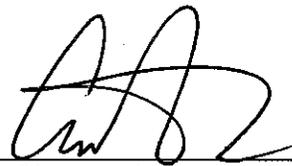
Refuge Supervisor:

 Acting

(Signature) 2/27/14

(Date)

Assistant Regional
Director, Refuges:

 Acting

(Signature) 2/28/2014

(Date)

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Coachella Valley National Wildlife Refuge

Use: Research

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

| Decision Criteria: | YES | NO |
|--|-----|----|
| (a) Do we have jurisdiction over the use? | ✓ | |
| (b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)? | ✓ | |
| (c) Is the use consistent with applicable Executive orders and Department and Service policies? | ✓ | |
| (d) Is the use consistent with public safety? | ✓ | |
| (e) Is the use consistent with goals and objectives in an approved management plan or other document? | ✓ | |
| (f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed? | ✓ | |
| (g) Is the use manageable within available budget and staff? | ✓ | |
| (h) Will this be manageable in the future within existing resources? | ✓ | |
| (i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources? | ✓ | |
| (j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future? | ✓ | |

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: 

Date: 1/6/14

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:  Acting

Date: 2/27/14

A compatibility determination is required before the use may be allowed.

FINDING OF APPROPRIATENESS OF A REFUGE USE

Written Justification

Refuge Name: Coachella Valley National Wildlife Refuge

Use: Research

Justification for Determining that this Use is an Appropriate Use for the Refuge:

Although scientific research is not identified as a wildlife-dependent recreational use, the information provided as a result of selectively permitting such use on the Refuge can benefit Refuge resources and facilitate informed management decisions. Based on the Refuge proposes, priority would be given to scientific research that contributes to the enhancement, protection, and management of listed and MSCHP-covered species and their habitats. All research applications would be reviewed to ensure that the research objectives and justification, study methodology, schedule, and anticipated end products would provide useful information to assist with resource management on the Refuge. Additionally, all proposals would be reviewed to ensure that implementation of the research proposal would not result in significant disturbance or other impacts to Refuge resources. Because sufficient restrictions can be placed on the researcher to ensure that disturbance and other potential impacts are kept to a minimum, in my professional judgment scientific research is an appropriate use on the Refuge.

Refuge Manager: CL Acker Date: 1/6/14

Refuge Supervisor: B. M. D. [Signature] Acting Date: 2/27/14

Appendix E-8

Equestrian/Hiking Trail Compatibility Determination and Finding of Appropriateness

Coachella Valley National Wildlife Refuge

Compatibility Determination
(Final, January 2014)

Use: Equestrian/Hiking Trail

Refuge Name: Coachella Valley National Wildlife Refuge

Establishing and Acquisition Authorities:

The Coachella Valley National Wildlife Refuge, located in Riverside County, California was established on August 28, 1985 under the authority of the Endangered Species Act of 1973 (87 Stat. 884) as amended, and the Land and Water Conservation Fund Act, dated Sept. 3, 1964 (78 Stat. 897). Additional lands have been added as a part of the active land acquisition program carried out in cooperation with the Nature Conservancy. Currently, the Refuge is composed of 3,577 acres.

Refuge Purposes:

The Refuge purpose for the Coachella Valley NWR is:

“To conserve (A) fish and wildlife which are listed as endangered species or threatened species . . . or (B) plants...” (Endangered Species Act of 1973).

National Wildlife Refuge System Mission:

The mission of the National Wildlife 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-668ee]).

Description of Use:

In 1989, the Bureau of Land Management (BLM) prepared an Environmental Assessment to evaluate the potential effects of a system of public equestrian and hiking trails in the southern portion of the Coachella Valley Preserve. This trail system was proposed by the Ivey Ranch Equestrian Center and the Coachella Valley Association of Governments (CVAG) (BLM 1989). The proposed trail system included several trail alignments that crossed lands included within the Coachella Valley National Wildlife Refuge (NWR or Refuge). After evaluating various alignments that would provide trail access through the Refuge, BLM identified a preferred trail alignment consisting of a north/south trail segment along a portion of the Refuge’s western boundary and east/west trail segment that would extend through the northern portion of the Refuge (Figure 1). The proposed alignment was presented to the U.S. Fish and Wildlife Service (Service) for evaluation.

In 1990, the Service issued a biological opinion stating that the implementation of BLM’s preferred alternative was not likely to jeopardize the continued existence of the Coachella Valley fringe-toed lizard, provided that the following reasonable and prudent measures were implemented:

- Trail users limited their activities to the designated trail;
- No pets are permitted on the trails; and
- Trail use is monitored for potential adverse effects to the fringe-toed lizard or its habitat and to implement corrective measures, if required.

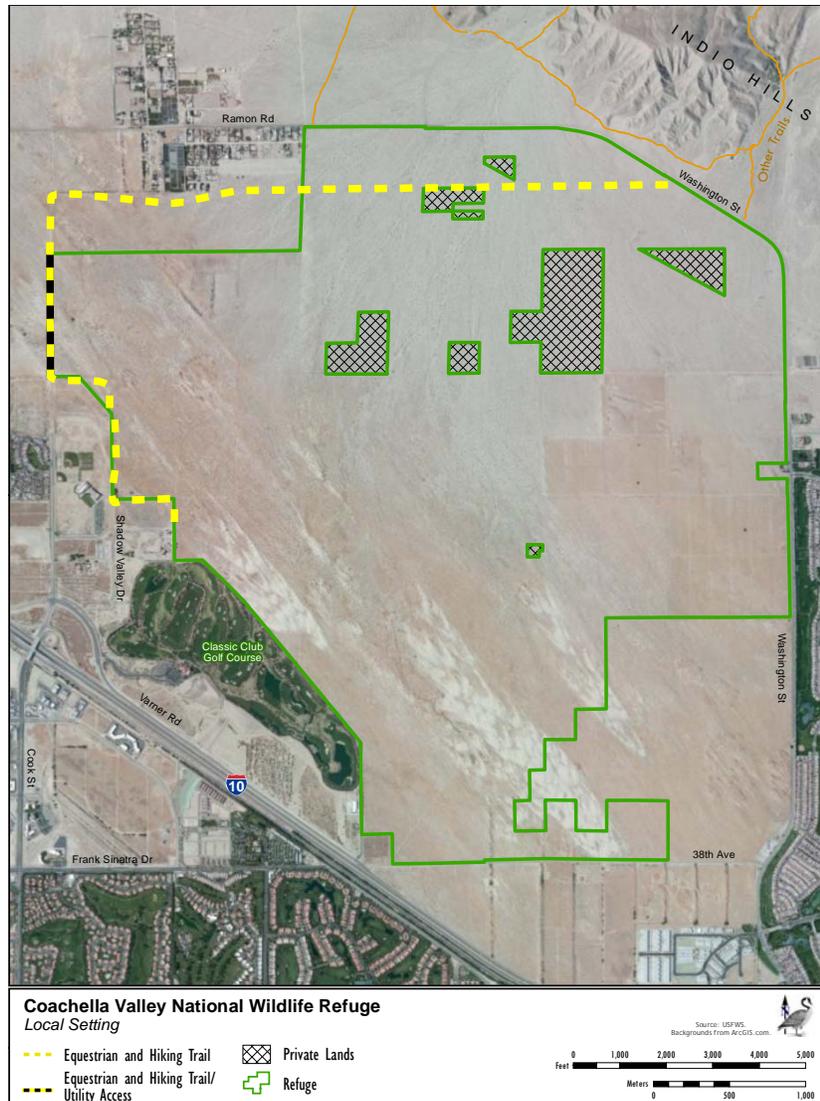


Figure 1. Equestrian/Hiking Trail - Coachella Valley NWR

BLM’s trail plan was subsequently approved and the trail was established on the Refuge. This trail is now part of the non-motorized transportation plan for the Coachella Valley, which was completed in 2001 and updated in 2010 (CVAG 2010). Although trail use is not considered a wildlife-dependent recreational use, the trail does provide opportunities for wildlife observation and photography, which are two of the six wildlife-dependent recreational uses identified by the National Wildlife Refuge System Improvement Act of 1997 (16 United States Code [USC] 668dd-668ee) (the Act).

The approved trail alignment is located well to the north of the Refuge’s sensitive active dune areas, as indicated in Figure 1. Over the years, the trail has received a moderate level of use, with activity levels slightly lower in 2013 than in 1990s. Monitoring of trail activity indicates that users typically adhere to the requirement to stay on the trail while traversing the Refuge. Most trail users are traveling through the Refuge to connect with other portions of the regional trail system, rather than coming specifically to ride on the Refuge.

Availability of Resources:

Trail maintenance requirements are low and overall trail use is limited, therefore, adequate funding is currently available to address limited maintenance needs within the trail corridor. Staffing is available to conduct at least semi-annual monitoring of trail activities and conditions on and surrounding the trail. The Refuge would however benefit from the proposal in the Sonny Bono Salton Sea NWR Complex Comprehensive Conservation Plan to increase current staffing levels within the Complex to include a dual function refuge manager/Federal wildlife officer. As of FY 2013, law enforcement activities on the Refuge are provided by the Service’s Southern California Federal Wildlife Zone Officer, who is also responsible for law enforcement related activities on several other Refuges in southern California. The new dual function position would provide a greater Service presence on the Refuge, facilitate increased monitoring of trail activity, and increased monitoring of the effects of trail activity on refuge resources.

| Table 1 Annual Staff Involvement Associated with Managing Trail Use on the Refuge | |
|---|--|
| Staff Responsibilities | Annual Administrative/Management Staff Time |
| Refuge Manager [†] – Oversight of activities on the Refuge | 0.01 FTE* |
| Wildlife Refuge Specialist – Periodically monitor activities and conditions on and surrounding the trail corridor | 0.10 FTE |
| Southern California Federal Wildlife Zone Officer [†] – Enforce regulations related to trail use on the Refuge | 0.09 FTE |
| REQUIRED ANNUAL STAFF TIME | 0.20 FTE |

*FTE (full time equivalent) † If a dual function Refuge Manager/Federal Wildlife Officer is added as a position for the Complex, these responsibilities would be combined and require 0.10 FTE for the dual function position

Anticipated Impacts of the Use:

The potential adverse effects of trail use on the Refuge include disturbance (e.g., noise, human and horse movement) to birds and other wildlife species that occupy the creosote bush scrub habitat adjacent to the trail; trampling of reptiles and invertebrates that may be present on the trail; and disturbance to and trampling of plants and wildlife elsewhere on the Refuge due to unauthorized off-trail activities (Purdy et al. 1987, Pomerantz et al. 1988, Knight and Cole 1995). The potential effects of disturbance on the species supported by the Refuge due to trail use are not however considered significant because the vast majority of the Refuge is closed to public use, providing significant acreage of undisturbed habitat to support native plants and wildlife. In addition, because the trail is not heavily traveled, the potential for direct mortality to reptiles and invertebrates is low.

Access onto the Refuge via the designated trail corridor does provide the opportunity for unauthorized off-trail activities. Such activities can result in disturbance to wildlife and disturbance to native soils. Soil disturbance within native habitat areas can contribute to the spread of invasive, non-native weeds by creating conditions favorable to seed germination (USFWS 2013). Periodic monitoring of the trail and adjacent habitat areas has not to date identified significant issues related to off-trail activity. However, if this situation were to change,

measures such as the installation of additional regulatory signage, fencing, and/or additional surveillance of trail activities would be implemented.

Potential Effects to Listed and Sensitive Species. Human activity can have adverse impacts to listed species, particularly when disturbance occurs in harsh environments such as the aeolian sand habitats present on the Refuge. Of particular concern are potential disturbances to the endangered Coachella Valley milk-vetch (*Astragalus lentiginosus var. coachellae*) and the threatened Coachella Valley fringe-toed lizard (*Uma inornata*). Both species are supported by the active desert dune habitat that occurs on the Refuge, as are a number of other sensitive species identified in the Coachella Valley Multiple Species Habitat Conservation Plan (CVAG 2007). The fact that the trail is situated well to the north of the Refuge's sensitive dune habitat minimizes the potential for any significant adverse effects to listed and sensitive species supported by aeolian sand habitats.

One factor that could affect core habitat for listed and sensitive species is the introduction of invasive plants into the area. A variety of studies have shown that non-native plant seeds will germinate in the laboratory after digestion by horses (Gower 2008, Quinn et al. 2008), which raises concern regarding the potential effect of equestrian activity on the Refuge. Observations by Refuge staff of the existing trail corridor do not indicate an increased presence of invasive plants along the edges of the trail, and according to the available literature, little research has been done to determine the extent to which non-native plant seeds distributed along a trail via horse manure actually germinate (Quinn et al. 2008, Gower 2008). Continued monitoring by Refuge staff will enable early detection of potential invasive plant concerns along the trail corridor. If weeds become an issue along the trail, the compatibility of equestrian use on the Refuge would require reevaluation.

Public Review and Comment:

The existing trail on the Coachella Valley NWR was addressed during the public scoping process for the Sonny Bono Salton Sea NWR Complex Comprehensive Conservation Plan (CCP). To initiate the CCP process, a Notice of Intent was published in the Federal Register on October 15, 2010 (65 FR 39172). At that time, written comments were solicited. In September 2010, two scoping meetings were held, one in Palm Desert and one in Calipatria, to receive input from the public on issues related to the future management of the Sonny Bono Salton Sea and Coachella Valley NWRs. Approximately 20 people attended the meeting held in Palm Desert and 10 people attended the Calipatria meeting.

A CCP web page (www.saltonsea.fws.gov) was created to provide the public with specific information regarding the topics addressed at the scoping meetings and to present information regarding when and where to provide comments. Two Planning Updates were also prepared to summarize the progress of the CCP and to discuss specific issues related to the planning process. Planning Updates were distributed to more than 100 entities representing interested members of the public, conservation organizations, hunting, fishing and boating organizations, public agencies, municipalities, special districts, Tribes, and adjoining property owners. We received more than 50 letters, emails, and phone calls between October 2010 and March 2012.

This Compatibility Determination for the continued use of an equestrian/hiking trail on the Coachella Valley NWR was made available for public review and comment as Appendix A of the Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment (USFWS 2013). No comments related to the draft Compatibility Determination were received.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

To minimize the potential for adverse effects to Refuge resources from activities associated with the equestrian/hiking trail that extends through the Refuge, the following measures would be implemented:

- Enforce the reasonable and prudent measures outlined in the biological opinion for this trail including restricting all trail use to the designated corridor, clearly marking the trail corridor by posting signs every 250 feet, prohibiting dogs and other pets within the Refuge boundary, and periodically monitoring trail use for compliance of these regulations.
- Maintain bollards or other barriers, as well as fencing, when necessary, to prohibit off-road vehicle access onto the Refuge from the trail.
- Periodically patrol the trail and assess the area around the trail to determine if unauthorized activity is occurring off trail; if so, implement appropriate measures (e.g., signage, fencing, trail closure) to minimize off trail impacts from hikers and equestrians.
- Periodically assess the extent of invasive plants occurring along the trail corridor and implement control as necessary to prevent the spread of invasive weeds further into the Refuge.
- If monitoring identifies impacts from the trail that are resulting in adverse effects to Refuge resources, work with CVAG and others to identify an alternative alignment for the trail that does not traverse Refuge lands.

Justification:

The existing trail corridor on the Refuge has received moderate use by equestrians and hikers since the early 1990s. Ongoing monitoring of this portion of the Refuge indicates no adverse effects to native habitat areas as a result of this use. The trail corridor will continue to be monitored to ensure that the activities occurring on the trail are not adversely affecting the listed and sensitive species supported on the Refuge. The implementation of the stipulations presented here will ensure continued compatibility with Refuge purposes. In addition, the trail provides the public with opportunities to experience the open desert habitat protected on the Refuge, as well to observe some of the Refuge's native plants and wildlife. Through these experiences, the public can gain a greater understanding of the importance of protecting native desert habitats and their associated wildlife species.

The overall benefit of facilitating this use on the Refuge is the development of public support for and appreciation of the actions implemented on the Refuge and throughout the Refuge System to manage, conserve, and protect fish and wildlife resources. As such, this use, as described, is determined to be compatible, as it is not materially interfering with or detracting from the purposes for which the Refuge was established.

Mandatory Re-Evaluation Date:

Mandatory 15-year Re-Evaluation Date (for priority public uses)

Mandatory 10-year Re-Evaluation Date (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision:

- 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 Cited:

Bureau of Land Management (BLM). 1989. Final Environmental Assessment Coachella Valley Preserve Public Equestrian and Hiking Trail System. Prepared for the Coachella Valley Preserve Steering Committee. April.

Coachella Valley Association of Governments (CVAG). 2007. Final Recirculated Coachella Valley Multiple Species Habitat Conservation Plan. Sept.

Coachella Valley Association of Governments (CVAG). 2010. Final Coachella Valley Association of Governments Non-Motorized Transportation Plan Update. Prepared by Ryan Snyder Associates, LLC in association with Urban Crossroads. September 2010.

Gower, S. 2008. Are horses responsible for introducing non-native plants along forest trails in the eastern United States? *Forest Ecology and Management* 256:997–1003.

Knight, R. L. and D. N. Cole. 1995. Wildlife responses to recreationists. In *Wildlife and recreationists*, edited by R. L. Knight and K. J. Gutzwiller. Covelo, California: Island Press.

Pomerantz, G. A., D. J. Decker, G. R. Goff, and K. G. Purdy. 1988. Assessing impact of recreation on wildlife: A classification scheme. *Wildlife Society Bulletin* 16:58-62.

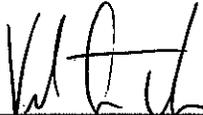
Purdy, K. G., G. R. Goff, D. J. Decker, G. A. Pomerantz, and N. A. Connelly. 1987. A guide to managing human activity on national wildlife refuges. Ft. Collins, Colorado: Office of Information Transfer, U.S. Fish and Wildlife Service.

Quinn, L, M. Kolipinski, V. Coelho, B. Davis, J. Vianney, O. Batjargal, M. Alas, and S. Ghosh. 2008. Germination of Invasive Plant Seeds after Digestion by Horses in California. *Natural Areas Journal*, 28(4):356-362.

U.S. Fish and Wildlife Service. 2013. Sonny Bono Salton Sea National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment.

Refuge Determination:

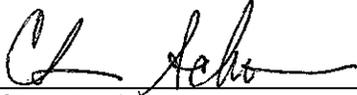
Prepared by:



(Signature)

1/4/14
(Date)

Project Leader
Approval:

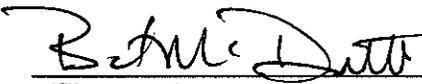


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1/6/14
(Date)

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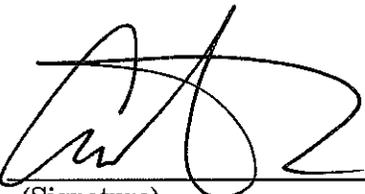
Refuge Supervisor:

 **Acting**

(Signature)

2/22/14
(Date)

Assistant Regional
Director, Refuges:



(Signature)

2/28/2014
(Date)

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Coachella Valley National Wildlife Refuge

Use: Equestrian/Hiking Trail

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

| Decision Criteria: | YES | NO |
|--|-----|----|
| (a) Do we have jurisdiction over the use? | ✓ | |
| (b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)? | ✓ | |
| (c) Is the use consistent with applicable Executive orders and Department and Service policies? | ✓ | |
| (d) Is the use consistent with public safety? | ✓ | |
| (e) Is the use consistent with goals and objectives in an approved management plan or other document? | ✓ | |
| (f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed? | ✓ | |
| (g) Is the use manageable within available budget and staff? | ✓ | |
| (h) Will this be manageable in the future within existing resources? | ✓ | |
| (i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources? | ✓ | |
| (j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future? | ✓ | |

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

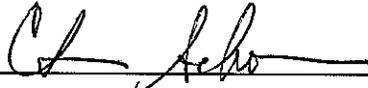
If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

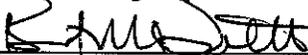
Refuge Manager: 

Date: 1/16/14

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:  Acting

Date: 2/27/14

A compatibility determination is required before the use may be allowed.

FINDING OF APPROPRIATENESS OF A REFUGE USE

Written Justification

Refuge Name: Coachella Valley National Wildlife Refuge

Use: Equestrian/Hiking Trail

Justification for Determining that this Use is an Appropriate Use for the Refuge:

Although trail use is not identified as a wildlife-dependent recreational use, trails do provide opportunities for the public to participate in a number of wildlife-dependent recreational uses including wildlife observation, photography, interpretation, and environmental education. The regional trail that extends through the Coachella Valley NWR provides the public with a rare opportunity to observe from a distance the significant sand dune and sand field habitats protected on the Refuge. Providing the public with such opportunities when they do not compromise habitat quality or species recovery helps to build support for protecting important habitats, as well as to promote an appreciation for the unique habitats found within the larger Coachella Valley Preserve area. Sufficient restrictions related to the uses permitted on the trail and the prohibition of off-trail use have and will continue to minimize the potential for disturbance to listed and sensitive species and their habitats, therefore, in my professional judgment the existing trail that extends through the Refuge is an appropriate use.

Refuge Manager:  Date: 1/16/14

Refuge Supervisor:  Acting Date: 2/27/14

Appendix F

Finding of No Significant Impact and Environmental Assessment

Finding of No Significant Impact and Environmental Assessment

Sonny Bono Salton Sea National Wildlife Refuge Complex Comprehensive Conservation Plan

Prepared by:

U.S. Fish and Wildlife Service
Pacific Southwest Region
Refuge Planning Office
2800 Cottage Way, W-1832
Sacramento, CA 95825

and

Sonny Bono Salton Sea National Wildlife Refuge Complex
906 W. Sinclair Road
Calipatria, CA 92233

March 2014

**U. S. Department of the Interior
Fish and Wildlife Service
Region 8 - Pacific Southwest Region**

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

**Environmental Assessment for the
Sonny Bono Salton Sea National Wildlife Refuge Complex
(Sonny Bono Salton Sea NWR and Coachella Valley NWR)
Comprehensive Conservation Plan
Imperial County and Riverside County, California**

The U.S. Fish and Wildlife Service (Service) has completed the Comprehensive Conservation Plan (CCP) and environmental assessment (EA) for the Sonny Bono Salton Sea National Wildlife Refuge Complex (NWRC). The CCP will guide the management of the Sonny Bono Salton Sea National Wildlife Refuge (NWR) and Coachella Valley NWR for the next fifteen years. The CCP/EA (USFWS 2013), herein incorporated by reference, describes the Service's proposals for managing the refuges included within the Sonny Bono Salton Sea NWRC (Sonny Bono Salton Sea NWR and Coachella Valley NWR) and the associated effects of this management on the human environment under three alternatives for each Refuge, including the no action alternative.

Decision

Following a comprehensive review and analysis of the three alternatives evaluated for each refuge within the Sonny Bono Salton Sea NWRC, as presented in the draft CCP/EA, and considering all public comments and our responses to them, the Service has determined that the analysis in the EA is sufficient to support:

- 1) Selection of Alternative B (Restore and Enhance Habitat Quality; Expand Opportunities for Wildlife Observation, Environmental Education, and Interpretation) as the preferred alternative or selected plan for the Sonny Bono Salton Sea NWR;
- 2) Selection of Alternative B (Expand Management Actions to Support Listed and Sensitive Species; Expand Public Outreach) as the preferred alternative or selected plan for the Coachella Valley NWR;
- 3) Approval of the Integrated Pest Management Plan for the Sonny Bono Salton Sea NWRC;
- 4) Approval of the Predator Management Plan for the Sonny Bono Salton Sea NWR; and
- 5) Approval of the Red Hill Bay Restoration Project, as described in Alternative B for the Sonny Bono Salton Sea NWR.

The preferred alternative or “selected plan” for each Refuge was determined to best meet the following criteria:

- achieves the mission of the National Wildlife Refuge System (Refuge System);
- ensures that each Refuge will be administered in accordance with the Refuge System Administration Act of 1966, as amended;
- achieves the purposes for which each Refuge was established;
- will be able to achieve the Service’s vision and goals for each Refuge;
- maintains and, where applicable, restores the ecological integrity of each Refuge’s habitats and populations;
- addresses the important issues identified during the scoping process;
- addresses the legal mandates of the Service and each Refuge;
- is consistent with the scientific principles of sound fish and wildlife management; and
- facilitates priority public uses that are compatible with each Refuge’s purposes and the mission of the Refuge System.

Alternatives Considered

Sonny Bono Salton Sea NWR. Following is a brief description of the three alternatives evaluated for managing the Sonny Bono Salton Sea NWR, including the selected plan (Alternative B). For a complete description of each alternative, see the EA.

Alternative A - No Action

Under the No Action Alternative, the management activities currently being implemented on the Refuge would continue. Therefore, this alternative represents the baseline from which other “action” alternatives were evaluated.

Wildlife and habitat management actions, the majority of which involve highly managed systems with specific wildlife species and habitat purposes, would continue at current levels under Alternative A. These actions include:

- cultivating green forage in managed agricultural fields to support wintering waterfowl;
- providing seasonal shallow water wetlands with alkali bulrush and other vegetation to provide additional forage for waterfowl;
- managing freshwater cattail marsh in various impoundments on the Refuge to support the endangered Yuma Ridgway’s rail (*Rallus obsoletus yumanensis*);

- providing permanent open water areas to support nesting and foraging seabirds, as well as foraging shorebirds and other waterbirds;
- preserving tree rows and areas of native desert scrub vegetation to support native wildlife; and
- controlling invasive vegetation in the Refuge's riparian areas.

Additionally, the Refuge would continue to cooperate with other agencies on issues related to habitat restoration in the Salton Sea, and monitoring of avian disease on the Salton Sea would continue per available funding. The public use programs occurring on the Refuge, including hunting, fishing, wildlife observation, photography, environmental education, and interpretation, would continue at current levels.

Alternative A was not selected because it does not include proposals to:

- *change current irrigation and soil preparation practices in managed agricultural fields to increase the annual yield of forage crops for wintering geese, while also improving water use efficiency and reducing dust generation and carbon emissions;*
- *address the need for the continued availability of high quality cattail marsh habitat to support the Refuge's current population of endangered Yuma Ridgway's rails;*
- *restore shallow saline water habitat in Red Hill Bay to support migratory and resident waterbirds and minimize the potential for wind-generated soil erosion associated with the currently exposed playa within Red Hill Bay;*
- *implement a range of management actions to improve gull-billed tern (*Gelochelidon nilotica vanrossemi*) and black skimmer (*Rynchops niger*) fledgling success on the Refuge;*
- *implement an Integrated Pest Management Plan; and*
- *enhance opportunities for wildlife observation, environmental education, interpretation, and photography.*

Alternative B (Selected Plan)

In addition to the management activities currently being implemented on the Refuge, this alternative includes proposals to enhance and restore habitat quality within the Refuge to better achieve Refuge purposes, as well as improve opportunities of wildlife-dependent recreational uses. These proposals include:

- implementing management practices (e.g., laser leveling of fields, no till farming) intended to increase the total crop yield within managed agricultural fields to support wintering geese, while also reducing costs, improving water use efficiency, and lowering carbon emissions;
- improving water use efficiency throughout the Refuge's management habitat areas without compromising habitat quality;

- periodically rotating managed cattail marsh habitat to ensure continued availability of high quality habitat to support the endangered Yuma Ridgway's rail;
- improving habitat quality in riparian areas to support resident and migratory songbirds and other native wildlife;
- in partnership with others, implementing the phased restoration of Red Hill Bay to provide shallow saline water habitat for shorebirds, seabirds, and other waterbirds;
- continuing to provide quality waterfowl hunting opportunities and enhancing opportunities for wildlife observation, environmental education, interpretation, and photography;
- implementing monitoring and management actions (including a Predator Management Plan) to conserve listed and sensitive species, including ground-nesting seabirds of conservation concern; and
- implementing an Integrated Pest Management Plan.

Alternative B was selected for implementation because it is considered the alternative that would most effectively achieve the Refuge's migratory bird purposes, as well as Refuge goals and objectives related to the protection of habitat to support migratory and resident birds and other native wildlife; conservation of the endangered Yuma Ridgway's rail and desert pupfish; coordination with other agencies to meet Refuge purposes; and enhancement of public appreciation, understanding, and enjoyment of Refuge resources.

Alternative C

The actions related to wildlife and habitat management, habitat restoration, and general refuge operations included in Alternative C are identical to those presented in Alternative B. The primary difference between the two alternatives relates to public use, with Alternative C focused on improving existing facilities, as well as the overall public use experience.

Although the implementation of Alternative C would ensure achievement of most of the Refuge purposes, goals, and objectives, this alternative was not selected for implementation because the public use proposals included under Alternative B are more likely to achieve the Refuge's public use goal of enhancing public appreciation, understanding, and enjoyment of Refuge resources.

Coachella Valley NWR. Following is a brief description of the three alternatives evaluated for managing the Coachella Valley NWR, including the selected plan (Alternative B). For a complete description of each alternative, see the EA.

Alternative A - No Action

Under the No Action Alternative, the management activities currently being implemented on the Refuge would continue. Therefore, this alternative represents the baseline from which other "action" alternatives were evaluated.

Of the actions currently implemented on the Coachella Valley NWR, those associated with the protection of the Refuge's sensitive sand dune and sand field habitats are most critical to achieving Refuge purposes. Such actions include surveillance conducted in partnership with other agencies to deter unauthorized access onto sensitive habitat areas; maintenance of fencing and signs to deter off-highway vehicle activity; and sporadic, local control of Sahara mustard (*Brassica tournefortii*) and other invasive plant species. Surveys for Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*), a federally listed endangered plant, and Coachella Valley fringe-toed lizard (*Uma inornata*), a federally listed threatened reptile, are also conducted annually on the Refuge.

Occasional guided tours of the Refuge for environmental education purposes would continue and an existing public equestrian and hiking trail extending along portions of the Refuge's western and northern boundary would remain.

Alternative A was not selected for implementation because it does not include proposals to:

- *improve habitat quality for the Refuge's listed species through expanded invasive plant species control;*
- *expand listed and sensitive species monitoring on the Refuge;*
- *enhance existing disturbed habitat to support the flat-tailed horned lizard (*Phrynosoma mcallii*);*
- *implement an Integrated Pest Management Plan; and*
- *expand public outreach through the development of off-refuge interpretation.*

Alternative B (Selected Plan)

Under this alternative, wildlife and habitat management would be expanded to include a more defined role for Refuge staff in species monitoring; implementation of an Integrated Pest Management Plan to address invasive plant species control; habitat enhancement of an old agricultural site to the west of Washington Street; and development and implementation of a long-term sand transport monitoring plan. Occasional guided tours of the Refuge would continue and an off-Refuge interpretive program would be developed per available funding.

Alternative B was selected for implementation because it is considered the alternative that would most effectively achieve Refuge purposes, goals, and objectives, particularly those related to the recovery and protection of federally listed species.

Alternative C

Alternative C includes the same wildlife and habitat management actions as those described in Alternative B with the exception of the treatment of the old agricultural site to the west of Washington Street. Under Alternative C, this area would be recontoured and fully restored to creosote bush scrub habitat. In addition to the public use program described in Alternative B, Alternative C proposes to install some interpretative signage along a portion of the existing trail corridor on the Refuge.

Although the implementation of Alternative C would result in the achievement of many Refuge goals and objectives, when considering the current staffing levels for the Refuge Complex, the restoration of creosote bush scrub habitat on the old agricultural site could impact the Refuge staff's ability to maintain both the primary actions needed to support the Refuge's listed and sensitive species and maintain and monitor the newly restored habitat area. Should circumstances change, the CCP could be revised in the future to incorporate this restoration proposal.

Effects of Refuge Management on the Human Environment

As described in the EA, implementing the selected alternatives for each Refuge will have no significant impacts on any of the environmental resources identified. A summary of the impacts analysis and conclusions is provided below. A more in-depth analysis is provided in the EA.

Sonny Bono Salton Sea NWR

Topography/Visual Quality. Proposed changes in management practices for the managed habitat areas on the Refuge would result in only minor alterations to already disturbed topography and these changes would have no effect of the existing visual quality of the area.

For the Red Hill Bay restoration proposal, water conveyance channels and three-foot-high berms would be constructed to facilitate the project. Much of the project area has been disturbed in the past; therefore, the creation of these channels and earthen berms would have little effect on the existing topographic or visual character of the area. Solar panels would be erected on poles at the project site to provide energy for water pump operation. These structures would not block views, nor would they impair views of the immediate or distant surroundings. The extension of necessary utilities and other components of the water management system for this restoration project would not substantially alter the existing visual character or quality of the site and its surroundings, and the proposed project would not create a new source of light or glare, nor would it affect day or nighttime views in the area.

Public use construction projects would include improving existing trails, developing new trails on existing access ways, and installing a trail on one of the proposed berms for the Red Hill Bay project. None of these proposals would require any significant alteration of the landform, nor would they alter the current visual quality of the area.

Therefore, the implementation of the selected plan would not result in any significant adverse effects to topography or the visual character of the area.

Geology/Soils. The implementation of new and expanded management practices within the managed habitat areas of the Refuge, as proposed in the selected plan, would have mixed effects with respect to geology and soils. Expanding no till practices and/or laser leveling the fields would reduce surface manipulation minimizing the potential for erosion. On the other hand, cooperative farming, which could be implemented on the Refuge in the future under this proposal, could result in additional soil manipulation due to field preparation requirements or cattle or sheep grazing activities. The extent of this manipulation in either case is expected to be limited. The rotation of cattail marsh habitat areas and improvements to existing nesting areas is not expected to affect or be affected by issues related to geology and soil.

The potential for ground shaking and rupture within the Refuge boundary is high, and a significant seismic event could cause a portion of the berms proposed within the Red Hill Bay Restoration project to fail and/or cause damage to other features of the project such as the water conveyance structures or the earthen nesting islands. To minimize the potential for berm failure, the berms have been designed to maximize stability, with internal berm slopes (those that would be inundated) to be constructed with an 8:1 slope gradient and the outer slopes constructed at 4:1. If however the berms were to fail, no associated safety issues are anticipated because of the low water levels (approximately one foot in depth) to be maintained in the ponds, the flow direction of inadvertently released water, which would be into the Salton Sea, and the lack of sensitive land uses in the vicinity of the project site. Thus, any water released from the impoundments due to a seismic event would not expose people, property, or structures to adverse effects. Therefore, potential impacts related to geological hazards would be less than significant.

Some water-generated erosion could occur at the Red Hill Bay restoration site during construction and immediately following project completion until conditions stabilize, but for the most part, eroded soil would be maintained within the restoration cells. To minimize the potential for soil erosion, best management practices (BMPs) would be implemented during construction as part of the Storm Water Pollution Prevention Plan (SWPPP). Measures such as the installation of silt fences, stabilization of construction traffic ingress/egress locations to minimize erosion, and the protection of existing vegetation (applicable primarily to project construction areas to the east Red Hill Bay where a water conveyance channel would be constructed) would avoid the potential for significant adverse impacts related to erosion. A benefit of reintroducing water to Red Hill Bay, an area of recently exposed Salton Sea seabed, is the reduction in the potential for wind-generated soil erosion.

The various improvements and new construction projects proposed within the Refuge headquarters compound to support Refuge operations (e.g., new carport, new storage facilities), as well as the improvements proposed to support Refuge visitors (e.g., new trails, restroom expansion, sidewalk repair) would occur on already developed sites, with minimal ground disturbance required to accommodate the improvements or new facilities. Where ground disturbance is proposed, appropriate BMPs would be implemented during construction to ensure that no erosion or siltation occurs that could affect nearby waterways or habitats. As a result, the potential for erosion would be less than significant. Although this area is prone to seismic activity, no actions are proposed that would increase the potential for geological hazards, and the potential for flooding due to a seiche would be low.

Paleontological Resources. Although there is the potential for paleontological resources to be present within the Sonny Bono Salton Sea NWR, the actions to be implemented within the managed habitat areas and the construction activities associated with public use and Refuge operation proposals would not result in any significant disturbance to previously undisturbed soils. Therefore, there is little, if any, potential for significant adverse effects to the paleontological resources from these activities.

Although limited, there is a potential for impacts to paleontological resources during excavation for the Red Hill Bay Restoration project. An impact would occur if physical damage to a scientifically useful fossil resulted in the reduction or loss of the data potential of that fossil, and/or if fossils were unearthed and removed from their stratigraphic context without appropriate scientific recordation of that context. To avoid the potential for such significant adverse effects, final construction drawings for the project would be reviewed to determine if excavation would be required at depths greater than five feet from the current surface

elevation. If so, a paleontological monitoring plan would be prepared in consultation with the Service's Regional Cultural Resources Program and implemented during excavation in those portions of the project site where there is a potential for impact to paleontological resources. If paleontological resources are encountered during excavation, work in the affected area would stop until a paleontological resource data recovery plan is prepared and implemented. The implementation of these measures would avoid any significant adverse effects to paleontological resources.

Alternative Energy Resources. Some of the Refuge lands that are owned by the Imperial Irrigation District (IID) and leased to the Service along the southeastern edge of the Salton Sea are located within the Salton Sea geothermal field. CalEnergy Operating Corporation has mineral interest leases on these subsurface lands, which grants them the right to pursue geothermal energy development. If geothermal energy development or facilities associated with geothermal energy development require access over any of these areas in the future, adjustments would be made to the Refuge lease as energy development and infrastructure is likely not compatible with the purposes for which the Refuge was established.

The site of the proposed Red Hill Bay Restoration project is also located on IID land within the Salton Sea geothermal field. The boundaries of the restoration project have been established based on discussions with CalEnergy to ensure that the proposal will not adversely affect subsurface development of their mineral interests.

Continued coordination with IID and CalEnergy on Refuge projects proposed within the Salton Sea geothermal field will avoid the potential for conflicts between Refuge actions and geothermal energy development in the area.

Agricultural Resources. Approximately 1,100 acres of land within the Refuge are designated as Prime Farmland or Farmland of Statewide Importance. Although the Refuge does not currently use these lands to produce commercial crops, the Refuge actively cultivates green forage crops on approximately 850 acres. These lands are specifically managed to protect adjacent commercial crops from depredation by wintering geese, which provides a benefit to agricultural resources in the area.

The Red Hill Bay Restoration site would occupy an area that was previously submerged below the Salton Sea and is not designated as important farmland; therefore, shallow water restoration in this area would have no effect on agricultural resources.

Hydrology. New and expanded management actions within the managed habitat areas will have a nominal effect on the existing hydrologic conditions within and surrounding the Refuge. Expansion of current invasive species control within existing waterways (e.g., rivers, drainage channels, and irrigation canals) would improve to some extent the flow rates within these waterways, but the overall effect would be minimal.

As part of the Red Hill Bay Restoration project, some water would be diverted from the Alamo River into the project's water impoundment area. The proposal would represent a relatively insignificant reduction in water flow within the Alamo River (about 10 cubic feet per second immediately downstream of the diversion). Even if Alamo River flows are reduced by 30 percent in future years as a result of various water agreements, the proposed diversion would represent only 2.6 percent of the total water volume within the River. No downstream water rights holders and/or users would be affected by the proposed diversion. The anticipated

reduction in flows within the Alamo River north of the future diversion channel would not significantly alter the existing hydrology in the area. In addition, none of the facilities proposed as part of this project, including the berms and drainage channels, would impede or cause the existing path of flood flows within the Alamo River to be altered.

The public uses and improvements to existing refuge operations and facilities proposed under the selected plan would not result in any substantive changes to existing drainage patterns, flood flow routes, or drainage and irrigation channels; therefore, no significant adverse effects related to hydrology are anticipated.

Water Quality. Improvements to current management actions, including the expansion of no till practices and laser leveling of agricultural fields, would result in less soil manipulation in the Refuge's managed agricultural fields. This would reduce the potential for erosion and siltation into adjacent waterways. Other actions proposed in managed habitat areas include invasive plant species control, which would be implemented through an integrated approach to pest management. A number of BMPs intended to protect surface water and groundwater quality would be implemented as part of the pesticide application process, which will include both ground and aerial applications. These BMPs are described in detail in the Integrated Pest Management (IPM) Plan that has been prepared for the Sonny Bono Salton Sea NWRC. Through the implementation of these BMPs, impacts to water quality from herbicide applications would be minor, temporary, or localized in nature.

Implementation of the Red Hill Bay Restoration project could result in short-term impacts to surface water quality by increasing the amount of sediment entering the Alamo River, Salton Sea, and other watercourses in the area during construction. There is also a potential for introducing pollutants into these surface water areas. To minimize such impacts, BMPs would be incorporated into the scope of the project to ensure proper maintenance and fueling of construction vehicles to avoid spills; tire cleanouts to avoid tracking dirt onto public roadways; and appropriate erosion control techniques following construction to minimize the potential for long-term erosion. The potential for impacts to water quality would be further reduced by the implementation of a SWPPP during construction. With the implementation of appropriate BMPs and adherence to the measures outlined in the SWPPP, no significant adverse effects to water quality are anticipated.

Another potential effect to water quality from the excavation of portions of the Red Hill Bay area is short-term increases in suspended sediments in the water column. These sediments may include legacy pesticides (e.g., DDE) carried into the area from upstream agricultural fields. If pesticides are present in the soils, mobilizing them during construction would increase their availability for biological uptake. To help inform the Service of the potential hazards, twenty sediment samples from the site would be collected and analyzed by the United States Geological Survey Pesticide Fate Research Group for current-use and legacy pesticides. The data obtained from this process would then provide guidance for implementing construction methods that can limit the mobilization of pesticides.

Climate Change. Predictions of increased temperatures and longer periods of excessively high temperatures during the summer months are likely to impact wildlife distribution and abundance on the Sonny Bono Salton Sea NWR, particularly if temperatures exceed thermal tolerances or result in severe water stress (PRBO Conservation Science 2011). Because the actual effects to Refuge resources due to climate change are difficult to predict, future management actions include proposals to measure and address the effects of climate change on Refuge resources through monitoring and adaptive management.

Air Quality. The wildlife and habitat management activities to be implemented under the selected plan are not expected to result in any adverse effects to air quality. Actions such as laser leveling, the expanded practice of no till farming, and improved water distribution across fields would reduce the extent of soil manipulation required in the managed agricultural fields, decreasing the already low levels of fugitive dust generated on the Refuge. The proposal for future consideration of cooperative farming practices on the Refuge would not be expected to increase fugitive dust generation above existing conditions because all new agricultural use on the Refuge would have to comply with the rules and regulations enforced by the Imperial County Air Pollution Control District, including Rule 806 (Conservation Management Practices).

The effects of aerial and ground applications of herbicides on air quality would be minimized through adherence to pesticide label requirements and the implementation of product-specific BMPs outlined in the IPM Plan for the Refuge Complex.

Because the total number of miles traveled to implement the selected plan would not substantively change over existing levels, no significant air quality impacts related to gasoline engine operation would occur.

Construction activities associated with the restoration of Red Hill Bay would result in temporary, localized adverse impacts to air quality related to fugitive dust and tailpipe emissions generated by construction equipment (e.g., graders, tractors, dump trucks); however, this project is not expected to generate dust or emissions in excess of current air quality standards. Measures to reduce the amount of fugitive dust and other emissions during construction, as required by the Imperial County Air Pollution Control District in Rule 800 (General Requirements for Control of Fine Particulate Matter [PM-10]) and Rule 801 (Construction and Earthmoving Activities) would be incorporated into the scope of the project. Following restoration, air quality impacts related to fugitive dust generated by winds blowing across the exposed seabed in Red Hill Bay would be avoided.

Greenhouse Gas Emissions. The activities associated with wildlife and habitat management, public use, and Refuge operations proposed under the selected plan would result in only minor increases in greenhouse gas emissions (GHGs). Some or all of the increases in GHGs associated with expanded opportunities for wildlife observation would be offset by reductions in GHGs realized from changes in agricultural field management. Construction activities associated with restoration at Red Hill Bay would result in an increase in the emission of GHGs, but these increases would be limited and temporary.

To reduce the total GHG emissions generated from the operation and maintenance of the Refuge, as vehicles are replaced, new vehicles will be selected that have better fuel economy. In addition, wherever possible, tasks requiring off-Refuge travel will be combined to reduce the total number of miles driven by Refuge staff. Office equipment, including light fixtures, will be evaluated and replaced as necessary with “Energy Star” qualified products.

Contaminants. Continued coordination with the Carlsbad Fish and Wildlife Office Contaminants Program in the review and evaluation of potential sources of environmental contaminants on the Refuge will ensure that contaminants issues are appropriately addressed as part of the Refuge’s overall management plan. In addition, Refuge staff would continue to adhere to all Federal, State, and label requirements related to the safe and secure storage, as well as use, of regulated and unregulated chemical products (e.g., pesticides, gasoline, motor oil,

lubricants, paints) on the Refuge. Required containment structures would be properly maintained and spill plans and training would continue to be updated as necessary. Appropriate BMPs would be implemented for all aerial and ground application of herbicides.

A Contaminants Assessment Process (CAP), completed for the Refuge Complex in 2012, identified selenium and DDE levels in the Salton Sea as important issues to be considered in conducting habitat and wildlife management actions. The results of the CAP will assist Refuge staff in prioritizing necessary sampling and/or clean-up actions, developing proposals for future investigations, and initiating pollution prevention activities.

The restoration of Red Hill Bay would have the potential to redistribute sediment-sorbed legacy contaminants (DDE) and pyrethroid pesticide residues to the sediment surface, but these effects are expected to be limited. Additional information related to contaminants is provided in the wildlife discussion.

Habitat and Vegetation Resources. The selected plan includes proposals intended to benefit habitat quality for resident and migratory birds and other wildlife. No adverse effects to native vegetation or managed habitat areas are anticipated from proposed management actions, potential implementation of cooperative farming agreements, or the expansion of opportunities for wildlife observation. Public use on the Refuge would be limited to designated trails and roadways, with much of the Refuge closed to public access. This approach will reduce the potential for impacts to habitat and native vegetation; therefore, no significant adverse effects to habitat or vegetation are anticipated.

Potential effects to native vegetation, sensitive plant species, and overall habitat quality from the implementation of the IPM Plan would be minor, temporary, or localized in nature.

Wildlife Resources. The wildlife and habitat management actions to be implemented under the selected plan (e.g., habitat restoration and enhancement, additional species surveys) could result in temporary impacts to wildlife in the form of disturbance. To minimize disturbance and other effects, these activities would be avoided to the extent feasible in periods and locations when sensitive wildlife species are particularly vulnerable (e.g., the nesting season for birds). Overall, the proposed management actions would benefit wildlife.

The proposal to restore Red Hill Bay could result in short-term adverse effects to nearby wildlife due to construction noise and human disturbance. These impacts are not however considered significant, because habitat in and around the project site, including along the Alamo River, is currently of low value. Upon completion, the restoration project would provide long-term benefits for migratory and resident birds.

Another potential impact to wildlife is the possible accumulation of selenium within the shallow waters of the restored Red Hill Bay area. The results of a study initiated in 2006 (Miles et al. 2009) to estimate the ecological risks of blending Salton Sea water with Alamo River water indicated that the blended water approach was effective in reducing selenium concentrations from the Alamo River, which has an average selenium levels of 8 µg/L (Setmire et al. 1993). Arithmetic mean values of selenium water concentrations in blended water study ponds during the study period ranged from 0.9 to 3.9 µg/L. The Red Hill Bay restoration project would build on this research and provide an opportunity to further address areas of uncertainty and ultimately inform adaptive management of this and other similarly created habitats. This would be accomplished through the implementation of a monitoring program similar to that described

in the Salton Sea Ecosystem Monitoring and Assessment Plan (available at <http://pubs.usgs.gov/of/2013/1133/>).

The implementation of the IPM Plan would result in the use of pesticides on the Refuge that represent relatively low risk to non-target organisms due to low toxicity or short-term persistence in the environment. Thus, potential adverse impacts to wildlife from pesticide applications would be less than significant.

The implementation of a Predator Management Plan to control individual predators (e.g., raccoons, coyotes, gulls) of ground-nesting seabirds (including adults, chicks, and eggs) during the nesting season through lethal and non-lethal actions would result in a limited, localized reduction in the number of predatory species present within the Refuge. Because of the limited numbers of individual predators to be affected by these actions, no significant adverse effects to the local, regional, or range-wide population of these highly resilient species would occur. Disturbance to other species as a result of implementing this program would be minimal.

The hunting of waterfowl in the United States is based upon a thorough regulatory setting process that involves numerous sources of waterfowl population and harvest monitoring data. Based on the estimated harvest numbers for the Refuge, the Service believes that the continuation of waterfowl hunting on the Sonny Bono Salton Sea NWR will not have a significant impact on local, regional, or Pacific Flyway duck, goose, or coot populations.

Waterfowl hunting on the Refuge can result in direct (e.g., mortality, wounding) and indirect adverse effects (e.g., altered behavior, population structure, distribution) to non-hunted wildlife (DeLong 2002, Bartelt 1987, Cole and Knight 1990). Within the Hazard Tract, shorebirds and other waterbirds (e.g., herons, egrets) are impacted to some extent by this disturbance. However, these impacts are reduced by the availability of adjacent and nearby Refuge lands (Havera et al. 1992) where hunting is not permitted and wildlife can feed and rest relatively undisturbed. To further reduce the effects of hunting on hunted and non-hunted species, hunting only occurs on Saturday, Sunday, and Wednesday, giving all wildlife on the Refuge a respite from the effects of hunting during the hunting season. Studies have shown that intermittent hunting, in which rest periods are provided, is an effective way to minimize the effects of disturbance on non-hunted wildlife (Fox and Madsen 1997). Although some direct loss of non-target species is observed annually on the Refuge, the number of non-target species lost is low and does not represent a significant adverse effect to non-target species.

Other public uses on the Refuge are restricted to designated trails and roadways, with much of the Refuge closed to public access. This results in minimal disturbance of resident and migratory birds and other wildlife.

Federal Endangered and Threatened Species. A number of the management actions included in the selected plan focus on the recovery and protection of listed species, particularly the endangered Yuma Ridgway's rail, while other actions include measures to protect listed species from disturbance or harm.

Yuma Ridgway's Rail

Approximately 200 acres of freshwater marsh located in various impoundments are managed on the Refuge to benefit the Yuma Ridgway's rail, which is present year round. Potential impacts to these rails involve limited periods of disturbance when maintenance such as control of invasive plant species and clearing of vegetation around the primary

water control structures is required. These maintenance activities, which occur over a period of a few hours, take place periodically throughout the year except during the nesting season, when maintenance would be suspended. Care is taken when implementing these activities to avoid loss or injury to rails or other secretive marsh birds. With these precautions, potential impacts to the rail are not considered significant.

Under the selected plan, a step-down Yuma Ridgway's rail management plan will be prepared to address the long-term management of rail habitat. The plan will address the need for the occasional clean out of dense cattail vegetation to maintain high quality rail habitat and explore how best to accomplish this action with the least amount of disturbance to the existing rail population. Any management activities within cattail habitat would occur outside of the nesting season, a survey would be conducted of rail habitat areas before any clean out actions are implemented, and alternative habitat areas would be established prior to clean out to ensure adequate protection and high quality foraging areas.

Yuma Ridgway's rails do not occupy habitat to be affected by the restoration of Red Hill Bay, nor do they occur in proximity to the restoration area, therefore, no adverse effects to Yuma Ridgway's rails are anticipated from the implementation of this restoration project.

The control of invasive non-native plants in rail habitat would be implemented in accordance with the IPM Plan. All pesticides considered for use in rail habitat would require review and approval through the PUPS process, and Chemical Profiles would be prepared to assess the potential effect of each pesticide on Refuge-specific species, including listed species. This assessment may result in the identification of product specific BMPs that must be implemented during application and/or requirements for application rates that are lower than those permitted on the product label.

The Refuge's Yuma Ridgway's rail population occurs within managed cattail marshes that provide little opportunity for human access. The majority of these areas occur where no public access is permitted within or around the marsh, which avoids any potential for disturbance or other impacts. In Unit 1, the public does have the opportunity to walk around one of these marsh areas and listen for rails and other marsh birds. Because of the dense nature of the habitat, the potential for adverse effects to the rails from this human activity and any associated noise is limited.

The rail habitat located in the Hazard Tract of Unit 2 is located in proximity to a waterfowl hunting area, but no access into these marsh areas is permitted. Seasonal disturbance associated with the noise from shotguns is possible, but is not anticipated to impact the rails. No hunting is permitted in proximity to these areas during the nesting season. No significant adverse effects to rails from the implementation of the selected plan's public use proposals are therefore anticipated.

The Refuge Manager reviews all research proposed to occur within rail habitat, approving only those proposals that would not have the potential to adversely affect Yuma Ridgway's rails. All research projects require a Special Use Permit (SUP) and researchers must adhere to the conditions and stipulations outlined in the approved SUP.

Desert Pupfish

Desert pupfish have been documented in some of the agricultural canals that extend through the Refuge and drain into the Salton Sea (Moyle 2002, Saiki et al. 2010). They may also occur in the near shore areas of the Salton Sea. The selected plan proposes to actively

monitor the presence of desert pupfish on the Refuge. Monitoring activities would not result in any adverse effects to the species.

To avoid any significant adverse effects to this species if and when it becomes necessary to draw down water in a management area that is found to be occupied by desert pupfish, the Refuge will develop methods for capturing the fish prior to draw down and either translocate them to other suitable habitat on or off the Refuge or temporarily hold them in an appropriate location while the work is conducted. Refuge staff will work with the California Department of Fish and Wildlife (CDFW) and the Palm Springs Fish and Wildlife Office in this effort. Relocation, as needed, and/or minor modifications to water management, as appropriate, would ensure that adverse effects to this species are minimized.

Restoration of the Red Hill Bay area has the potential to affect desert pupfish; therefore, conservation measures have been incorporated into the scope of the project to avoid the potential for significant adverse effects to the species. In preparation for grading and other construction work within the Red Hill Bay area, water from IID drains would be diverted from the Red Hill Bay area to allow the playa to dry. Because there is the potential for pupfish to occur in these waters, surveys to identify the presence or absence of pupfish in the project site will be conducted in advance of any diversion and draining. Measures will be taken to minimize movement of fish from the Salton Sea to the Red Hill Bay impoundments and any pupfish in the area will be removed and relocated prior to draining.

A mesh screen, to be maintained weekly, will be placed across the mouth of the Salton Sea water intake channel in an effort to prevent desert pupfish movement from the Salton Sea into the project site. Despite these efforts, there would still be a chance that these fish may become entrained in the water delivery system or the wetland cells. Therefore, project features have been incorporated into the project design to minimize trauma to the fish while traveling through the water delivery system. This includes the use of a screw centrifugal pump designed to avoid harm to fish, fry, or pelagic eggs that may find their way into the pump. The project design also includes features to support desert pupfish should they become established in the impoundments, including the creation of deep pools and swales (up to six feet deep) within the restoration area and the installation of shade structures (concrete culverts) to provide a thermal buffer and shelter for the pupfish.

Monitoring of basic water quality conditions (e.g., temperature, salinity, dissolved oxygen) will occur weekly at the water intake channels and near the impoundment inlets and outlets. Salinity levels in the ponds will vary but will not exceed a level that is detrimental to pupfish survival (i.e., 68 ppt).

Several of the herbicides used on the Refuge can be toxic to fish, including dicamba and triclopyr. Glyphosate ranges from practically nontoxic to highly toxic depending upon the formulation and types of surfactants used during application. Herbicides proposed for use on the Refuge are evaluated through the Chemical Profile process described in the IPM Plan to determine if its use could pose a threat to desert pupfish. Where necessary, product specific BMPs may be required during application. In general, herbicides would not be applied to surface waters where desert pupfish may be present; BMPs, as described in the IPM Plan, would be implemented to avoid spray drift; and all pesticide products would be applied in accordance with label requirements. The implementation of these measures would avoid any adverse effects to desert pupfish.

Existing and proposed public use facilities and programs do not occur in areas where desert pupfish may exist; therefore, no potential adverse effects to desert pupfish are anticipated from these uses.

The potential for impacts to desert pupfish resulting from future research proposals would be evaluated as part of the SUP process. If a potential for adverse effects to desert pupfish is identified, either the request to conduct the proposed research would be denied, or conservation measures would be incorporated into the SUP to avoid the potential for adverse effects. In the latter case, additional evaluation per the requirements of National Environmental Policy Act (NEPA) and Endangered Species Act (ESA) would likely be required.

Other Federally Listed Species. Although rarely, if ever, observed on the Refuge, there is the potential for least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and California least tern (*Sternula antillarum browni*) to be present and potentially nest on the Refuge. To avoid any adverse effects to these species during the implementation of wildlife and habitat management actions, activities in riparian areas would be avoided during the nesting season. Where actions are proposed during the nesting season in areas that might support least tern nesting, a site survey would be conducted prior to initiating the action. If least tern nests are observed, the action would be postponed until the end of nesting season.

In accordance with Section 7(a)(2) of the Endangered Species Act of 1973, the Service has conducted a biological evaluation to determine whether the actions proposed in the selected plan may affect federally listed and proposed species or proposed or designated critical habitat. Based on this evaluation, the Service has determined that the approval and implementation of the Final Comprehensive Conservation Plan for the Sonny Bono Salton Sea NWRC, as well as the approval and implementation of the Complex's Integrated Pest Management Plan and Predator Management Plan for the Sonny Bono Salton Sea NWR that were prepared in conjunction with the CCP may affect the listed species present on the Refuge, but are not likely to adversely affect these species. The biological evaluation also concludes that because the CCP is a programmatic document requiring future site-specific step-down planning, subsequent Section 7 consultation will be conducted for all future actions on the Refuge that may affect listed, proposed, or candidate species.

The Service has also conducted a separate biological evaluation for the implementation of the Red Hill Bay Restoration project. Based on this evaluation, the Service has determined that the approval and implementation of this project may affect desert pupfish present in the project area, but through the implementation of specific conservation measures, this listed species is not likely to be adversely affected.

State Listed Threatened or Endangered Species and Other Species of Concern. The implementation of the following conservation measures would avoid any significant adverse effects to State listed species and other species of concern: minimizing disturbance during the nesting season; controlling invasive plant species through an integrated approach to pest management; implementing BMPs that will reduce the potential for adverse effects from the use of herbicides; minimizing disturbance during monitoring; and providing large areas of undisturbed habitat for wildlife use by restricting public use activities to specific locations on the Refuge.

Cultural Resources. Few cultural resource investigations, surveys, or research projects have been conducted within the boundaries of the Refuge, although cultural resources have been identified in the project vicinity. Although the potential for archaeological resources to be present within the Refuge varies depending upon the topography, soil types, proximity to water, proximity to food resources, and many other factors, it must be assumed that there is a potential for yet undiscovered buried deposits to be present on the Refuge. Therefore, in accordance with applicable laws and regulations, all proposed actions on the Refuge that involve ground-disturbance in areas that have not been previously disturbed or changes to a structure that was constructed more than 50 years ago must be reviewed by the Service's Cultural Resources Program to determine the project's potential to affect cultural resources.

The Service's Cultural Resource staff have the initial responsibility for determining the appropriate measures to be implemented to protect cultural resources. In instances, such as when a project involving ground disturbance is determined to be located in an area of sensitivity for an archaeological resource, measures may include requiring an archaeological monitor, meeting the Secretary of the Interior's Guidelines, to be present during grading, digging, coring, or any other activity that would affect subsurface materials.

In the event of the inadvertent discovering of cultural resources, all earthwork on the site must be halted and the Service's Regional Historic Preservation Officer must be contacted to review the materials and recommend a treatment that is consistent with applicable laws and policies. In addition, the site would be recorded and evaluated for eligibility to the National Register of Historic Places (NRHP). Once this work is completed, additional measures may be required depending upon the results of the eligibility determination. If any site is encountered that is determined to be eligible to the NRHP, the Service would consult with State Historic Preservation Officer (SHPO), federally recognized tribes, and interested parties.

Implementing the requirements of all applicable laws and regulations related to the protection of cultural resources would ensure that no significant adverse effects to cultural resources would occur during the implementation of the selected plan.

In the case of the Red Hill Bay Restoration project, the potential for impacts to cultural resources has already been evaluated by the Service's Cultural Preservation Officer. Based on this evaluation, it has been determined that no significant impacts to cultural resources are anticipated during the implementation of this project. No further cultural resource identification effort is therefore necessary for the project. However, the existence of cultural resources can never be predicted with certainty, therefore, in the event that cultural resources are discovered during project implementation, any ground disturbing activity would be halted. The Service's Regional Archaeologist would be notified and additional consultation would be required. In compliance with the terms of the Service's Programmatic Agreements with SHPO and the Advisory Council for Historic Preservation regarding the administration of routine undertakings under the National Historic Preservation Act in the states of California, Idaho, Nevada, Oregon, and Washington, the project was reported to the SHPO in the annual report, prepared and submitted at the end of fiscal year 2011.

The selected plan also includes a proposal to work with the Service's Regional Archaeologist to develop procedures (that would be formalized through a Memorandum of Understanding with the appropriate tribal representatives) to be implemented in the event of the discovery of resources on the Refuge that are addressed under the Native American Graves Protection and Repatriation Act of 1990.

Land Use. The wildlife, habitat, and visitor services uses included in the selected plan would not conflict with the land use goals of the Imperial County General Plan, and in some cases would contribute to the achievement of one or more General Plan goals (e.g., preserving commercial agricultural, preserving natural habitat areas). In addition, conservation measures (e.g., implementing BMPs to avoid herbicide spray drift, coordinating with other agencies and adjacent landowners as appropriate during plan implementation) have been incorporated into the selected plan to avoid conflicts with surrounding land uses.

Recreational Opportunities. The selected plan would provide opportunities for a range of wildlife-dependent recreational uses including hunting and wildlife observation. No actions are proposed that would adversely affect adjacent recreational opportunities.

Transportation/Traffic Circulation. With the exception of short-term increases in vehicular traffic during the restoration of Red Hill Bay, the implementation of the selected plan would not result in any noticeable increases in traffic volumes on surrounding roads, nor would existing levels of service at surrounding intersections be affected.

The restoration of Red Hill Bay, which is likely to be implemented in phases, would result in short-term increasing in vehicular traffic associated with the transport of people, equipment, and materials to and from the restoration site during construction, and minor long-term increases in traffic associated with the operation, monitoring, and maintenance of the restored site. Based on the existing low traffic volumes on the streets that provide access to the restoration site, the additional trips that would be generated during peak construction are not anticipated to reduce the level of service on any streets to below LOS C, the accepted standard for Imperial County. Therefore, no significant adverse effects to traffic flow in the project vicinity are anticipated.

Public Utilities/Easements. No actions are proposed that would adversely affect existing utilities, IID irrigation/drainage channels, or access easements. Any grading or restoration proposed on the Refuge that could temporarily affect existing easements or access to an existing utility would be coordinated with the appropriate utilities during the project design phase to avoid any conflicts.

Health and Safety. Although health and safety issues have been identified for the areas in and around the Salton Sea, including fish advisories and air and dust-borne disease, the actions proposed in the selected plan, including habitat restoration, would not exacerbate the potential for exposure to these existing safety issues by either the public or Refuge personnel. The Refuge would continue per available funding to cooperate with others in year-round monitoring for evidence of avian disease at the Salton Sea, and when necessary to implement actions to minimize the spread of the disease.

Mosquito control is not currently conducted on the Refuge and mosquito surveillance is currently deemed unnecessary in this portion of the Imperial Valley. If the situation changes and surveillance and/or control are determined to be necessary, a Special Use Permit along with appropriate NEPA review would be conducted at that time. No actions are proposed on the Refuge under any alternative that would significantly increase available breeding habitat for mosquitoes.

Population and Employment. The selected plan includes a restoration proposal that would generate a few short-term job opportunities, providing minor benefits to the local economy. Other contributions to the local economy could include local employment opportunities with the Service, the purchase of goods and equipment from local businesses, occasional hiring of contractors to implement actions to support of Refuge purposes, and the economic benefits derived from an estimated 15,000 to 20,000 visitors annually, the majority of whom are considered non-resident visitors living more than 50 miles away from the Refuge. The benefits to surrounding farmers of providing foraging opportunities for geese and other waterfowl on the Refuge and reducing the potential for crop loss to surrounding commercial fields can also have a positive effect on the local economy. All of these benefits are however relatively small in the context of the overall regional economy.

Environmental Justice. The Refuge provides equal access to all segments of the population to visit and participate in refuge activities. The implementation of the selected plan would not result in any disproportionate adverse impacts to any residents in the region, particularly minority or low-income residents.

Cumulative Effects. An analysis of the interaction of activities proposed for the Sonny Bono Salton Sea NWR with other actions occurring over a larger spatial reference and a temporal reference of about 15 years (the intended life of this CCP) was conducted as part of the EA (refer to section 5.11.1 of the EA) and no significant cumulative impacts were identified.

Coachella Valley NWR

Topography/Visual Quality. The management activities proposed under the selected plan would result in no changes to the landform and no discernible changes to the Refuge's visual quality. Therefore, no significant adverse effects to the existing landform or the visual character of the site are anticipated.

Geology/Soils. Proposals to expand invasive species control within the Refuge's sand dune and sand field habitats, as well as on the old vineyard site, would result in limited soil disturbance. The overall effects to the environment of the anticipated soil disturbance would be minimal due to the relatively small size of the disturbance areas and the proposal to reseed controlled areas, where appropriate, with local native species. No structures or other facilities are present or proposed on the Refuge, so there is no potential for significant effects related to geological hazards such as liquefaction, settlement, ground rupture, or lateral spreading.

Paleontological Resources. Although there is some potential for paleontological resources to be present within the Coachella Valley NWR, no actions are proposed for managing the Refuge that would require excavation. Therefore, there is no potential for impacts to paleontological resources from the implementation of selected plan.

Alternative Energy Resources. The Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP) was developed to ensure a balance between environmental protection and economic development, including alternative energy development (CVAG 2007a). The lands included within the Coachella Valley NWR are identified as core habitat area for a number of species covered under the MSHCP, therefore, no alternative energy projects are planned within this portion of the MSHCP planning area, and no adverse effects to alternative energy resources from implementing the selected plan are anticipated.

Agricultural Resources. Approximately 400 acres within the Coachella Valley NWR are classified as Farmland of Local Importance. No structures or other actions are proposed that would result in the irreversible alteration of the quality or quantity of these farmlands, therefore, no significant adverse effects to agricultural resources are anticipated as a result of implementing the selected plan.

Hydrology. The extent of physical change to the existing conditions on the Refuge from implementing the selected plan would be limited. Therefore, no measurable increases in erosion or siltation on- or off-site are anticipated and the rate or amount of surface runoff from the site would remain unchanged.

Water Quality. The management activities proposed in the selected plan are generally associated with habitat and species protection and monitoring. These activities have little, if any, effect on water quality. Impacts to water quality from the application of herbicides on the site would be minimized through the implementation of appropriate BMPs, as described in the IPM Plan for the Refuge Complex, and adherence to the specific label requirements for each herbicide.

Climate Change. For the Sonoran Desert ecoregion, various climate models project increases in the median annual temperature in excess of 2 °C (3.64 °F) by the end of the 21st century (PRBO Conservation Science 2011). With respect to projected changes in mean annual rainfall however there is considerable uncertainty. Climate modeling results indicate changes in mean annual rainfall that range from an increase of 3 mm to a decrease of 55 mm by 2070 (PRBO Conservation Science 2011). Changes in the magnitude, timing, and distribution of precipitation have the potential to affect the availability of surface and groundwater resources, and significant and/or frequent flood events could increase erosion, alter dune structure, or effect local topography. Changes in precipitation also have the potential to increase the diversity and abundance of invasive plants within desert habitats. Depending upon the timing of the rains, this could affect the ability of native plants, such as the Coachella Valley milk-vetch, to germinate, flower, and produce seed.

Because the actual effects to Refuge resources from climate change are difficult to predict, future management actions include proposals to measure and address the effects of climate change on Refuge resources through monitoring and adaptive management.

Air Quality. The wildlife and habitat management activities to be implemented in accordance with the selected plan would have little effect on the air quality within the Coachella Valley. Daily auto or truck trips associated with management, monitoring, maintenance, and law enforcement average less than 10 per day, therefore, the emission generated from these trips are insignificant.

The localized air quality effects of applying herbicides to control invasive plant species would be minimized through the implementation of the BMPs outlined in the IPM Plan for the Refuge Complex and adherence to pesticide label requirements.

Greenhouse Gas Emissions. The activities to be implemented on the Refuge under the selected plan would result in minor increases in GHGs, attributed primarily to additional trips associated with monitoring and invasive plant control. These limited increases in GHG emissions would not represent a significant adverse effect.

In an effort to reduce the total GHG emissions generated from the operation and maintenance of the Refuge, as vehicles are replaced, new vehicles will be selected that have better fuel economy. In addition, wherever possible, tasks requiring off-Refuge travel will be combined to reduce the total number of miles driven by Refuge staff.

Contaminants. No issues related to contaminants have been identified on the Coachella Valley NWR.

Habitat and Vegetation Resources. The implementation of the wildlife and habitat management activities included in the selected plan would result in little, if any, adverse effects to existing native vegetation and habitat. Some minor trampling of vegetation may occur during invasive plant control or species monitoring, but care is taken to walk between plants when on dunes and over all, the activity levels on the Refuge are extremely low. Public use on the Refuge is limited to an existing trail corridor that extends along the western and near the northern perimeter of the Refuge and special guided tours conducted within sand dune and sand field habitat. Monitoring of these areas indicates no adverse effects to habitat or native vegetation from these activities. Therefore, impacts to habitat and vegetation under this alternative would be considered less than significant.

Wildlife Resources. The implementation of the wildlife and habitat management activities presented in the selected plan (e.g., protection of sand dune and sand field habitats, control of invasive weeds, monitoring of listed and special status species, enhancement of creosote bush scrub) are intended to benefit wildlife species. Some minor disturbance to wildlife, and in particular short-term disturbance to individuals of the species being monitoring, could occur. Such impacts would be minimized by ensuring that biological monitors and other researchers are familiar with the habitats and habits of the species being monitored and by timing various monitoring activities to avoid impacts to non-target species.

Prior to conducting habitat enhancement activities, a site reconnaissance and survey for sensitive wildlife species (e.g., flat-tailed horned lizard, Coachella Valley Jerusalem cricket, Coachella Valley giant sand treader cricket) would be conducted to determine their presence. If sensitive species are present, measures such as avoiding the use of motorized equipment to control weeds or prepare the site would be incorporated into the scope of the project to avoid significant adverse effects to these species.

The implementation of the IPM Plan would result in the use of pesticides on the Refuge that represent relatively low risk to non-target organisms due to low toxicity or short-term persistence in the environment. Thus, potential adverse impacts to wildlife from pesticide applications would be less than significant.

Authorized public use on the Refuge is limited to occasional guided tours, the use of an existing equestrian/hiking trail that extends along the western and northern edge of the Refuge, and approved research projects. During guided tours, there is the potential for short-term disturbance to wildlife and trampling of lizards and invertebrates. To minimize these impacts, the number of persons participating in the tours is limited and participants are asked to walk behind the guide, minimize noise on the dunes, and be aware of the presence of wildlife as they walk through the habitat. To reduce the potential for impacts to wildlife from off-trail activity, dogs are prohibited on the trail and signs are posted reminding users to stay on the trail.

To minimize the potential for impacts to wildlife when research is conducted on the Refuge, all research must be approved by the Refuge Manager. In addition, a Special Use Permit is issued that describes appropriate conduct on the Refuge, any time or seasonal restrictions for some or all activities, and other avoidance actions that may be necessary to protect sensitive species. Adherence to the stipulations in the Special Use Permit is intended to minimize the potential for adverse effects to wildlife.

Federal Endangered and Threatened Species. The majority of the management actions included in the selected plan for the Coachella Valley NWR focus on the recovery and protection of listed species, while other actions include measures to protect listed species from disturbance or harm.

Coachella Valley Fringe-toed Lizard and Coachella Valley Milk-vetch

The selected plan includes proposals to increase Refuge staff participation in listed species monitoring efforts, increase invasive plant species control efforts particularly in sand dune and sand field habitats, initiate an effort to reestablish native honey mesquite shrubs on the Refuge to recreate mesquite hummocks within the blowsand habitat, develop and implement a sand transport monitoring plan, and increase the Refuge's law enforcement presence on the Refuge to reduce unauthorized access by vehicles and individuals.

Although these proposals represent an overall benefit to the listed species on the Refuge, measures must be taken during their implementation to minimize impacts related to disturbance and injury or death from trampling. To avoid such impacts, monitoring activity will occur at times of the day and times of the year when impacts related to disturbance are least likely to occur, the number of individuals present in sensitive habitat areas will be limited, and monitors and other staff will be trained on how to traverse sensitive habitat areas in a manner that will minimize the potential for trampling of lizards that may be buried just below the surface of the sand.

Control of invasive weeds, particularly Sahara mustard, would involve the use of herbicides. Through the implementation of the IPM Plan, impacts to listed species would be avoided. Potential products would be reviewed through the Chemical Profile process prior to approval for use of on the Refuge to ensure that they do not pose a threat to listed species. The implementation of BMPs during application and adherence to label requirements will also minimize the potential for adverse effects to the Refuge's listed species.

To ensure that no significant adverse effects to listed species result from the limited public use activities permitted on this Refuge, no dogs are permitted on the Refuge including along the existing equestrian/hiking trail; trail users are required to stay on the designated trail; and participants in the guided tours are briefed on how and where to walk within the dune habitat to minimize the potential for trampling lizards or other sensitive species.

All research proposals would be reviewed by the Refuge Manager to ensure that there is no potential for adverse effects to listed species. Adherence to the conditions and stipulations included in the SUP, which must be issued by the Refuge Manager before a research project can be initiated on the Refuge, would ensure that no significant adverse effects to listed species would occur.

As described above, the Service has conducted a biological evaluation to determine whether the actions proposed in the selected plan may affect federally listed and proposed species or proposed or designated critical habitat. Based on this evaluation, the Service has determined that the approval and implementation of the Final Comprehensive Conservation Plan for the

Sonny Bono Salton Sea NWRC, as well as the approval and implementation of the Complex's Integrated Pest Management Plan Sea NWR that was prepared in conjunction with the CCP may affect the listed species present on the Refuge, but are not likely to adversely affect these species. The biological evaluation also concludes that because the CCP is a programmatic document requiring future site-specific step-down planning, subsequent Section 7 consultation will be conducted for all future actions on the Refuge that may affect listed, proposed, or candidate species.

Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP) Covered Species and Other Species of Concern. The actions proposed in the selected plan to benefit federally listed species would also provide benefits for MSHCP covered species and other species of concern. In addition, the selected plan proposes to implement applicable management actions included in the 2012 Reserve Management Unit Plan for the Valley Floor Reserve Management Unit. These actions are intended to address the habitat and management needs of those species covered by the Coachella Valley MSHCP.

The implementation of the following conservation measures would avoid any significant adverse effects to MSHCP covered species and other species of concern: minimizing all disturbance in sensitive habitat areas; controlling invasive plant species through an integrated approach to pest management; implementing BMPs that will reduce the potential for adverse effects from the use of herbicides; minimizing disturbance during monitoring; limiting the intensity of public use occurring in sensitive dune habitat areas, and continuing to prohibit dogs on the Refuge.

Cultural Resources. The cultural resources discussion presented for the Sonny Bono Salton Sea NWR is also applicable to the Coachella Valley NWR. As such, implementing the requirements of all applicable laws and regulations related to the protection of cultural resources would ensure that no significant adverse effects to cultural resources would occur as a result of implementing the selected plan for the Coachella Valley NWR.

Land Use. The proposals included in the selected plan are consistent with the intent, goals, and objectives of the Coachella Valley MSHCP and as such do not conflict with any General Plan land use designations (CVAG 2007b) applicable to the area in and around the Refuge. In addition, these proposals do not conflict with existing or proposed land uses in the vicinity of the Refuge.

Recreational Opportunities. The selected plan continues to accommodate a regional equestrian/hiking trail through the Refuge and provide some limited opportunities for wildlife observation and environmental education. No actions are proposed that would adversely affect adjacent recreational opportunities.

Transportation/Traffic Circulation. The Refuge's consistency with the Coachella Valley MSHCP ensures that none of the actions proposed in the selected plan would result in impacts to the regional transportation system. In addition, the low number of vehicular trips to be generated during plan implementation would have no effect on current levels of service on surrounding roadways or at nearby intersections.

Public Utilities/Easements. No actions are proposed that would adversely affect existing utilities, utility easements, or access easements. Any enhancement or restoration proposed on the Refuge that could temporarily affect access to existing easements or utilities would be coordinated with the appropriate utilities during the project design phase to avoid any temporary access conflicts.

Health and Safety. No health or safety hazards have been identified for this Refuge. The habitats on the Refuge provide little if any potential breeding habitat for mosquitoes and no surveillance or control of mosquitoes occurs or is proposed on the Refuge.

Population and Employment. Based on the results of the fiscal impact analysis prepared to quantify the potential impacts of the build out of the Coachella Valley MSHCP on the Coachella Valley's regional economy, the overall impacts to the regional economy from implementing actions consistent with the MSHCP are less than significant (CVAG 2007b). The majority of the actions implemented on the Coachella Valley NWR relate to protection and preservation of resources and visitation to the Refuge is limited, therefore, the effects to the regional economy and employment base of implementing the selected plan are nominal.

Environmental Justice. The Refuge provides equal access to all segments of the population, and implementation of the selected plan would not result in any disproportionate adverse impacts to any residents in the region, particularly minority or low-income residents.

Cumulative Effects. The proposals included in the selected plan for the Coachella Valley NWR would have such a minimal effect on the environment, that there is no potential for the actions to contribute directly or cumulatively to adverse effects related to the physical, biological, or social and economic environment. In addition, adherence to the State and Federal policies and regulations pertaining to the protection of cultural resources would avoid or mitigate any significant adverse effects as a result of implementing the limited actions proposed in the CCP. Therefore, in accordance with Service Manual (550 FW 1), a cumulative impact assessment will not be conducted for the actions proposed for this refuge, as it has not been deemed necessary to make a determination of significance.

Public Review

The draft CCP/EA was available for public review and comment between July 23, 2013 and August 22, 2013 and two public meetings were held, one in Palm Desert on July 30, 2013 and one in Brawley on July 31, 2013. The document was distributed to Federal, State, and local agencies, Tribal governments, State Clearinghouse, Brawley Public Library, Thousand Palms Library, Meyer Memorial Library in Calipatria, and interested organizations, businesses, and individuals. It was also available for review on-line at the Sonny Bono Salton Sea NWR web site.

The public review process generated 13 comment letters, which included 87 individual comments. Comment letters originated from various agencies, as well as a tribal government, commercial business, conservation organization, and member of the public. These comments are provided in Appendix F-3 in Volume 2 of the final CCP along with our responses to the comments. As noted in our responses, the Final CCP has been modified in various locations to meet and address, as appropriate, the concerns that were raised in the comment letters. We also corrected all formatting and typographical errors that were brought to our attention.

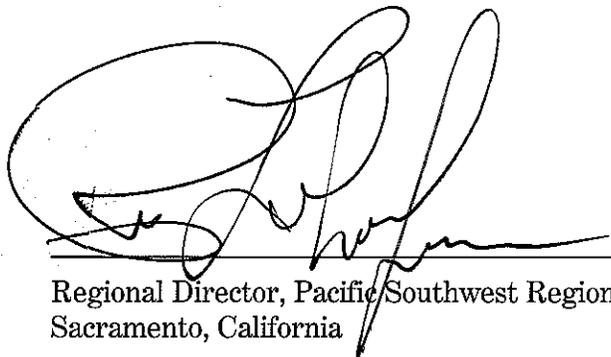
Throughout the planning process, numerous opportunities for public involvement in the development and review of the CCP were provided. This included two scoping meetings, three planning updates, a CCP webpage announcing various opportunities for public comment, and public review and comment on the draft CCP/EA and accompanying step-down plans. The details of the Service's public involvement program are described in the Final CCP.

The Final CCP, approved step-down plans, and other accompanying documents are available to the public and can be reviewed at the U.S. Fish and Wildlife Service, Sonny Bono Salton Sea National Wildlife Refuge Complex, 906 W. Sinclair Road, Calipatria, CA 92233 (telephone 760-348-5278), as well as at the Brawley Public Library (400 Main Street, Brawley, CA) and Palm Desert Library (73-300 Fred Waring Drive, Palm Desert, CA). These documents can also be downloaded from the Internet at http://www.fws.gov/refuge/sonny_bono/_what_we_do/planning.html.

Conclusions

Based on my review and evaluation of the information contained in the supporting references, I have determined that implementing: 1) Alternative B (Restore and Enhance Habitat Quality; Expand Opportunities for Wildlife Observation, Environmental Education, and Interpretation) for the management of the Sonny Bono Salton Sea NWR; 2) Alternative B (Expand Management Actions to Support Listed and Sensitive Species; Expand Public Outreach) for the management of the Coachella Valley NWR; 3) the Integrated Pest Management Plan for the Sonny Bono Salton Sea NWRC; 4) the Predator Management Plan for the Sonny Bono Salton Sea NWR; and 5) the Red Hill Bay Restoration project would not represent major Federal actions that would significantly affect the quality of the human environment, within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969, as amended. Accordingly, the Service is not required to prepare an Environmental Impact Statement.

This Finding of No Significant Impact and supporting references are on file at the U.S. Fish and Wildlife Service, Sonny Bono Salton Sea National Wildlife Refuge Complex, 906 W. Sinclair Road, Calipatria, CA 92233 (telephone 760-348-5278).



Regional Director, Pacific Southwest Region
Sacramento, California

March 6, 2014
Date

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