

2. The Comprehensive Conservation Planning Process

2.1 Introduction

The CCP for the Sonny Bono Salton Sea NWRC (Sonny Bono Salton Sea NWR and Coachella Valley NWR) is intended to guide the management of the Refuge over the next 15 years. The CCP was developed in association with the preparation of an accompanying environmental assessment (EA) to meet the dual compliance requirements of the Improvement Act and NEPA. Preparation of the CCP is guided by the Improvement Act, as well as the Refuge Planning Policy, as outlined in Part 602, FW 1, 3, and 4 of the Service Manual. Service policy, the Improvement Act, and NEPA each provide specific guidance for how the CCP process and/or the associated environmental analysis of alternatives should be conducted. For example, the Service is required to actively seek public involvement in the preparation of CCPs and associated environmental documents, such as EAs. In addition, the associated environmental document must provide equal and full analysis of a range of alternatives, or different approaches to refuge management, that can reasonably be implemented to achieve refuge goals and purposes and help fulfill the Refuge System mission.

The EA for the Sonny Bono Salton Sea NWRC CCP evaluated the environmental effects to the human environment of implementing a range of management alternatives for the Sonny Bono Salton Sea NWR and Coachella Valley NWR. NEPA requires that we consider all reasonable alternatives, including the “no action” alternative, which represents the continuation of current conditions and management practices. Alternative approaches for managing these Refuges were developed during the planning process and considered in the EA, which is provided in Appendix F.

Key steps in the CCP and parallel NEPA processes include:

- Preplanning;
- Public scoping and involvement;
- Identifying issues, opportunities, and concerns;
- Defining and revising vision statement and Refuge goals;
- Developing and evaluating alternatives;
- Identifying the preferred alternative for each Refuge;
- Drafting the CCP and EA;
- Revising draft documents and releasing the Final CCP;
- Implementing the CCP; and
- Monitoring and adapting management practices as necessary.

Figure 2-1 presents the overall steps in the CCP process, many of which include opportunities for public input, in a linear cycle, but the planning process is actually a non-sequential movement among the steps, with many revisions occurring during plan development.

2.2 Preplanning

Preplanning for this CCP began in 2010 with the establishment of a core planning team. The core planning team included the Project Leader, Deputy Project Leader, Refuge Planner, Refuge Wildlife Biologist, and other members of the Sonny Bono Salton Sea NWRC, as well as a representative from CDFW. In addition, an expanded team was formed to integrate stakeholders into the planning process. Appendix A lists the members of the core planning team, as well as other participants who provided important insight regarding planning issues and ongoing refuge management.

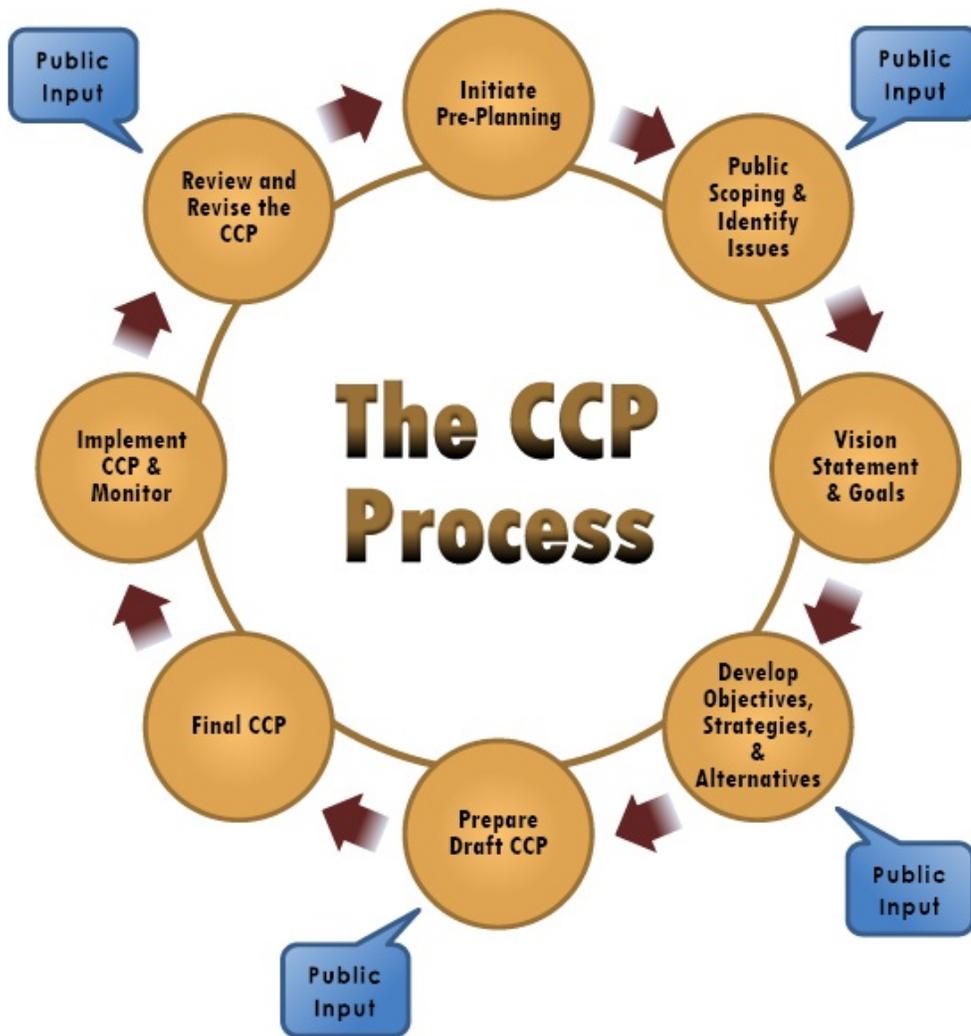


Figure 2-1. Comprehensive Conservation Planning Process

The initial tasks of the core planning team involved the collection of pertinent data for each Refuge and the identification of preliminary issues, concerns, and opportunities. Through this process, the planning team identified primary areas of focus, including wildlife and habitat management, public use, and Refuge operations. These focus areas, which were presented to the public during the scoping process, helped to shape the public input received during the scoping period into potential objectives for each Refuge.

2.3 Public Involvement in Planning

Public involvement is an essential component of the CCP and NEPA process. The public is encouraged to participate in this planning effort from its initiation during the scoping process through the public comment period on the draft CCP/EA. The Service also encourages the public to stay involved in the planning process during plan implementation. The public planning effort for the Sonny Bono Salton Sea NWRC CCP began in August 2010 when a newsletter (referred to as a "Planning Update") was distributed to approximately 380 entities, including local, State, and

Federal agencies; special districts; tribes; interested organizations; adjacent property owners; potential user groups; and other interested members of the public. This initial Planning Update described the planning process and requested input regarding the future management of the Refuge Complex. The CCP was officially initiated on October 15, 2010, when the Notice of Intent to prepare a CCP for the Sonny Bono Salton Sea NWRC was published in the *Federal Register* (75 FR 63379 [15 October 2010]).

Two public scoping meetings were held in September 2010, one in Palm Desert and one in Calipatria, to further develop and ascertain Refuge planning issues. Representatives from affected public agencies and non-profit organizations, elected officials, private property owners, and interested members of the public attended these meetings and provided written and verbal comments that were recorded and compiled for consideration during the development of objectives, strategies, and alternatives. Others contributed written comments either electronically or by mail in response to the *Federal Register* notice, the appeal for input provided in the Planning Update, and the press release that was issued regarding the planning effort and the scoping meetings. The issues raised during the scoping process addressed a range of topics from requests for expanded public uses to concerns regarding the fate of the Salton Sea.

A summary of the comments received during the scoping process was provided in a second Planning Update, distributed in January 2012. This Planning Update also presented preliminary management alternatives for the Sonny Bono Salton Sea NWR and Coachella Valley NWR, with an invitation for the public to provide comments regarding the proposed alternatives. A number of comments were provided that related to the hunting proposals included in two of the alternatives, and several other comments addressed habitat management proposals.

On July 23, 2013, the Notice of Availability of the draft CCP/EA for the Sonny Bono Salton Sea NWR Complex was published in the *Federal Register* (78 FR 44144). Public comments were accepted through August 22, 2013. Notice of the document's availability was distributed to Federal, State, and local agencies, Tribal governments, State Clearinghouse, several public libraries, and interested organizations and individuals. Two public meetings were held to take comments: one in Palm Desert on July 30, 2013 and one in Brawley on July 31, 2013.

Thirteen letters, containing 87 comments, were received during the public review process. These comments, which are provided in Appendix F as Appendix F-3, addressed a range of issues (e.g., Salton Sea restoration, water rights, land tenure, surrounding land use, visitor services), and changes were made to the Final CCP and EA, as appropriate, in response to these comments.

2.4 Public Scoping Comments, Issues, Concerns, and Opportunities

Issues, concerns, and opportunities associated with the future management of the Refuges within the Sonny Bono Salton Sea NWRC were obtained from a variety of sources. As previously discussed, a range of issues was identified during the public scoping process. Additional issues were identified by the planning team and during meetings with Refuge staff. A focused discussion of wildlife and habitat management issues was conducted that involved other Federal and State agencies, The Center for Natural Lands Management, and several wildlife professionals. The Service also conducted a visitor services review to examine existing and potential future wildlife-dependent recreational uses on these Refuges.

All of this input was compiled by the Service and taken into consideration during the development of management alternatives. This input was also used to further refine Refuge goals. The key issues and comments for each Refuge are summarized here.

2.4.1 Sonny Bono Salton Sea NWR

Wildlife/Habitat Management

- Optimize forage productivity in managed agricultural fields to support wintering geese.
- Control mammalian predators in seabird nesting areas to protect western gull-billed tern (*Gelochelidon nilotica* ssp. *vanrossemei*) and black skimmer (*Rynchops niger*) chicks and eggs from predation.
- Improve existing nesting areas and provide new nesting opportunities in proposed wetland restoration areas to support nesting gull-billed terns and other seabirds.
- Identify and implement strategies, including habitat restoration, to address the physical and biological effects of a shrinking Salton Sea.
- Ensure that Refuge planning is consistent with the larger restoration planning being conducted for the Salton Sea, including the Salton Sea Species Conservation Habitat Project.
- Encourage research related to Yuma Ridgway's rail movement between established marsh areas on the Refuge, as well as the effects that burning overgrown marshes has on existing movement patterns.
- Maintain adequate habitat to support the Yuma Ridgway's rail, identify, in the CCP or step-down habitat management plan, new locations on the Refuge for cattail marsh creation to replace existing marsh areas as they become decadent.
- Continue the current level of participation in the active surveillance of and responses to avian disease on the Salton Sea.

Public Use

- Continue to provide opportunities of waterfowl hunting and consider expansion of these opportunities on the Refuge, including allowing hunting in Unit 1.
- Expand waterfowl hunting to include wing shooting.
- Discontinue waterfowl hunting on the Refuge.
- Reduce goose hunting on the Union Tract by one day per week to improve the quality of the hunt at this location.
- Expand opportunities for bird watching and other wildlife observation, as well as interpretation and environmental education.
- Include the topic of climate change in environmental education programs.
- Improve trail accessibility.

Cultural Resources

- Evaluate potential impacts to cultural resources and consult with affected tribal governments.

Refuge Operations

- Hire a Federal wildlife officer to address enforcement issues on both Sonny Bono Salton Sea NWR and Coachella Valley NWR.
- Coordinate with surrounding landowners and other partners, and establish a volunteer group to assist Refuge staff with public use activities.
- Implement repairs and improvements to public facilities, including restrooms and parking areas.
- Consider cooperative farming as an option for managing managed agricultural fields on the Refuge.
- Evaluate current and future land tenure issues.

Environmental Effects

- Evaluate, and where appropriate implement, measures to address air quality impacts associated with newly exposed Salton Sea sediments in areas managed by the Refuge.
- Evaluate long-term water availability for current and future management practices.
- Evaluate existing and future water quality issues including increases in temperature and concentrations of constituent of concern.
- Address the effects of climate change on Refuge resources and management.
- Evaluate the potential cumulative impacts of implementing the management proposals.
- Address effects of alternative energy development on Refuge resources.

2.4.2 Coachella Valley NWR

Wildlife/Habitat Management

- Control invasive weeds, particularly Sahara mustard (*Brassica tournefortii*), in sand dune and sand field areas of the Refuge.
- Identify measures to ensure continued sand transport onto the Refuge.
- Patrol for and enforce regulations prohibiting vehicle use within the Refuge.
- Encourage aggressive control of small outbreaks of new invasive plants on the Refuge to prevent large infestations in the future.

List and Sensitive Species Management

- Increase staff involvement in monitoring listed and Coachella Valley MSHCP-covered species on the Refuge.
- Develop and implement management actions to benefit flat-tailed horned lizard.

Public Use

- Provide opportunities for hunting upland bird and large and small game on the Refuge.
- Expand opportunities for wildlife observation and interpretation.
- Provide off-refuge interpretation of the resources protected on the Refuge.

Refuge Operations

- Hire a Federal wildlife officer to address enforcement issues on both Sonny Bono Salton Sea NWR and Coachella Valley NWR.
- Coordinate with the U.S. Army Corps of Engineers (USACOE) on flood control proposals for the Thousand Palms area.

Environmental Effects

- Address the effects of climate change on Refuge resources and management.
- Evaluate the potential cumulative impacts of implementing the management proposals.

2.5 Management Challenges and Opportunities

In addition to the issues raised during the public scoping process, the planning team, with input from other partners, also identified several challenges, threats, and/or opportunities that will likely affect management within the Sonny Bono Salton Sea NWRC over the next 15 years and beyond.

2.5.1 Management Challenges

The majority of the issues expected to present challenges for the future management of the Sonny Bono Salton Sea NWR and Coachella Valley NWR involve issues of regional and in some cases global significance, including a receding Salton Sea, climate change, the increasing prevalence of

invasive plant species in the Salton Basin, protection of existing sand transport processes in the Coachella Valley, and the long-term impacts of depleted groundwater levels in the Coachella Valley. These issues and their effects on Refuge resources will likely have to be addressed through a coordinated effort involving many partners. As a result, management actions taken on the individual Refuges in response to these factors will have to be evaluated from time to time to determine if adjustments in current management practices are required to adapt to changing conditions. These issues, which are summarized here, were considered during the development of the management alternatives presented in the EA (Appendix F).

A Receding Salton Sea

From the time the Sonny Bono Salton Sea NWR was established in 1930 until about 1980, management of the Refuge included the need to address the effects of inundation as the water level in the Salton Sea continued to increase in response to increasing inflows of drain water from upstream agricultural activities. By the early 1980s, water levels in the Sea had stabilized due to water conservation measures implemented by IID (<http://www.iid.com/index.aspx?page=172>). Between the mid-1990s and 2000s, IID entered into three related agreements to transfer water from the Imperial Valley to urban areas in southern California, including the Coachella Valley and San Diego County. The effect of these transfer agreements, along with increased water conservation measures that allowed more efficient transport and utilization of water, was initially a stabilization of water levels in the Salton Sea, followed by a gradual lowering of the water surface elevations. In 2000, the water surface elevation in the Salton Sea was 228 feet below mean sea level; by October 2010, the Sea had dropped to 231.87 feet below mean sea level (USACOE and California Natural Resources Agency 2011).

Water levels in the Salton Sea are expected to decrease gradually through 2017, but beginning in 2018, when mitigation water associated with a water transfer agreement between IID and the San Diego County Water Authority is no longer delivered to the Sea, the water level is expected to recede at a much faster rate (Cohen and Hyun 2006). According to the Salton Sea Ecosystem Restoration Program Draft Programmatic Environmental Impact Report (California Department of Water Resources and CDFG 2006), the predicted surface water conditions in 2030 could range from 246 feet below mean sea level to 254 feet below mean sea level. The actual surface water elevation will depend upon the rate of inflow from various sources, as well as the water surface net evaporation rate, over this period. The greater decrease in water elevations is consistent with a predicted drop of 20 feet in water elevation in the 10 to 12 years after 2017 modeled by Cohen and Hyun (2006) under a no restoration condition.

Regardless of whether the elevation rate in 2030 is 246 or 254 feet below mean sea level, the salinity levels in the Sea at these elevations are expected to be well above levels that can support most fish, as well as the invertebrates that have historically supported the fish and migratory birds in the Sea. For example, the pileworm (*Neanthes succinea*), which has been a primary component of the Salton Sea food chain, is unlikely to be present in areas exceeding 50 mg/L (California Department of Water Resources and CDFG 2006). The consequences of this scenario are loss of foraging opportunities for fish-eating birds such as pelican, gulls, and terns, as well as substantial losses of foraging, rafting, and loafing areas for waterfowl, shorebirds, and other waterbirds. In preparation for the need to continue to provide foraging habitat to support the range of migratory bird species that have depended on the Salton Sea as a resting and fueling station for almost a century, several agencies are currently developing restoration proposals along the edge of the Salton Sea. Some proposals focus on the needs of fish-eating birds, while others will provide shallow water habitat to support shorebirds, waterfowl, and

other waterbirds. In addition, the existing managed wetland areas on the Sonny Bono Salton Sea NWR will continue to provide foraging opportunities for migratory birds.

The effects of the receding Salton Sea are already apparent on lands managed by the Refuge around the southern perimeter of the Sea. Between 2010 and 2012, a significant portion of the waters within the Red Hill Bay area, in the southeast end of the Salton Sea, receded, leaving behind exposed playa that provides no benefits for migratory birds. Similar losses of habitat have occurred at the edges of Bruchard Bay in Unit 1. By about 2030, some of the original refuge lands currently submerged below the Salton Sea will likely be exposed, as will the currently submerged lands the Service leases from IID for Refuge management.

The changes to the Salton Sea that are predicted to occur over the next 15 years will likely affect how and where habitats are managed on the Refuge. The need for the existing managed wetlands located just beyond the south end of the Sea will likely continue and could expand as water levels in the Sea decrease and the salinity level rises. How the current diversity and abundance of birds using the habitats in and around the Salton Sea will change is unknown, therefore, management on the Sonny Bono Salton Sea NWR will likely have to be adapted over the coming years to achieve the Refuge's migratory bird purposes.

Climate Change

Increasing carbon dioxide and other greenhouse gas emissions from anthropogenic sources have undeniably altered the temperature over the last century. The Intergovernmental Panel on Climate Change (IPCC 2007a), in its Summary for Policymakers, states that "warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level." Such temperature changes can have different consequences worldwide from sea-level rise to greater meteorological fluctuations.

The Service recognizes that a changing climate will affect natural resources on refuges and has been charged by the Secretary of the Interior (Secretarial Order 3289) to consider climate change during CCP and other planning processes. Anticipated impacts may include species range shifts, species extinctions, phenological changes, and increases in primary productivity. The effects of climate change on Refuge resources, facilities, and management activities are critical components of all Refuge management decisions. As part of Service's strategy for addressing climate change, the NWRS has initiated work on a national inventory and monitoring program that will provide data for a long-term understanding of the effects of changing climate on fish and wildlife and for assessing the success of conservation actions taken on the ground to help fish and wildlife adapt to climate change.

Higher temperatures and reduced annual precipitation in southern California are likely to increase the demand for water in urban areas and increase the need for water conservation in the Imperial Valley. These effects, along with increased evaporation, could result in an observable increase in the rate at which the Salton Sea recedes, exacerbating the effects of the loss of available foraging habitat for migratory birds.

Within the Coachella Valley, climate change is likely to extend drought conditions, which would affect blow-sand habitats and the species these habitats support. During periods of drought, fluvial sediment delivery to the Coachella Valley floor declines, limiting the potential for rejuvenation of diminishing dune systems (USFWS 2010a). Drought conditions also reduce the foraging opportunities and water availability (e.g., decreased precipitation, groundwater levels) for native wildlife and plants, including a reduction in the arthropod populations present

in the spring, which represent an important source of food for the Coachella Valley fringe-toed lizard. On the other hand, if predictions that rainfall will increase in the southwest are realized, the abundance of invasive plants in sensitive habitat areas could increase resulting in conflicts with native plant and animal species. The presence of invasive plants could over time stabilize active dune areas and/or increase the potential for wildfires.

Monitoring must be an integral part of the management efforts implemented on these Refuges, so changes over time can be noted and measures to address adverse effects can be developed and implemented to achieve Refuge purposes and goals.

Invasive Species

Non-native plant and animal species introduced into areas where conditions are favorable for their establishment have the potential to affect native species in many ways, including predation, competition (in which exotic species outcompete native species when natural predators and/or competitors are not present), changing the physiognomy of the habitat in such a way as to interfere with essential behavior such as foraging, or altering ecological processes (e.g., exotic annual grasses and unnaturally frequent fire exacerbating one another in a positive feedback loop). Under these circumstances, non-native species can cause harm to the environment, the economy, or human health.

Non-native species that cause harm are collectively referred to as invasive species (National Invasive Species Council 2008). Invasive species are considered one of the most pervasive threats to habitat management in the NWRS. The Service recently established a pilot program to map selected invasive plant species on several refuges. Conducting inventories of priority invasive species is an integral component of invasive species management and is critical to improving our understanding of, confronting, and deterring the invasive species threat. Without inventory data, we will not be able to address the full extent of the problem, nor can we fully understand how and at what locations management will be most effective.

The Refuges of the Sonny Bono Salton Sea NWRC are primarily affected by invasive plant species, with annual invasive herbs, particularly Sahara mustard, and grasses the biggest problems on the Coachella Valley NWR. Perennial vegetation, such as salt cedar and common reed (*Phragmites australis*), can reduce habitat quality in riparian wetland areas on the Sonny Bono Salton Sea NWR.

Sand Transport Processes

The Coachella Valley MSHCP describes the aeolian sand communities of the Coachella Valley, including the sand dunes and sand fields protected within the Coachella Valley NWR, as “extremely dynamic in terms of spatial mobility and tendency to change from active to stabilized and back” (CVAG 2007a). These dynamic habitats can be affected by natural and human events. Unfortunately, human activities in the Coachella Valley can substantially change the natural processes that create and sustain these habitats. It is estimated that active sand dune habitat in the Coachella Valley suitable to support the Coachella Valley fringe-toed lizard has decreased by more than 50 percent since 1980 due to modification to and disruption of the historical sand transport processes (USFWS 2010a).

The Refuge is part of the Thousand Palms sand transport system, one of four main sand transport systems in the Coachella Valley. These systems are composed of sand source areas, fluvial transport zones, fluvial deposition/aeolian erosion areas, wind transport corridors, and aeolian sand deposition areas. Fine sand within the dune systems on the Refuge is transported by the winds from windblown sand sources in the Indio Hills. Shrubs, topographic features,

and structures slow the wind near the ground surface, causing sand to drop out and accumulate and dunes and hummocks to form near these features (USFWS 2010a). Sand accumulations increase and decrease over time depending on the extent of the upwind sand supply and the speed of the winds. When upwind sand supply is substantial, temporary accumulations of blowsand build up, creating dunes often lasting for years or decades. A reduction in the supply of additional blowsand transported from areas upwind will result in the erosion of active sand dunes because the wind erodes the blowsand from these areas faster than it is replaced. The result is depleted or eliminated dunes or hummocks. This is the case within the Thousand Palms Conservation Area; at the current rate of dune migration, the existing dunes are expected to migrate downwind at an average of 20 to 30 feet (6 to 9 meters) per year. At this rate, these dunes are expected to be extirpated by 2060 (USFWS 2010a).

Addressing the effects of natural and human actions on sand transport systems requires the continuation of current regional partnerships. In addition, active management of the sand dune habitat on the Refuge to mimic natural processes will likely be necessary in the near future, but as suggested by Barrows (1997), understanding the habitat features important to the species supported by the aeolian sand communities “is a necessary prerequisite to habitat manipulation.”

Groundwater Availability

The Coachella Valley NWR is located within a portion of and hydraulically connected to the Whitewater River subbasin, the largest of the four subbasins within the upper Coachella Valley groundwater basin (Tyley 1974). This subbasin is recharged primarily by flows from the Whitewater River watershed with groundwater generally flowing from the recharge areas of the surrounding mountain fronts southeast through the center of the valley to the Salton Sea (Tyley 1974). Groundwater well data for the upper Coachella Valley groundwater basin indicate that over the last two decades water levels in the aquifer below the lands being conserved as part of the Coachella Valley MSHCP, including the Coachella Valley NWR, have dropped considerably as a result of groundwater pumping to meet the needs of the surrounding areas (CVWD 2005). Records of the water levels in several wells located along the perimeter of the Coachella Valley NWR indicate a drop in water levels between the 1990s and 2012 of about 20 feet (My Desert.com 9/9/13).

Loss of Mesquite Hummocks

In the 1990s, geologists studied a time series (1939-1995) of aerial photographs of the dunes and sand transport corridor in the Thousand Palms Conservation Area. These aerial photographs indicate the loss of large areas of mesquite hummocks within the Thousand Palms Conservation Area, including areas within the Coachella Valley NWR (USFWS 2010a). Based on the available literature, the loss of mesquite vegetation on the Refuge appears to be related to a combination of a substantial lowering of the water table (CVAG 2007b, USFWS 2010a), extended drought conditions, human disturbance, and the increased presence of invasive plant species.

Groundwater elevations on the southeast end of the Refuge in 1936 ranged from about 50 to 70 feet below the surface (Tyley 1974). Between 1936 and 1967, groundwater levels decreased by approximately 30 feet at the southeast corner of the Refuge (Tyley 1974). Some of this decline in water level has been attributed to a dry period that extended from 1946 to 1964 (Tyley 1974). This substantial lowering of the water table has likely contributed to the loss of mesquite vegetation in the southeast portion of the Refuge (USFWS 2010a).

Mesquite hummocks are believed to have historically played an important role in dune formation on the Thousand Palms Conservation Area (Barrows 1996), as they locally slowed the wind causing blowsands to drop out and accumulate. The loss of mesquite vegetation will likely have a direct long-term effect on the status of the aeolian sand communities present on the Refuge, because of the role that mesquite vegetation plays in the development and protection of dune habitat. When they were alive and foliated, these mesquite stands served to capture blowsands, which then accumulated to form hummocks and dunes, supporting a range of species specially adapted to these blowsand habitats (USFWS 2010a). The lack of mesquite will likely expedite the loss of blowsand from the Refuge and other parts of the Thousand Palms area (USFWS 2010a).

2.5.2 Opportunities

Despite the issues and threats described here, opportunities exist for protecting the resources within the Refuge Complex, including conserving habitat quality, protecting listed species, and providing habitat to support migratory bird populations and other trust species. These opportunities include: 1) the potential to cooperatively manage conserved lands in the vicinity of each Refuge involving, as appropriate, other Federal, State, and local agencies; tribes; and land conservancies to reduce overall costs, improve the ability to control illegal access, and share knowledge that will result in more effective management of habitat and species; and 2) the potential to partner with other agencies and educational and research institutions to conduct research related to specific species habitat and foraging requirements, ecological processes, methods for optimizing restoration results, effective control of invasive plants, and other topics that would provide information essential to the long-term management of the species and habitats supported on the Sonny Bono Salton Sea and Coachella Valley NWR.

There is also the opportunity to address the changing conditions at the Salton Sea through an evaluation of the status of the lands currently managed as part of the Sonny Bono Salton Sea NWR. There may be opportunities to exchange area owned in fee-title for areas currently managed to meet Refuge purposes. Some lands currently leased from IID may no longer be needed to meet Refuge purposes and/or longer-term lease agreements for some areas could be pursued to ensure the ability to meet Refuge goals and objectives.

2.6 Development of a Refuge Vision

A vision statement, defined as “A concise statement of what the planning unit should be, or what we hope to do, based primarily upon the Refuge System mission and specific refuge purposes, and other mandates” (Service Manual, 602 FW 1.5 (Z)), has been developed for each Refuge as part of this CCP process. The Refuge vision provides a descriptive picture of how a Refuge will look in the future and describes the desired future conditions in the long term (more than 15 years). The visions for the Refuges within the Sonny Bono Salton Sea NWRC are presented in Chapter 1.

2.7 Development of Refuge Goals, Objectives, and Strategies

Goals and objectives are the unifying elements of successful Refuge management. They identify and focus management priorities, provide a context for resolving issues and concerns raised during the scoping process, guide specific projects, provide rationale for decisions, and offer a defensible link among management actions, Refuge purpose(s), Service policy, and the NWRS mission. In developing goals and objectives, there is a natural progression from the general to the specific. Goals define general targets in support of the Refuge vision, while objectives address the

incremental and measurable steps to be taken to achieve the goals. Finally, strategies identify specific tools, actions, or techniques that would be implemented to accomplish project objectives.

The goals and objectives provide long-term guidance to Refuge managers and staff and help integrate science, improve management practices, and justify compatible use decisions. The Refuge System defines goals as a "...descriptive, open-ended, and often broad statement of desired future conditions that conveys a purpose but does not define measurable units" (Service Manual, 602 FW 1). The goals for each refuge within the Complex are presented in Chapter 1.

Each goal is subdivided into one or more objectives. Objectives are defined as "concise statements of what we want to achieve, how much we want to achieve, when and where we want to achieve it, and who is responsible for the work" (Service Manual, 602 FW 1). The number of objectives per goal can vary depending upon the number needed to satisfy a particular goal. In cases where there are many objectives, an implementation schedule may be developed to better define when and how the strategies presented under each objective would be implemented to ensure that each objective and the overarching goals can be effectively and efficiently achieved. The objectives and strategies for the alternative selected for implementation on each refuge are presented in Chapter 3.

2.8 Development of Alternatives

As indicated earlier, each CCP must comply with the provisions of NEPA. To facilitate compliance, the requirements of NEPA have been integrated directly into the overall CCP process. This includes the requirement to analyze a reasonable range of alternatives or approaches to Refuge management that could be reasonably undertaken to achieve Refuge goals and refuge purposes. The Refuge Planning policy (602 FW 1) defines alternatives as "different sets of objectives and strategies or means of achieving refuge purposes and goals, helping fulfill the Refuge System mission, and resolving issues."

The process of developing alternatives involves analyzing current conditions, identifying various measures that—if implemented—would help achieve Refuge goals, and incorporating, as appropriate, input provided during the public scoping process and from the core and extended planning teams, as well as from other information gathered during subsequent meetings and workshops. As required by NEPA, one of the alternatives that must be analyzed is the "no action" alternative, which constitutes a continuation of current conditions and management practices. The draft CCP/EA analyzed three alternatives, a no action alternative and two action alternatives, for each Refuge (the Sonny Bono Salton Sea NWR and the Coachella Valley NWR). An equal and full assessment of the effects to the human environment of implementing each of the alternatives was conducted. Appendix F provides additional information about the alternatives considered during this process.

2.9 Selection of the Proposed Action

Based on the analysis of the effects on the environment of implementing the various alternatives, and taking into consideration Refuge purposes and goals, we have selected Alternative B (Restore and Enhance Habitat Quality; Expand Opportunities for Wildlife Observation, Environmental Education, and Interpretation) for implementation on the Sonny Bono Salton Sea NWR and Alternative B (Expand Management Actions to Support Listed and Sensitive Species; Expand Public Outreach) for implementation on the Coachella Valley NWR. We have selected these alternatives for implementation because they can best achieve the purposes, vision, and goals of these Refuges; help fulfill the Refuge System mission; are consistent with principles of sound fish

and wildlife management; and minimize adverse effects on the environment. The selected alternative for the Sonny Bono Salton Sea NWR was modified slightly to incorporate one of the visitor services proposals included in Alternative C. This proposal envisions the development of an interpretive auto tour route in the Imperial Valley in partnership with other agencies and organizations to highlight the many natural, cultural, and economic resources of the region.

2.10 Plan Implementation

During the 15 years following CCP approval, the CCP will serve as the primary reference document for all Refuge planning, operations, and management. The CCP presents wildlife and habitat management, visitor services (public use), and other Refuge operations objectives that when implemented are intended to achieve Refuge goals and purposes. It also describes the specific strategies to be implemented to achieve the various objectives. Refuge staff will review the CCP when preparing annual work plans and updating future project and maintenance management databases.

The CCP may be reviewed during routine inspections or programmatic evaluations. The results of these reviews or other monitoring efforts may indicate a need to modify one or more implementation strategies if the desired outcomes anticipated in the CCP are not being achieved. If minor changes are required, the level of public involvement and NEPA documentation will be determined by the Refuge Manager. Major changes to Refuge goals or objectives would require formal revisions to the CCP. In addition, the CCP will be evaluated and formally revised, as necessary, approximately every 15 years.