5. Plan Implementation

5.1 Introduction

Presented here are the details of how we will manage the Sonny Bono Salton Sea NWR and Coachella Valley NWR over the next 15 years. Implementation of the selected alternatives, which began with the approval of the CCP, will occur with assistance from existing and new partners, including public agencies, tribes, non-governmental organizations, and the public. Consistent public outreach and continued coordination with Refuge constituents are essential components of this implementation process.

This CCP serves as the primary management reference document for Refuge operations, management, and step-down planning until the CCP is formally revised or amended. The timing and achievement of the management strategies are contingent upon several factors, including funding and staffing, completion of step-down plans, accomplishing compliance requirements, and monitoring outcomes.

CCPs provide long-term guidance for management decisions and identify the Service's best estimate of future needs. These plans detail programs that in some cases require funding that is substantially above current budget allocations and, as such, are primarily for Service strategic planning and program prioritization purposes. Accordingly, the plans do not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition.

In addition to providing long-term guidance for Refuge management decisions, the CCP also addresses the role these Refuges and the management undertaken on these Refuges plays in the larger conservation landscape. The Sonny Bono Salton Sea NWR is just one component of the much larger Salton Sea landscape and as that landscape changes, the role of the Refuge may need to adapt. The same is true for the role that preservation of the habitats within the Coachella Valley NWR plays in the long-term preservation of the habitats and species covered by the Coachella Valley MSHCP.

5.2 Refuge Vision, Goals, Objectives, and Strategies

This CCP sets forth the vision, goals, objectives, and strategies needed to accomplish the purposes for which each of the refuges within the Sonny Bono Salton Sea NWRC were established. Goals and objectives are the unifying elements of Refuge management, intended to identify and focus management priorities and provide a link between management actions, Refuge purposes, and the National Wildlife Refuge System mission and goals.

The vision, goals, objectives, and strategies for the Sonny Bono Salton Sea NWR and Coachella Valley NWR are presented in Chapter 3. Although it is our intent to implement the proposed projects by the dates presented in this chapter, the timing of implementation may vary depending upon a variety of factors, including funding, staffing, compliance with Federal regulations, partnerships, and the results of monitoring and evaluation.

5.3 Funding and Personnel

5.3.1 Project Funding

For fiscal year (FY) 2012, the general operating costs (excluding staff costs, which are discussed below) for the Sonny Bono Salton Sea NWRC were approximately $827,160. Base funding available to Refuges varies annually. In addition, specific funding may be provided in a given year to address deferred maintenance needs, to fund a specific Refuge construction project, or to address specific management actions. For instance, in FY 2012, $10,000 in additional funding was provided to the Complex for avian disease monitoring on the Salton Sea. Special funding may be available from time to time through a competitive process initiated to fund special projects, such as visitor services projects that implement the Service's initiative for connecting people with nature. The annual budget for the Refuge System is not always adequate to address the replacement and maintenance needs on individual Refuges; therefore, a database of deferred maintenance projects is retained as part of an the Service Asset Maintenance Management System (SAMMS). (As of 2012, SAMMS was the database of record for documented real property deferred maintenance needs, existing equipment replacement requests, and project proposals that will result in the construction of additional new real property assets or the expansion/alteration of existing assets.)

New construction projects proposed for inclusion in the SAMMS database for the Sonny Bono Salton Sea NWRC address a range of Refuge responsibilities including wildlife and habitat management, visitor service, and general Refuge operations. With the completion of the CCP, the existing SAMMS database will be updated to reflect the proposals included in the preferred management alternative for the Sonny Bono Salton Sea NWR and Coachella Valley NWR.

Table 5-1 outlines the SAMMS projects for the Sonny Bono Salton Sea NWR and Table 5-2 includes the SAMMS project proposed for the Coachella Valley NWR. These lists include both new projects and projects that meet the definition of a deferred maintenance project. The projects are listed for each Refuge in order of priority. In addition, visitor services projects on both Refuges are prioritized for the complex. The ranking of the visitor services projects for the Complex are provided at the end of the construction project description and are identified by the "VS" Priority number.

Table 5-1
Proposed SAMMS Database - Sonny Bono Salton Sea NWR

Construction Project (presented in order of priority)	Corresponding CCP Objective(s)	Estimated Project Cost
Restore Salton Sea Wetlands at Red Hill Bay – To address the effects of a receding Salton Sea, implement the phased restoration of Red Hill Bay by creating 420 acres of shallow saline wetland habitat to support shorebirds and other waterbirds and reduce the potential for dust. Berms, waters pumps, and other components of a water delivery system would be maintained for the life of the project. The project's eastern berm would include a new birding trail and two interpretative signs to address project purposes and species' benefits.	Sonny Bono Salton Sea NWR – 1.4, 2.3, 2.4, 4.1, 4.2, 5.2, 5.3, 5.5, 5.6	$3,500,000
Install Shaded Visitor Parking – Design, purchase, and install a shade structure to cover five visitor parking spaces, improving visitor comfort and safety at the Refuge headquarters' parking lot where the average high summer temperature is 100°F or greater. (VS Priority 1)	Sonny Bono Salton Sea NWR – 5.2, 5.3	$50,000

Table 5-1 Proposed SAMMS Database - Sonny Bono Salton Sea NWR		
Construction Project (presented in order of priority)	**Corresponding CCP Objective(s)**	**Estimated Project Cost**
Replace Existing Carport – Replace the existing carport located behind the Complex headquarters to improve protection for station vehicles from high winds, direct sunlight, and extreme temperatures.	Sonny Bono Salton Sea NWR – 2.4, 4.5	$225,000
Expand and Refurbish Existing Public Restroom – Remodel or replace the existing unisex bathroom to provide two restrooms that can better accommodate visitors. The design should improve accessibility and reduce water use. (VS Priority 2)	Sonny Bono Salton Sea NWR – 5.2, 5.3, 5.4	$20,000
Replace/Repair Existing Concrete Sidewalk Around the Visitor Contact Area of the Complex Headquarters – Replace or repair approximately 2,265 square feet of damaged and degraded sidewalk to protect visitor safety and ensure continued accessibility to the visitor contact desk and public restroom. (VS Priority 3)	Sonny Bono Salton Sea NWR – 5.2, 5.3, 5.4	$26,600
Improve the Surface of the Interpretive Trail at the Complex Headquarters – Resurface the existing interpretive trail that leads from the Complex headquarters to the base of Rock Hill (approximately 3,800 linear feet) to provide a firm and stable surface to improve access for all members of the public. (VS Priority 4)	Sonny Bono Salton Sea NWR – 5.2, 5.3, 5.4, 5.5	$40,000
Update Interpretive Signage in Unit 1 – Design, fabricate, and install, where appropriate, six interpretive panels and two bird identification signs along the existing trail and on the new observation deck in Unit 1 to interpret topics such as the habitat needs of the Yuma Ridgway's rail, the need to provide a sanctuary for wildlife (i.e., why you can't walk out to the Salton Sea), different birds for different seasons, what attracts birds to this area, and how the Refuge's farming practices support wildlife. (VS Priority 5)	Sonny Bono Salton Sea NWR – 5.2, 5.3, 5.4, 5.5, 5.6	$29,500
Improve Interpretive Trail Accessibility – In Unit 1, upgrade 4,000 linear feet of an existing trail, as well as the access routes to and from the parking lot and observation deck to provide a year-round firm and stable trail surface that can accommodate all users. (VS Priority 6)	Sonny Bono Salton Sea NWR – 5.2, 5.3, 5.4, 5.6	$25,000
Construct a Parking Area for Birdwatchers in Unit 1 – Design and construct a four-car parking area in Unit 1 along Vendel Road to support birdwatching and photography near three acres of restored willow scrub habitat. (VS Priority 8)	Sonny Bono Salton Sea NWR – 5.2, 5.3, 5.4, 5.5, 5.6	$75,000
Construct New Photoblind in Unit 1 – Design and construct an accessible photo/observation blind adjacent to restored willow scrub habitat to support photographing and viewing birds utilizing the willow habitat, as well as wintering geese and sandhill cranes that foraging in the adjacent farm fields.(VS Priority 9)	Sonny Bono Salton Sea NWR – 5.2, 5.3, 5.4, 5.5, 5.6	$10,000
Construct a Seasonal Birding Trail, Kiosk, and Parking Area in the Hazard Tract – Design and construct a 1.5-mile-long loop trail and four to six-car parking area and design, fabricate, and install a two-panel kiosk with site information and interpretation, in the northwest corner of the Hazard Tract to accommodate seasonal (March 1 through September 30) opportunities for wildlife observation, photography, environmental education, and interpretation. (VS Priority 10)	Sonny Bono Salton Sea NWR – 5.2, 5.3, 5.4, 5.6	$60,000

Table 5-1 Proposed SAMMS Database - Sonny Bono Salton Sea NWR		
Construction Project (presented in order of priority)	**Corresponding CCP Objective(s)**	**Estimated Project Cost**
Control Public Access to Protect Sensitive Habitats – Install six new gates and associated signage at various locations within the Refuge where elimination of unauthorized public access is necessary to protect sensitive species and habitat.	Sonny Bono Salton Sea NWR – 2.4	$10,000
New Chemical and Flammable Liquid Storage Buildings – Purchase and install new prefabricated, stand-alone, steel chemical and flammable liquids storage buildings, replacing the existing old buildings, where products such as herbicides, oils, paints, and fuel cans are currently stored. The new structures will improve storage conditions and ensure continued compliance with health, safety, and environmental regulations.	Sonny Bono Salton Sea NWR – 3.3, 4.5	$40,000 ($20,000 per building)
Update Interpretive Signage in Unit 2 – Design, fabricate, and install six to eight interpretive panels along the Red Hill Trail. The interpretive messages should be coordinated with the curriculum and lesson plans used by teachers in association with the Refuge's environmental education program. (VS Priority 11)	Sonny Bono Salton Sea NWR – 5.2, 5.3, 5.4, 5.5, 5.6	$28,000
Develop and Publish a Naturalist Activity Guide – In partnership with others, develop and publish an activity pamphlet that will enable students and their families, teachers, and other visitors, to conduct and enjoy self-guided walks on the Refuge. Design the pamphlet to improve the field trip experience by providing new activities that explore the Refuges' natural history, conservation values and challenges, and stewardship opportunities. (VS Priority 12)	Sonny Bono Salton Sea NWR – 5.4, 5.5, 5.6	$10,000
Total Estimated Cost for the Refuge		**$ 4,149,100**

Table 5-2 Proposed SAMMS Database – Coachella Valley NWR		
Construction Project	**Corresponding CCP Objective(s)**	**Estimated Project Cost**
Interpretive Elements for Off-Site Display – In partnership with others, develop a concept for, design, and fabricate both a permanent interpretive display to be placed at an appropriate off-site location and a traveling interpretive display to be used at schools, libraries, and other locations, to interpret the rare and unique resources of the Coachella Valley NWR. (VS Priority 7)	Coachella Valley NWR – 2.1, 3.1	$25,000
Total Estimated Cost for the Refuge		**$ 25,000**

Another database relevant to Refuge operations is the Refuge Operating Needs System (RONS), a database that houses a Refuge's desired habitat improvement projects, studies, and new equipment needs, as well as the place where staffing needs (predicated on the nationally agreed upon staffing model) are expressed.

Data within RONS are used regularly in budget justifications presented to the Department of the Interior, the Office of Management and Budget, and Congress. All of the RONS projects within the Sonny Bono Salton Sea NWRC are prioritized to identify the most important projects within the Complex. Each year RONS projects are submitted for consideration and compete with similar projects throughout the nation for Refuge funds.

The RONS database is updated when a CCP is completed to reflect the proposals included in the selected management alternative. The projects described in the selected alternatives for the Sonny Bono Salton Sea NWR and Coachella Valley NWR are presented in Table 5-3, with the projects listed in order of priority (from highest to lowest) within the Refuge. The implementation of these actions will assist in achieving Refuge purposes, goals, and objectives. For each project, the corresponding CCP objective, as described in Section 3.3, is provided.

Table 5-3
Updates for Inclusion in the RONS Database for the Sonny Bono Salton Sea NWRC

Proposed Action	Complex Ranking	Corresponding CCP Objective	Operating Costs	
			First Year Cost	Recurring Annual Cost
Sonny Bono Salton Sea NWR Projects (presented in order of priority for the Refuge)				
Laser-level Agricultural Fields – Enter into a contract to laser-level approximately 360 acres of managed agricultural fields to provide more uniform irrigation coverage. Better coverage will improve plant forage production to support 30,000 wintering snow geese and other waterfowl, result in better utilization of water, and lower annual water costs.	5	1.1, 3.3, 4.5	$100,000	$15,000
Increase Irrigation Efficiency – Purchase and install a new sprinkler irrigation pipe in the Flammang fields to more efficiently distribute water across the site, and install a water storage container and pipe to collect and distribute tail water to other fields.	8	1.1, 1.2, 4.5	$100,000	$15,000
Sonny Bono Salton Sea NWR Staffing Needs (presented in order of priority for the Refuge)				
Improve Water Delivery to Managed Fields and Wetland Areas – Hire a full-time Irrigator (GS 5/6) to operate and maintain the Refuge's water delivery and distribution system, including at new restoration sites.	1	1.1, 1.2, 4.5	$45,000	$45,000
Expand Interpretive, Volunteer, and Public Outreach Programs – Hire a full-time Outdoor Recreation Planner (GS 7/9/11) to oversee these programs.	3	4.5, 5.3, 5.5, 5.6, 5.7 ,5.8	$95,000	$95,000
Management of Refuge Facilities – Hire a full time Facilities Manager (GS 7/9/11) who would be responsible for upkeep of Refuge structures and facilities organization.	4	2.4, 4.1, 4.5	$95,000	$95,000

Table 5-3
Updates for Inclusion in the RONS Database for the Sonny Bono Salton Sea NWRC

Proposed Action	Complex Ranking	Corresponding CCP Objective	Operating Costs	
			First Year Cost	Recurring Annual Cost
Implement Biological Activities – Hire a Fish and Wildlife Biological Technician (GS 5/7/9) to monitor and respond to Salton Sea wildlife disease outbreaks; assist in bird surveys; and conduct invasive plant control.	6	2.4, 4.1, 4.4	$37,500	$37,500
Sonny Bono Salton Sea NWR Subtotal for Projects and Staffing			**$472,500**	**$302,500**
Coachella Valley NWR Projects (presented in order of priority for the Refuge)				
Control Invasive Plants to Protect Listed Dune Species – Design and implement a multi-year enhancement plan for about 200 acres of previously cultivated land that will focus on invasive plant control followed by seeding of appropriate native plant species.	7	1.1, 1.2, 1.3, 2.1	$200,000	$5,000
Reestablish Mesquite Hummocks to Benefit Listed and Sensitive Species – To retain sand on the Refuge, install and irrigate honey mesquite along the downwind end of the Refuge. Once established, the loss of blowsand from the Refuge will be slowed and accumulated sand will be available for redistribution onto the site. Actions include purchasing and planting honey mesquite, and providing irrigation or an alternative form of water.	9	1.1, 1.2, 1.3, 2.1	$150,000	$10,000
Coachella Valley NWR Staffing Needs (presented in order of priority for the Refuge)				
Protect and Manage Refuge Resources – Hire a dual function refuge manager/Federal wildlife officer (GS 7/9/11), who would dedicate a minimum of 25 percent of the time to law enforcement on both the Coachella Valley and Sonny Bono Salton Sea NWRs and spend the remaining time managing the Coachella Valley NWR (e.g., habitat and species management, species monitoring, general site maintenance, managing partnerships, and coordinating with the Valley Floor RMC and Coachella Valley Conservation Commission).	2 (Complex position)	1.1, 1.2, 1.3, 2.1, 3.2	$150,000	$95,000
Coachella Valley NWR Subtotal for Projects and Staffing			**$500,000**	**$110,000**
Total Estimated Cost for the Refuge Complex			**$972,500**	**$412,500**

The costs presented in Table 5-3 are rough estimates and will be refined as more details are available. To fully implement the proposed actions and achieve the goals and objectives of the CCP, additional staff position will be required as reflected in Table 5-4. The estimated cost for implementing the proposals in the SAMMS and RONS database, as outlined in Tables 5-1, 5-2, and 5-3 is $5,146,600 and the anticipated reoccurring annual cost for these new proposals is estimated at $412,500.

5.3.2. Current and Future Staffing Needs

The current staffing levels for the Refuge Complex, per the approved (4/30/12) organization chart, are presented in Table 5-4, along with those positions that are identified in the CCP as necessary to achieve Refuge purposes. Based on the actions presented in the CCP, there is a need to add and fill three new permanent full time staff positions and fill, as permanent full time, two currently unfilled term full time positions. If all of these positions were to be filled, and funding was available for project implementation, the Refuge would be able to carry out all aspects of CCP to a reasonable standard. If one or more positions are not filled, some aspects of the Plan may not be completed within the timeframe presented in the CCP. The estimated cost of providing the staff needed to maintain and operate the Sonny Bono Salton Sea NWRC per the direction provided in the CCP is approximately $1,350,000, which includes all current and proposed positions at their full performance level plus benefits.

Table 5-4
Current and Proposed Future Staff Positions for the Sonny Bono Salton Sea NWRC

Position (grade)	Quantity	Current Unit	Proposed Unit
Project Leader (GS-13/14)	1.0[1*]	PFT[2]	PFT
Deputy Project Leader (GS-12/13)	1.0[1*]	PFT	PFT
Senior Wildlife Biologist (GS-11/12)	1.0[1*]	PFT	PFT
Wildlife Refuge Specialist (GS 7/9/11)	1.0[1*]	PFT	PFT
Administrative Support Assistant (GS-6/7)	1.0[1*]	PFT	PFT
Biological Technician (GS-5/7)	1.0[1#,6]	TFT[3]	PFT
Biological Technician (GS-5)	2.0[1*]	TFT	TFT
Biological Technician (GS-4/5)	1.0[1*]	STEP[4]	STEP
YCC Youth Leader (GS-5)	1.0[1#]	Temp[5]	Temp
Computer Assistant (GS-4/5)	1.0[1*]	PFT	PFT
Park Ranger (GS-5/7)	1.0[1#]	TFT	TFT
Engineering Equipment Operator (WG-10)	1.0[1*]	PFT	PFT
Mobile Equipment Mechanic (WG-10)	1.0[1*]	PFT	PFT
Tractor Operator (WG-6)	2.0[1*]	PFT	PFT
Tractor Operator (WG-6)	1.0[1#]	TFT	TFT
Maintenance Worker (WG-6)	1.0[1*]	PFT	PFT
Irrigation System Operator (GS-5/6)	1.0[1#,6]	TFT	PFT
Dual Function Refuge Manager/Federal Wildlife Officer (7/9/11)	1.0[7]	PFT	PFT
Outdoor Recreation Planner/Interpretive Specialist (GS 7/9/11)	1.0[7]	PFT	PFT
Facilities Manager (GS 7/9/11)	1.0[7]	PFT	PFT

[1]Position currently included on the Complex organization chart ([1*] filled position, [1#] unfilled position), [2]PTE = Permanent Full Time, [3]TFT = Term Full Time, [4]STEP = Student Temporary Employment Program, [5]Temp = Seasonal, [6]Identified in the CCP as a position that should be filled as PFT to meet Refuge purposes, [7]Identified in the CCP as a new position that should be filled to meet Refuge purposes.

5.3.3 Potential Funding Sources for Implementing CCP Projects

Some of the projects included in the CCP may be implemented in full or in part by sources other than the Refuge annual budget. These projects could be funded through partnerships with other local, State, or Federal agencies, special legislative appropriations, or grants (e.g., North American Wetlands Conservation Act Grant, National Fish and Wildlife Foundation, Service Cost Share Grants, Federal Highway Administration Refuge Roads Program, Salton Sea Financial Assistance Program). Other potential sources of funding for species monitoring, habitat restoration, listed species conservation and recovery, and research include: the Cooperative Endangered Species Conservation Fund, funds available for implementing the Coachella Valley MSHCP, and grants that support community-based restoration through partnerships with land management agencies.

5.4 Land Tenure

Approximately 2,500 acres located to the south of the Salton Sea were originally leased to the Service by the IID in the 1940s and 1950s. The original leases expired some time ago with IID electing to lease the lands on a year-to-year basis rather than entering into any new long-term leases with the Service.

The Service is currently working with the IID to establish longer term leases for lands needed to meet Refuge purposes into the future. Factors such as the receding Salton Sea and changes in land use to support geothermal development could result in modifications to the configuration of the IID lands currently being utilized for Refuge purposes. IID lands needed to accommodate geothermal development (e.g., plants, transmission and pipeline corridors, access roads) would no longer be leased to the Service, as such uses would likely not be considered compatible with Refuge purposes. There is, however, the potential that IID lands may be available elsewhere in the vicinity of the Refuge that could be leased to the Service to ensure that adequate acreage is available to meet the habitat needs of the species currently supported on the Refuge. Such changes to the current configuration of the Refuge would be implemented to ensure that the Refuge purposes, goals, and objectives outlined in the CCP would continue to be met and activities occurring within the lands managed by the Refuge would be compatible with those purposes.

The changing conditions within the Salton Sea may also influence future land tenure. As the Salton Sea continues to recede, it will be necessary to evaluate how the current configuration of lands managed by the Service are or are not assisting in the achievement of Refuge purposes. When deemed appropriate, a step-down plan would be prepared to evaluate the status of the lands managed as a part of the Refuge. This step-down plan may identify opportunities to exchange areas under the jurisdiction and management of the Service for areas owned by other entities. Coordination with the Palm Springs Fish and Wildlife Office would be initiated during step-down planning if changes in land tenure could adversely affect listed species.

5.5 Step-down Plans

In some cases, achieving the management objectives presented in the CCP for public use and wildlife and habitat management will require more in-depth planning than is currently provided in the CCP. For these projects, the Service prepares step-down plans. Step-down plans provide additional planning and design details necessary to implement the strategies (projects or programs) identified in the CCP. Three step-down plans were been prepared in association with this CCP, an Integrated Pest Management Plan for the Refuge Complex (Appendix G) and a Predator Management Plan (Appendix H) and a Hunt Plan (Appendix I) for the Sonny Bono

Salton Sea NWR. The environmental consequences of implementing these plans were addressed in Chapter 5 of the EA (Appendix F).

5.5.1 Step-Down Plans Accompanying the CCP

Integrated Pest Management Plan

An Integrated Pest Management (IPM) Plan has been prepared for the Sonny Bono Salton Sea NWR Complex in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. 136r-1) and Part 517 DM 1 of the Department of the Interior's Departmental Manual. The complete document is provided in Appendix G.

The purpose of preparing an IPM Plan is to provide a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks. The Service is mandated to manage pests and use IPM principles in a manner that reduces risks from both the pests and associated pest management activities. IPM is a science-based, decision-making process that incorporates management goals, consensus building, research, pest biology, environmental factors, pest detection, monitoring, and the selection of the best available technology to prevent unacceptable levels of pest damage. In developing the IPM Plan, full consideration has been given to the safety and protection of humans and other non-target organisms and resources.

Along with a detailed discussion of IPM techniques, the IPM Plan for the Sonny Bono Salton Sea NWR Complex describes the selective use of pesticides, primarily herbicides, on the Refuge. Various herbicides are proposed for use in combination with other pest management activities to ensure the availability of quality habitat to support migratory and resident birds and other wildlife. The IPM Plan also addresses application techniques, including aerial application of herbicides within the Refuge's managed agricultural fields and areas of the Refuge that currently support extensive monocultures of salt cedar.

The IPM Plan describes the approval process to be followed when pesticides are proposed for use within the Complex. Depending on the product, Pesticide Use Proposals (PUPs) are submitted for review and approval at the Project Leader, Regional Office, or Washington Office level. Unless an IPM Plan is in place, all PUPs must be submitted for review and approval at the appropriate level on an annual basis. With an approved IPM Plan in place, a Chemical Profile is developed for the proposed pesticide and a PUP is then reviewed at the appropriate level. If approved, for the next four years following approval, the PUP need only be reviewed and approved at the field level. If however the Refuge were to propose a substantial change in the use pattern of an approved PUP, review by the Regional or Washington Office, depending upon the product, would be required before this change could be implemented on the Refuge.

The primary focus of the IPM Plan for the Sonny Bono Salton Sea NWR Complex is on controlling invasive plants. The approved IPM Plan will continue to be reviewed and updated as needed throughout the life of the CCP to address new information and policy changes.

Predator Management Plan

A Predator Management Plan, provided in Appendix H, has been prepared for the Sonny Bono Salton Sea NWR to reduce the effects of mammalian predation on nesting gull-billed terns and black skimmers, both identified as Birds of Conservation Concern by the Service. Predator management along with proposals to expand and improve nesting opportunities for these ground nesting seabirds is intended to restore conditions that support the successful reproduction of these species on the Refuge. Predator management on the Refuge will involve the use of both lethal and

nonlethal control methods, with the use of lethal control limited to those individual predators that pose a threat to gull-billed tern and black skimmer chicks, eggs, and adults.

Hunt Plan

A hunt plan (Appendix I) for the Sonny Bono Salton Sea NWR has been prepared in accordance with 605 FW2 (Hunting) of the Service Manual and Title 50, Part 32 of the Code of Federal Regulations. The hunt plan describes the details of the Refuge's hunting program, which is managed by CDFW. The hunt plan does not include any changes to how the hunting program was implemented prior to the development of the CCP.

5.5.2 Future Step-Down Plans

Several additional step-down plans are proposed for completion in the future. Table 5-5 lists these step-down plans along with target dates for completion.

Table 5-5
Future Step-down Plans Proposed
for the Sonny Bono Salton Sea National Wildlife Refuge Complex

Plan	*Description*	*Target for Completion*
Habitat Management Plan (HMP), Coachella Valley NWR	Consistent with Service Manual Section 620 FW 1 (Habitat Management Plans), the HMP will include an inventory and description of the habitats on the Coachella Valley NWR, as well as identification and discussion of refuge resources of concern, habitat goals and objectives, and habitat management strategies. This HMP will likely be a subset of the larger Reserve Management Unit Plan adopted for Unit 1 of the Coachella Valley MSHCP in 2012.	FY2016
Inventory and Monitoring Plan (IMP), Coachella Valley NWR	Consistent with the Inventory and Monitoring Initiative, the IMP, to be prepared in a concise, user-friendly format, will prioritize surveys based on input provided in the HMP and Reserve Management Unit Plan and provide guidance for improving the quality, consistency, utility, and long-term storage of monitoring data. Consistent with the Reserve Management Unit Plan, data collected for this effort will also be submitted for entry into the GIS database for the Reserve Management Unit and the Coachella Valley MSHCP area.	FY 2017
Yuma Ridgway's Rail Management Plan, Sonny Bono Salton Sea NWR	Per the draft revised Yuma Clapper Rail Recovery Plan (USFWS 2010c), this plan will address: the long-term protection and management of Refuge core rail habitat areas; long-term monitoring requirements; rail population goals; measures to ensure successful maintenance of rails and their habitats; an evaluation of potential movement within and to and from the Refuge; the need to secure a long-term water source of a quantity and quality sufficient to manage the Refuge's rail habitat; and management actions needed to control the threat to rails associated with current and future selenium levels.	FY2016
Visitor Services Plan, Sonny Bono Salton Sea NWR	This plan will provide an integrated analysis of all applicable aspects of the visitor service programs on the Refuges within the Sonny Bono Salton Sea NWR Complex. Specific strategies needed to achieve the visitor services goals and objectives included in the CCP will be addressed, and detailed information and future plans for compatible wildlife-dependent recreational uses and their supporting recreational activities and facilities will be provided.	FY2017

Table 5-5 Future Step-down Plans Proposed for the Sonny Bono Salton Sea National Wildlife Refuge Complex		
Plan	***Description***	***Target for Completion***
HMP, Sonny Bono Salton Sea NWR	The HMP will include an inventory and description of the habitats on the Sonny Bono Salton Sea NWR, as well as identification and discussion of refuge resources of concern, habitat goals and objectives, and habitat management strategies.	FY2018
Visitor Services Plan, Coachella Valley NWR	This plan will focus on providing appropriate public outreach and interpretation of the resources protected on the Refuge by working in partnerships with others to provide this information primarily at off-refuge locations.	FY2018
IMP, Sonny Bono Salton Sea NWR	The IMP will prioritize surveys based on input provided in the HMP, and provide guidance for improving the quality, consistency, utility, and long-term storage of monitoring data.	FY 2019
Land Status Review, Sonny Bono Salton Sea NWR	This step-down plan will evaluate the status of the lands currently being managed as part of the Refuge in light of the changing circumstances at the Salton Sea, determine if changes in land tenure may be necessary in order for the Refuge to continue to meet its Refuge purposes and goals, and if necessary, make recommendations for changes to the Refuge's current land status.	FY 2022

5.6 Fire Management Plan

Per the Department of the Interior fire management policy, all refuges with vegetation that can sustain fire must have a Fire Management Plan (FMP) that details fire management guidelines for operational procedures and values to be protected and enhanced. Fire management plans outline the fire management objectives for a Refuge, including as appropriate, suppression and prescribed fire strategies.

Values considered in a FMP include protection of Refuge resources and neighboring private properties, effects of burning on refuge habitats/biota, and firefighter safety. Refuge resources include properties, structures, cultural resources, trust species including endangered, threatened, and species of special concern, and their associated habitats. FMPs are reviewed periodically to ensure that the fire program is conducted in accordance and evolves with the Service mission and the goals and objectives of the Refuges covered by the plan.

The currently approved FMP for the Sonny Bono Salton Sea NWR (USFWS 2001) addresses fire management strategies that focus on preparedness, wildland fire operations, prevention, detection, and full suppression. Prescribed fire is also included as a strategy for achieving management objectives within the Sonny Bono Salton Sea NWR.

In 2003, the Coachella Valley NWR was determined to be exempt from developing a FMP because the Refuge contained essentially no burnable vegetation due to weather and fuels conditions that prevent ignition and fire spread. In addition, there were no plans to conduct prescribed burning. If conditions change in the future, a FMP would be prepared for the Coachella Valley NWR.

5.7 Cultural Resource Management

To avoid adverse effects to cultural resources, the following procedures will be implemented for all proposals that require subsurface disturbance in previously undisturbed areas or require ground disturbance at depths that extend beyond the depths of previous ground disturbing activities within the proposed project area:

a. Prepare and submit a Request for Cultural Resource Compliance (Appendix D) to the Regional Cultural Resources Program as early in the planning process as possible, and include a map, indicating the full extent of the area of potential effect along with a detailed project description;
b. Implement any measures deemed necessary by the Cultural Resource staff to protect cultural resources (in an area of sensitivity for an archaeological resource, measures may include having an archaeological monitor present during activities affecting subsurface materials), or if the action falls under the terms of the Service's Programmatic Agreements with SHPO and the Advisory Council for Historic Preservation, retain this documentation in the project file;
c. If during the course of ground disturbing activities, any cultural resources are discovered, all earthwork on the site would be stopped and the Service's Regional Historic Preservation Officer would be contacted to review the materials and recommend a treatment that is consistent with applicable laws and policies, the site would be recorded and evaluated for eligibility to the NRHP, and all measures required to protect or otherwise mitigate impacts to the site would be implemented (if the site is determined to be eligible to the NRHP, the Service, through the Regional Historic Preservation Officer, would consult with SHPO, federally recognized tribes, and interested parties); and
d. Proper care for any federally owned and administered archaeological collections would be provided in accordance with all applicable Federal regulations, including ensuring that significant prehistoric and historic artifacts and associated records are deposited in an institution with adequate long-term curatorial capabilities (i.e., providing professional, systematic, and accountable curatorial services on a long-term basis).

To identify and preserve traditional cultural properties and sacred sites on the Refuge and to determine the level of confidentiality necessary to protect them, the Refuge will work with interested tribal groups to establish government-to-government relationships that will ensure meaningful consultation with tribal governments during the planning phase of projects. The Refuge Complex will initiate discussions with interested tribal groups to create a MOU to implement the inadvertent discovery clause of NAGPRA. Development of this MOU will involve identifying the Native American tribes, groups, and direct lineal descendants that may be affiliated with these Refuge lands, initiating consultation with the affiliated parties, developing procedures to follow for intentional and inadvertent discoveries, and identifying the persons to contact for the purposes of NAGPRA.

5.8 Compatibility and Appropriate Use Determinations

The Improvement Act requires that all uses permitted on a NWR be compatible with Refuge purposes and the mission of the NWRS; further, they shall not be inconsistent with public safety. Before activities or uses are allowed on a Refuge, uses must be found to be both appropriate and compatible. A compatible use is defined as a proposed or existing wildlife-dependent recreational use or any other use of a Refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the Refuge System mission or the purposes for

which a Refuge was established. A determination of whether or not a use is appropriate is required for all but wildlife-dependent recreational uses, which are identified in the Improvement Act as hunting, fishing, wildlife observation and photography, and environmental education and interpretation.

Compatibility determinations prepared for the Sonny Bono Salton Sea NWR include waterfowl hunting; recreational fishing; wildlife observation, photography, and interpretation; environmental education; and research. For the Coachella Valley NWR, compatibility determinations were prepared for Environmental Education, Research, and Equestrian/Hiking Trail. An appropriate use evaluation was prepared for research and equestrian/hiking trail. All documents are provided in Appendix E.

5.9 Inventory, Monitoring, and Evaluation

The core mission of the Refuge System is to conserve, manage and restore fish, wildlife and plant resources and their habitats. To evaluate progress toward meeting the Refuge System's conservation, management and restoration objectives, Refuges are tasked with monitoring the status and trends of their priority biological resources. Accomplishing this requires that all phases of the data management cycle be addressed, including identifying priority resources of concern and appropriate monitoring attributes, developing appropriate study designs, selecting protocols, collecting data, entering and analyzing data, reporting results, and archiving significant documents and data for future generations. Additionally, effective stewardship of Refuge System lands depends on the availability of relevant and accurate data to guide management decision making. This information will be developed for the Refuge Complex as part of future step-down plans, including habitat management plans (HMPs) and inventory and monitoring plans (IMPs).

In 2012, Inventory and Monitoring Initiative staff (I&M staff) from Region 8 conducted an Inventory and Monitoring Needs Assessment at various refuges throughout the region, including the Sonny Bono Salton Sea NWR. This assessment was conducted to identify and summarize inventory and monitoring needs of individual stations. As part of the assessment, I&M staff populated the Planning and Review of Inventory and Monitoring on Refuges (PRIMR) Access database of natural resource surveys with available current, historical and planned surveys of abiotic features, biological resources and natural resource stressors on stations. Details such as survey type, timing, duration, lead organization, and protocol were included. Collection of baseline data will continue at both Refuges. These data will be used to update existing species lists, wildlife habitat requirements, and seasonal use patterns, and will be utilized and expanded upon during the development of HMPs and IMPs for the Sonny Bono Salton Sea and Coachella Valley NWRs.

Monitoring the effects of management actions on Refuge trust resources is an important component of the CCP, as is the documentation of Refuge baseline conditions. By completing baseline inventories and monitoring specific management actions, Refuge staff can better understand the species, habitats, and physical processes that occur on the Refuge and the ecological interactions that occur between species. With this information, Refuge staff can also identify changes in populations or population trends that may be occurring on the Refuge as a result of factors including, but certainly not limited to disturbance, competition from invasive species, changes in water quality and quantity, and climate change.

Monitoring of federally listed species and other special status species is an ongoing management activity within the Refuge Complex. As described in Chapter 3, monitoring is implemented by Refuge staff, other public, private, academic, and nonprofit partners, and researchers and is

expected to be funded through a variety of funding sources from both within and outside the Service. These monitoring programs will provide valuable information needed to assess the quality of the habitats, as well as to provide Refuge-specific data needed to evaluate the effectiveness of the various wildlife and habitat management strategies proposed and to determine if changes in management are necessary to achieve Refuge purposes and goals.

Monitoring of public use programs will involve the continued collection of visitor use statistics and an assessment of how public use activities are affecting wildlife and habitat quality. The data obtained will then be used to evaluate the overall effects of public use on Refuge resources, as well as to determine if the public use opportunities provided by the Refuge Complex are achieving proposed objectives for improving visitor understanding of Refuge resources, connecting people with nature, and providing a positive visitor experience.

5.10 Adaptive Management

The Service acknowledges that much remains to be learned about the species, habitats, and physical processes that occur on refuge lands, and about the ecological interactions between them. Developing a better understanding of these processes and interactions is further complicated by ongoing changes associated with climate change, receding water levels in the Salton Sea, increased fire frequency in the Coachella Valley, and presence of non-native species within native habitats. Uncertainty is an unavoidable component of managing natural systems because of their complexity, inherent variability, and gaps in our knowledge of their functions. Adaptive management involves sequential decision making, integrating project design, management, and monitoring to systematically test assumptions. It strives to reduce some of that uncertainty and improve management over time by allowing us to evaluate and refine management based on the results of management activities and the status of the managed resource. The Service has been practicing adaptive management on the Refuge since its establishment and plans to continue the practice. Accordingly, the proposed management scenarios for the two refuges within the Sonny Bono Salton Sea NWRC provide for ongoing adaptive management.

In designing and implementing an adaptive management strategy, it may be necessary at some point during the next 15 years to amend the CCP in response to changing conditions. Adequate baseline data, clearly defined and measurable project objectives, a monitoring plan focused on measurable results, and a process for refining and improving current and future management actions are all essential components of a successful adaptive management approach. For proposed restoration projects, the details of the adaptive management approach would be integrated into final restoration plans.

The adaptive management process would be used to evaluate our success in achieving our public use goals and objectives. These periodic evaluations would be used over time to adapt both our public use objectives and strategies to better achieve our goals. Such a system embraces uncertainty, reduces option foreclosure, and provides new information for future decision-making.

5.11 Partnership Opportunities

Partnerships will continue to play an important role in implementing the various strategies presented in the CCP. Achieving many of the objectives presented above will require various degrees of interaction and support from outside partners (e.g., other public and private land managers, USGS, IID, Valley Floor Reserve Unit Management Committee, CVCC). Through ongoing partnerships with other land managers in the region, staff and funding can be leveraged to

implement management and monitoring strategies that benefit multiple ownerships. Such an example is active participation in the Valley Floor Reserve Unit Management Committee and coordination of activities on the Coachella Valley NWR with the recommended actions within the RMU Plan for Unit 1 (CVCC 2012a). Implementing public use programs and public outreach will also require the continuation of existing partnerships, as well as the development of new partnerships.

Restoration efforts will also involve partnerships with other Federal, State, and/or local agencies, researchers, and non-governmental organizations. Protection of cultural resources will require partnerships with the region's Native American community on issues such as resource protection, interpretation, and repatriation.

The needs and opportunities for research within the Refuge Complex are vast and it is only through partnerships that these needs can even begin to be met. For example, expanded partnerships with academic institutions, USGS, and others could provide valuable data related to the life history of little-known species protected on the Coachella Valley NWR, while other research could answer questions related to the threats to waterbirds from rising selenium levels in the Salton Sea, as well as how best to manage limited sand resources to protect endemic dune species.

5.12 Compliance Requirements

5.12.1 Federal Regulations, Executive Orders, and Legislative Acts

All projects and step-down plans described in the CCP are required to comply with NEPA and the Improvement Act, as well as a variety of other Federal regulations, executive orders, and legislative acts. Such requirements address issues such as human rights, cultural resources, biological resources, land and water use, Tribal coordination, and wilderness. Federal regulations, executive orders, or legislative acts applicable to projects proposed for implementation on the Sonny Bono Salton Sea NWR and Coachella Valley NWR are presented in Appendix J along with a summary of how the CCP will comply with these requirements. With respect to wilderness, the lands within both the Sonny Bono Salton Sea NWR and the Coachella Valley NWR have been inventoried and no areas were found that meet the eligibility criteria for a Wilderness Study Area as defined by the Wilderness Act. Therefore, potential wilderness designation of lands within the Sonny Bono Salton Sea NWR Complex is not analyzed further in the CCP. The results of the wilderness inventory are documented in Appendix M.

5.12.2 Potential Future Permit, Approval, and/or Review Requirements

The implementation of some actions described in this CCP may require additional analysis and review under NEPA, and potentially under the California Environmental Quality Act (CEQA) should the project include State partners or State funding. Prior to implementing some management actions, the Service may be required to obtain local, State, or Federal permits or approvals. Permits, approvals, or reviews that may be required for projects within the Sonny Bono Salton Sea NWR Complex include, but are not limited to the following:

- **U.S. Fish and Wildlife Service, Refuges** - Project level internal Section 7 consultation, as appropriate under the authorities of the Endangered Species Act, prior to implementing any actions that may affect federally listed endangered or threatened species.

- **U.S. Fish and Wildlife Service, Regional Cultural Resources Team** - Project level internal review of actions that could have an adverse effect on cultural resources pursuant to the National Historic Preservation Act and/or other regulations related to the protection of cultural resources. Compliance involves submitting a Request for Cultural Resource Compliance Form (Appendix D) to the Regional Cultural Resources Team, which will assist in notification to the Tribes and determine if consultation with the California State Historic Preservation Officer is required.

- **U.S. Army Corps of Engineers** - Clean Water Act Section 404 for projects, including restoration projects, that could discharge dredged or fill material into waters of the U.S.

- **California State Water Resources Control Board** - Clean Water Act Section 401 certification for discharges into waters of the U.S. and/or a General Permit for Discharges of Storm Water Associated with Construction Activity.

- **California State Historic Preservation Office** - Section 106 consultations under the authorities of the National Historic Preservation Act for any actions that may affect historic properties or cultural resources associated with listed properties (or those eligible for listing) on the National Register of Historic Places.

5.13 Conservation Measures to be incorporated into Future Projects

To ensure that proposed projects and other actions described in this CCP do not result in significant adverse effects to the environment, conservation measures will be implemented, as appropriate, in association with the development and/or carrying out of proposed projects and/or actions. Project specific measures were provided in Chapter 5 of the EA (Appendix F), and stipulations necessary to ensure compatibility are outlined in the Compatibility Determinations provided in Appendix E. An overview of the conservation measures to be considered is provided below.

General Conservation Measures for all Project Categories

- Consult with the appropriate departments at IID prior to implementing refuge projects located adjacent to IID facilities or easements.
- Follow all terms and conditions provided in regulatory permits and other official project authorizations or approvals.

Habitat and Species Protection Conservation Measures

- Avoid any disturbance within and provide adequate no disturbance buffers around habitat that supports sensitive nesting bird species during the breeding season;
- Minimize disturbance (e.g., noise, lighting, human presence) in sensitive habitat areas year round;
- Implement appropriate BMPs to minimize the potential for impacts to air and water quality related to soil exposure and erosion.
- To the extent feasible, use existing roadways or travel paths for access related to both project implementation and ongoing refuge activities;
- Adhere to the specific BMPs included on pesticide product Chemical Profiles to avoid impacts to Refuge trust species (refer to Appendix G for more details);
- Routinely evaluate the results of on-going species and habitat monitoring to determine if modifications in Refuge operations and/or management practices are necessary to address changes in population trends or habitat quality; and

- Survey proposed construction sites to identify and map the locations of all listed or sensitive species and/or sensitive habitats that could be affected by a project and then design the proposed facility to avoid to the extent practicable any impacts to these resources; where impacts cannot be avoided, implement measures to mitigate these impacts to below a level of significance (e.g., habitat restoration).

Water Quality Conservation Measures

- Obtain a Construction General Permit (2009-0009-DWQ) from the California State Water Resources Control Board and prepare a Storm Water Pollution Prevention Plan for construction activities involving grading and/or major brush removal;
- Implement appropriate erosion control measures (e.g., fiber rolls, filter fabric, silt fencing) during and after land disturbance to minimize short and long-term erosion into wetlands;
- Carry out the appropriate BMPs, including those outlined in the IPM Plan, when applying pesticides on the Refuge; and
- Implement the following BMPs when construction vehicles or equipment are being used to implement a project:
    - Specify and follow vehicle and equipment fueling procedures and practices that are designed to minimize or eliminate the discharge of fuel spills and leaks, particularly when operating in or around wetlands;
    - To the extent practicable, do not allow vehicle/equipment fueling within 50 feet of a wetland or downstream drainage facility and use berms and/or dikes around fueling areas to prevent run-on, runoff, and to contain spills;
    - Inspect construction vehicles and equipment for leaks prior to each day of use and if a leak is discovered, immediately implement repairs; and
    - Maintain a spill kit on the construction site at all times when construction equipment is present.

Air Quality Conservation Measures

- Effectively stabilize graded or disturbed areas during construction to minimize dust generation by:
    - watering prior to and during any earth movement, when necessary;
    - installing wind fencing, if deemed necessary; and
    - stopping work during high wind conditions;
- Cover temporary stockpiles of excavated material with a suitable cover such as a tarp when dry, windy conditions are predicted in the area;
- Cover the load of all haul vehicles during the transport of dirt or other dust generating materials;
- Wash or sweep all construction vehicles and equipment prior to leaving the project site to avoid tracking dirt and dust onto public roads;
- Ensure that all construction equipment meets APCD air quality standards; and
- Carry out the appropriate BMPs, as outlined in the IPM Plan (Appendix G), when applying herbicides.

Cultural and Paleontological Resource Protection Measures

- To protect cultural resources, follow the measures outlined in section 5.7.
- To protect paleontological resources,
    - identify the paleontological sensitivity of the project area (i.e., the potential for a stratigraphic or bed unit to yield significant paleontological resources); and

  - in areas of high paleontological sensitivity, work with the Regional Cultural Resources Program to determine if a paleontological monitoring plan is required based on a review of the proposed project.

- If the preparation of a paleontological monitoring plan is deemed necessary, develop the plan in consultation with the Regional Cultural Resources Program and enter into a formal agreement with a recognized museum repository for the curation of any fossils that may be uncovered.
- Prior to commencing construction activity in an area of high paleontological sensitivity, retain a certified paleontologist to supervise the monitoring of construction excavations (involving inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present), and to produce a Paleontological Resource Management Recovery Plan, should one be required.
- For construction activities to be implemented in an area of high paleontological sensitivity, the construction supervisors and crew would receive training from a certified paleontologist on the procedures for identifying and protecting paleontological resources, as well as the procedures to be implemented in the event fossil remains are encountered during ground-disturbing activities.
- The paleontological monitor, who would have authority to temporarily divert grading away from exposed fossils to recover the fossil specimens, would document the results of the construction monitoring program.
- Should fossils be encountered, field data forms would be completed for each fossil locality. The locality would be recorded, the stratigraphic columns measured, and appropriate scientific samples submitted for analysis.

5.14 Plan Amendment and Revision

CCPs are intended to evolve with each Refuge, and the Improvement Act specifically requires that these plans be formally revised and updated at least every 15 years. The formal revision process will follow the same steps as those implemented for the initial CCP development process, with a major emphasis placed on public involvement. Until a formal revision is initiated, the Service will periodically review and update the CCP (at least as often as every five years) to address needs identified as a result of monitoring or in response to adaptive management procedures. This CCP will also be informally reviewed by Refuge staff while preparing annual work plans and updating the Refuge databases. It may also be reviewed during routine inspections or programmatic evaluations. Results of any or all of these reviews may indicate a need to modify the plan. The goals described in this CCP will not change until they are reevaluated as part of the formal CCP revision process. However, the objectives and strategies may be revised to better address changing circumstances or to take advantage of increased knowledge of Refuge resources. If revisions to the CCP are required prior to the initiation of formal revisions, the level of public involvement and associated NEPA documentation will be determined by the Refuge Manager.