Draft Compatibility Determination

Title

Draft Compatibility Determination for Farming (Cooperative) and Haying or Ensilage, Sonny Bono Salton Sea National Wildlife Refuge

Refuge Use Category

Agriculture, Aquaculture, and Silviculture

Refuge Use Type(s)

Farming (cooperative), Haying or ensilage

Refuge

Sonny Bono Salton Sea National Wildlife Refuge

Refuge Purpose(s) and Establishing and Acquisition Authority(ies)

" ... as a refuge and breeding ground for birds and wild animals;" Executive Order 5498 in 1930

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

" ... for the management and control of migratory waterfowl and other wildlife;" Lea Act of 1948 (16 U.S.C. § 695)

"... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude, if such terms are deemed by the Secretary to be in accordance with law and compatible with the purpose for which acceptance is sought." 16 U.S.C. § 742f(b)(1)

National Wildlife Refuge System Mission

The mission of the National Wildlife Refuge System, otherwise known as Refuge System, is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife,and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (Pub. L. 105-57; 111 Stat. 1252).

Description of Use

Is this an existing use?

No. The Sonny Bono Salton Sea National Wildlife Refuge (Refuge or NWR) previously used refuge staff and funding to implement its farming program, consistent with the Comprehensive Conservation Plan and Environmental Assessment (USFWS 2014), but it has not been approved as a refuge use.

What is the use?

Cooperative farming entails the systematic practice of agriculture, whereby the soil is mechanically disturbed and seeds or other plant components are artificially introduced at regular intervals, with the primary objective of cultivating mature plant stands for the production of food, utilized by wildlife, domesticated animals, or human populations. Farming practices also include water delivery, irrigation, drainage, land leveling, and the application of fertilizers and pesticides. Haying or ensilage is defined as the cutting or mowing of vegetation for fodder.

The Refuge has grown a variety of crop species for waterfowl forage since the 1940s. Farming is used on the Refuge to produce legumes, cereal grains, and green browse as forage for Arctic-nesting geese, sandhill cranes (*Grus canadensis*), and other wildlife during the fall, winter, and early spring.

The Refuge farming and haying program was initiated under the authority of the Lea Act to provide an abundant forage supply to attract migratory birds to the Refuge and reduce crop depredation on nearby private agricultural lands. As water conservation practices and cropping patterns in the Imperial Valley within the Imperial Irrigation District (IID) have changed, the Refuge farming program was modified to provide and enhance winter forage, which Arctic-nesting geese and sandhill cranes depend on, without increasing water or labor demands on Refuge staff. In recent years, the program has endeavored to ensure the provision of year-round forage and nesting habitats, in addition to the production of winter forage, to support resident passerines, Galliformes, waterfowl, and raptors. To facilitate the expansion of the Refuge farming program, the Refuge intends to integrate cooperative agriculture by permitting the cultivation of Sudan grass, alfalfa, and other crops under a cooperative farming framework, without necessitating an increase in water or labor resources.

A Cooperative Farming and Haying Program directly improves and enhances foraging conditions that provide a high level of migratory bird use. In addition to providing food and habitat for multi-species bird use, cooperative farming is a valuable management tool for providing long-term, cost-effective habitat management and depredation relief to leased lands and privately owned farm fields.

The acreage and types of crops grown align with the Refuge's management goals, objectives, and strategies as detailed in the Comprehensive Conservation Plan for the

Sonny Bono Salton Sea National Wildlife Refuge Complex (USFWS 2014).

Is the use a priority public use?

No. However, cooperative farming would provide vital high-quality foraging habitat within a public waterfowl hunting area known as Union. Hunting is a priority public use.

Where would the use be conducted?

Cooperative farming would take place on approximately 846 acres of land that is currently used for USFWS-conducted farming (ryegrass and winter wheat) at the Sonny Bono Salton Sea NWR. Only lands that are actively leveled, contain subsurface tile drainage systems, and are used currently for row crop agriculture by the U.S. Fish and Wildlife Service (USFWS) are included in the Refuge farming program.

When would the use be conducted?

Farming practices occur throughout the year. Using diesel-powered agricultural tractors and implements, farm fields are prepared by ripping, disking, leveling, tilling, furrowing, and ridging before the crops are planted. The fields are then irrigated and fertilized using surface flood irrigation methods, either monthly or every ten days. Farm field management varies depending on the crop; however, the three primary grazing/green crops in the cooperative agriculture program are Sudan grass, winter wheat, and alfalfa. In the future, the consideration of additional crops may be undertaken, provided they offer benefits to wildlife and do not necessitate an increase in water or labor resources. Sudan grass is planted in the spring and irrigated every ten to fourteen days. Once mature, farmers can harvest two to three hay cuttings before leaving the remaining crop for migratory bird habitat or planting a rye grass crop for goose forage. Wheat is typically planted in the winter and irrigated about once every two weeks. Once the crop goes to seed, it is harvested in the late summer after nesting season ends. Any remaining crop/seedhead is left to provide forage for sandhill cranes and other migratory birds. Alfalfa is planted between late spring and autumn, with irrigation varying between seasons. In late spring, summer, and fall, alfalfa is irrigated every ten to fourteen days, while in winter and early spring, it is irrigated once a month. Alfalfa farmers may harvest three to five cuttings of hay each season before crop management is returned to the Refuge to provide goose forage from November through February. Typically, farmers manage an alfalfa field for a minimum of five years before replanting or rotating to a different crop.

How would the use be conducted?

The Refuge farming and haying programs will be implemented through multi-year Cooperative Agricultural Agreements (CAAs) with local farming operators. Each agreement is examined and renewed annually and publicly advertised on a 5-year

basis. Farming and haying activities are based on annual farming plans developed by Refuge staff with input from cooperative farmers. These plans provide specific planting and harvest periods, pesticides used, and additional subunit-specific management goals.

Cooperative Farming & Haying Program

The Refuge will consider additional crops, such as sorghum, for future use on a case-by-case basis to assess whether the proposed species meets habitat needs and pesticide limitations. Most of the on-the-ground farming work, including irrigation from March to September, is carried out by the CAA Cooperator rather than the Refuge staff. The Cooperator is responsible for all costs associated with growing the crops listed above as an in-lieu service in exchange for hay cuttings from their planted farm fields.

The Cooperator plants approved crops, such as alfalfa or Sudan grass, in fields designated in the annual farming and haying plans. The crops are grown to maturity during the summer and harvested until late September or October, when the first geese and cranes arrive at the Refuge. Once birds begin using the crop as forage, fields are left undisturbed, except when irrigation is needed or to manage invasive plant species. Typically, fields are irrigated once a month and herbicide once per year or as needed for invasive grasses and broadleaves between November and December.

Grains, such as organic corn or sorghum, may be grown in designated fields during the fall to produce green browse for geese and to provide nesting substrate and prey forage for passerines, Galliformes, and burrowing owls (a species of special concern) in the spring and summer. The grains are harvested in late summer, and any unharvested residual grains provide additional forage for sandhill cranes the following year. Winter wheat is planted in late winter and irrigated throughout the season. Geese and cranes feed on the sprouting grains, while the geese also browse on the meristems of the winter wheat plants. Grazing by geese and cranes throughout the winter, combined with a lack of herbicide application, generally results in a mixed stand of wheat and weeds by spring. On a scheduled basis, individual winter wheat fields are disked and prepared for corn or sorghum planting, while other fields are left to grow and provide nesting substrate. After the nesting season, the fields are harvested, and the residual grain is left for wildlife forage, usually consumed by sandhill cranes. If sufficient wheat grain remains, the field is left to re-seed itself in the second fall following the initial seeding or is supplemented with broadcast seeding.

Crops are rotated systematically, with individual fields typically switching between grains and grasses every two to five years, depending on soil health and market demands. As a result, the amount of land allocated to either group can vary between 142 and 600 acres.

Farming Cooperators are chosen according to the process described in the USFWS Refuge Manual, 620 FW 2, and farming privileges are awarded when a producer

enters into a Cooperative Agricultural Agreement with the Refuge. Part 29.2 of Title 50, Code of Federal Regulations, entitled "Cooperative Land Management," states that: “Cooperative agreements with persons for crop cultivation, haying, grazing, or the harvest of vegetative products, including plant life, growing with or without cultivation on wildlife Refuge areas may be executed on a share-in-kind basis when such agreements are in aid of or benefit to the wildlife management of the area.”

The custom farming rates, labor, and hay value equivalents reflect standard practices and fair-market rental rates typical of Imperial County, with adjustments made for restrictions imposed by the USFWS. These restrictions include prohibiting the use of certain insecticides, limiting herbicide use to an approved list of products, regulating the timing of plantings, and conducting nesting surveys to minimize negative impacts on breeding birds before haying and harvesting.

Why is this use being proposed or reevaluated?

Managing a portion of the Refuge to provide forage for wintering waterfowl, primarily geese, addresses two of the Refuge purposes (i.e., protecting wildlife, reducing crop depredations by wintering waterfowl by providing adequate foraging opportunities within the boundaries of the Refuge). This cooperative farming program, including but not necessarily limited to grain production (wheat, sorghum, corn) and haying of irrigated uplands (alfalfa, Sudan grass, rye grass), allows Refuge staff to manage habitat quality and provide wildlife forage more efficiently to support attainment of the CCP objective for Managed Agricultural Lands:

> *Throughout the 15-year life of the CCP, continue to provide approximately 2,650 tons of green forage on approximately 870 acres of agricultural lands within the refuge to support approximately 30,000 geese annually. (USFWS 2014)*

Cooperative farming and haying programs are being proposed as Refuge uses due to the Refuge's reduced capacity in both staffing and funding. Cooperative farmers can provide high-quality wildlife habitat while ensuring economic viability for themselves. Currently, farming and haying are necessary activities to continue providing high-quality migratory bird forage and habitat. It is also expected that cooperative farming will lead to improvements in soil quality and the proper maintenance of subsurface tile drainage systems.

Availability of Resources

The farming and haying programs are administered by Refuge staff, whose tasks include preparing CAAs, annual farming/haying plans, preparing monthly and annual pesticide use reports for both the federal and state systems, coordinating with farming Cooperators for routine management activities, conducting compliance and biological monitoring, and routine analysis of the effectiveness of the program. Field site preparation (e.g. mowing and/or disking) before planting can be done by the

farming Cooperator and/or Refuge staff depending on the details of the CAA.

Cooperators will pay IID for the irrigation water supply from April through September (the active growing season) using the Refuge water card, helping the Refuge retain its water apportionment. According to the 2025 IID Equitable Distribution Plan, the Refuge water apportionment is 8,772.1 acre-feet of annual water use, which is sufficient to support cooperative farming activities. Facilities and real property assets installed to support agricultural purposes—such as lift pumps, pipelines, ditches, and subsurface tile drainage systems—are typically constructed and/or maintained at the expense of IID or the Refuge. However, the CAA may specify conditions under which the maintenance of these assets will be shared with the cooperator, as year-round use could lead to a higher frequency of maintenance needs. Any temporary facilities installed primarily for specific crops or haying methods, such as irrigation dams, valves, pipelines, and fences, are installed by the farming cooperator as outlined in the annual farming/haying plans. Current Refuge staffing levels are adequate to administer the grazing and farming programs at the Sonny Bono Salton Sea NWR.

The Cooperator farmer is responsible for all other costs of producing crops (seed, fertilizer, planting, irrigation labor, herbicide application) as an in-lieu service for the value of farming Refuge lands as detailed in the Cooperative Agricultural Agreement and annual farming/grazing plans.

Anticipated Impacts of the Use

The effects and impacts of the proposed use to Refuge resources, whether adverse or beneficial, are those that are reasonably foreseeable and have a reasonably close causal relationship to the proposed use. This compatibility determination includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible; in such cases, the resource is considered an “affected resource.”

Potential impacts of a proposed use on the refuge's purpose(s) and the Refuge System mission

The Refuge cooperative farming program is not expected to negatively impact the established purposes of Sonny Bono Salton Sea NWR. Rather, farming is expected to benefit wildlife at the Refuge and contribute to the achievement of refuge purposes. The use will function to attract waterbirds and other migratory birds and serve to reduce depredation on crops on private lands surrounding the refuge.

Anticipated short and long-term impacts of cooperative farming (both positive and negative) are outlined below. Short-term impacts

Vegetation/Habitat

The Refuge actively cultivates green forage crops, which are specifically managed to

protect adjacent commercial crops from depredation by wintering geese. Since these lands are already in agricultural production, continuing to manage these areas as agricultural lands through cooperative farming agreements would not result in the loss of either native habitat or important farmland (Prime Farmland or Farmland of Statewide Importance), and would support Refuge vegetation/habitat goals as outlined in the Comprehensive Conservation Plan (USFWS 2014).

The Service must continually evaluate agricultural use and cropping patterns to ensure they align with proper wildlife and habitat management needs. All CAAs must provide sufficient food resources to support wildlife and habitat population objectives throughout the year. While agricultural lands do not provide complete, balanced diets, some standing grains (such as wheat or sorghum) offer a rich source of carbohydrates and high-quality nesting habitat (Ringelman 1990).

Some agricultural practices, such as tilling, may lead to increased invasion of non-native annual weeds and grasses (USFWS 2014). Invasive plants such as mallow, puncturevine, sesbania, wild radish, and others pose a risk to refuge habitats, and can adversely affect the productivity of winter forage for geese. Methods such as no-till agriculture or best management practices (BMPs) for habitat management may be implemented to reduce the spread of invasive species, and invasive species control may continue to be implemented on refuge agricultural fields (USFWS 2014).

Most of the herbicides approved for Refuge use contain the active ingredients glyphosate or 2,4-D DMA. Glyphosate and 2,4-D rapidly adhere to soil and degrade, particularly in areas with high organic content. As a result, little is transferred by rain or irrigation water, and they have minimal leaching potential from applied areas (Sauve and Parker 2005). All herbicides are applied in accordance with the label and are commonly used for invasive species control in upland areas, away from water resources, without persisting in the environment for extended periods. For this reason, the controlled application of herbicides is expected to have only minor adverse effects on water and soils. All irrigation water drains into IID-controlled drainage systems, which eventually flow into the Salton Sea, along with runoff from the other half-million agricultural acres in the Imperial Valley that are not overseen by the USFWS. The herbicides used by cooperators on the Refuge are expected to have a negligible cumulative impact on neighboring wetlands and managed open water habitats.

The misapplication or incorrect use of pesticides could adversely affect both adjacent native plant communities and wildlife populations. However, the implementation of BMPs for habitat management, as well as cropland and facilities maintenance, would limit these impacts to localized, minor, and temporary effects. This includes ensuring applications do not exceed threshold values as described in the Chemical Profiles on the product label. Furthermore, all industrial agriculture pesticide use in Imperial County is strictly monitored by the Imperial County Agriculture Commissioner through permits, notices of intent, and monthly agricultural use reports.

Wildlife

Noise and physical disturbance caused by agricultural activities (such as mowing, haying, etc.) could adversely impact ground-nesting birds and other wildlife by destroying nests, hens, and/or young, while also flushing species from their habitat if proper precautions are not taken. Additionally, the misapplication or incorrect use of pesticides could adversely affect wildlife. To minimize the potential for adverse impacts to wildlife, Refuge staff and cooperators will adhere to all best management practices and stipulations outlined in this document, as well as any stipulations identified in Cooperative Agricultural Agreements. This would limit adverse impacts to wildlife to localized, minor, and temporary effects. Should aerial spraying of herbicides be implemented on agricultural fields, potential adverse effects to wildlife would be minimized through implementation of BMPs and adherence to buffers between treatment areas and adjacent wetland habitats (USFWS 2014).

Agricultural activities can improve the winter forage supply (e.g., short annual grass meristems and forbs) for Arctic-nesting geese such as Snow (*Chen caerulescens caerulescens*), Ross's (*Anser rossii*), white-fronted geese (*Anser albifrons*), and Aleutian cackling geese (*Branta hutchinsii leucopareia*); sandhill cranes; and other migratory birds. Many species of geese in North America feed almost exclusively on agricultural lands during the winter, and a study of greater white-fronted geese has shown that a variety of agricultural crops may be suitable for winter foraging (Bellrose 1980; Ely and Raveling 2011; Ringelman 1990).

Providing high-value grassland habitat makes macro-invertebrates, seeds, and plant tubers available for winter foraging by sandhill cranes and other migratory birds. Maintaining high-value habitat can also help meet the year-round foraging, denning, and nesting needs of wildlife species, such as Western meadowlarks (*Sturnella neglecta*), burrowing owls (*Athene cunicularia*), long-billed curlews (*Numenius americanus*), Merriam's kangaroo rats (*Dipodomys merriami*), a multitude of lizard species, and kit foxes (*Vulpes macrotis*).

Threatened and endangered species and other special status species

Several herbicides used on the Refuge, including dicamba and triclopyr, can be toxic to fish like the desert pupfish, which may inhabit some agricultural drainage canals that extend through and around the Refuge. Glyphosate can range from practically nontoxic to highly toxic depending on the formulation and types of surfactants used during application (USFWS 2014). Desert pupfish habitat has historically been impacted by the application of pesticides to nearby agricultural areas (USFWS 1993; USFWS 2010). To avoid any impacts to fish, including the desert pupfish, no herbicides are applied to surface waters, BMPs are implemented to avoid spray drift, and all products are applied in accordance with label requirements. Therefore, the use of herbicides is not expected to result in any significant adverse effects to the desert pupfish (USFWS 2014). Should aerial spraying of herbicides be implemented on agricultural fields, potential adverse effects to the Yuma Ridgway's Rail (*Rallus*

longirostris yumanensis) would be minimized through implementation of BMPs and adherence to buffers between treatment areas and adjacent wetland habitats (USFWS 2014).

Migratory and resident songbirds identified as California Species of Concern may utilize Refuge agricultural fields. Farming and haying activities can result in direct short-term disturbances; however, the duration of disturbance would be short term, and the area affected would be limited. Additionally, adhering to the stipulations identified in this document will ensure that appropriate monitoring and avoidance will occur if breeding birds are present during planned agricultural activity. Refuge agricultural fields may benefit these species by providing forage and habitat (USFWS 2014).

Noise and physical disturbance caused by agricultural activities (such as mowing, haying, etc.) could adversely affect the burrowing owl. However, burrowing owls have been shown to commonly occupy and nest successfully in agricultural areas (Conway 2006; Moulton et al. 2006; Beebe et al. 2014). The Refuge croplands provide critical foraging and nesting habitat for burrowing owls, free from heavy pesticide use. Specifically, farming on the Refuge produces habitat for prey species like insects, rodents, and lizards and serves as an undisturbed nesting site for both adult and young burrowing owls. Farming activities are not expected to result in any significant adverse effects to the burrowing owl, all artificial burrows within the refuge boundary are marked and monitored on an annual basis while >95% of natural burrows are marked and monitored annually. All artificial and known natural burrows within the refuge boundary are identified through the application of neon spray paint and reflective tape fiberglass posts; operators of heavy equipment receive training on the significance of these markers, and ongoing enhancements are implemented to improve marker visibility.

Long-term impacts

The production of crops inherently forgoes the opportunity to restore agricultural land to a native plant community, which could potentially increase natural diversity within the Refuge. However, the benefits to wildlife—such as sandhill cranes and Arctic-nesting geese—outweigh this loss by providing essential foraging and nesting habitat for both migratory and resident birds.

By growing important winter forage, Refuge croplands provide habitat for sandhill cranes and Arctic-nesting geese. Specifically, grains like winter wheat and sorghum, as well as grasses like alfalfa, Sudan, and rye grass offer a high-carbohydrate maintenance diet for migratory wildlife in the winter and early spring.

The Imperial Valley supports 68.9% of California's burrowing owl population, with 521 pairs detected and an additional 5,887 pairs estimated (Wilkerson et al., 2010). Initially listed as a species of special concern, the Center for Biological Diversity petitioned in March 2024 for the State of California to list the Imperial Valley population as threatened (Miller, 2024). The Refuge croplands provide critical foraging and nesting

habitat for these owls, free from heavy pesticide use. Specifically, farming on the Refuge produces habitat for prey species like insects, rodents, and lizards and serves as an undisturbed nesting site for both adult and young burrowing owls. Mature wheat and Sudan grass stands also provide nesting habitat for passerines, Galliformes, and other raptor species.

Providing high-quality foraging habitat on Refuge croplands will also reduce the depredation of proximate private properties, thus reducing conflicts between the Refuge and private landowners.

Public Review and Comment

The public was provided the opportunity to review and comment on current and potential Refuge programs as part of the Comprehensive Conservation Planning process in 2013. This draft compatibility determination will be available for public review and comment for 15 days. The public will be made aware of this comment opportunity through emails to interested parties and posting on the refuge website. A hard copy of this document will be posted at the Refuge Headquarters (906 West Sinclair Road, Calipatria, CA 92233).

Determination

Is the use compatible?

Yes

Stipulations Necessary to Ensure Compatibility

1. Use of genetically modified organisms, such as Round-Up ready corn, is prohibited on Refuge lands per USFWS policy.
2. Only pesticides from a pre-approved Pesticide Use Permit obtained from the USFWS Pesticide Use Proposal System can be utilized on the Refuge. The use and application of all pesticides will adhere to all label instructions and requirements, as well as any BMPs identified in the Service's Pesticide Use Proposal System. All pesticides used will be reported to the Refuge Manager in the form of a notice of Intent and pesticide use reports. Notice of Intents must be provided at least 24 hours before any herbicide application activity and pesticide use reports must be submitted within seven days of application per California Department of Pesticide Regulation.
3. If the cutting of grass hay and harvesting of crops within the irrigated uplands occurs during a period when refuge management determines that there may be breeding birds, the actions must be preceded by a nesting ground bird survey to reduce harm to any nesting ground birds. Surveys must be done at least a week before any major cutting or harvesting activity.

4. Refuge staff will develop multi-year Cooperative Agricultural Agreements and annual Farming Plans, which provide direct benefits to migratory birds and other Trust responsibilities. These documents will provide the necessary information and assistance from the Refuge to determine the types of crops, acreages planted, and how farming is implemented on the Refuge.
5. The Cooperator will operate under the terms and conditions of a Cooperative Agricultural Agreement, Special Use Permit, and a Refuge Farming/Grazing Plan.
6. Only lands that were leveled, contain subsurface tile drainage systems, and were converted to agricultural uses prior to USFWS ownership will be included in the Refuge Farming Program.
7. Refuge staff will regularly monitor Cooperator compliance and maintain complete files on all farming activities.
8. Refuge staff will set the value of grazing to reflect current fair market values, monitor Cooperator compliance, and maintain complete files on all farming and grazing activities.
9. All Refuge Complex rules and regulations must be followed unless otherwise excepted, in writing, by the Refuge Manager.

Justification

The Sonny Bono Salton Sea National Wildlife Refuge was established to oversee and regulate migratory waterfowl and other wildlife, serving as an inviolable sanctuary, and to preserve fish, wildlife, or plant species designated as endangered or threatened. Farming to benefit wildlife at the Sonny Bono Salton Sea NWR, as outlined in this determination, is compatible with the Refuge's established purposes. The Cooperative Farming and Haying Programs will directly support the Refuge's goals, objectives, management plans, and activities. These programs will improve and enhance foraging conditions, promoting a high level of migratory bird use and reducing crop depredation in nearby agricultural fields.

The Salton Sea is a winter destination for many migratory birds, as abundant food resources in the region prepare wintering birds for spring migration and the upcoming breeding season (USFWS 2014). Although native vegetation provides higher levels of protein, fiber, and water than most agricultural crops, crops can provide easily accessible, high-energy foods that are more readily digestible than native plants and can reduce foraging time required to meet caloric demands (Alisauskas and Ankney 1992; Baldassarre and Bolen 2006; Raveling 1979). Studies have found that many species of geese in North America feed almost exclusively on agricultural lands during the winter (Bellrose 1980; Ely and Raveling 2011; Raveling 1990). Agricultural lands also provide benefit to other migratory birds, including wintering populations of sandhill cranes and a variety of other resident and migratory birds. In accordance

with Refuge purposes, the refuge cultivates agricultural crops in upland units to attract geese to the Refuge and away from commercial agricultural fields (USFWS 2014). By conducting farming through cooperative agreements and in accordance with management practices and stipulations described above, staff anticipate that the Refuge will provide adequate forage to meet wildlife and habitat goals and objectives identified in the Refuge's Comprehensive Conservation Plan and will contribute to the Refuge's established purposes.

The cooperative farming and grazing programs will not significantly impact public safety or existing recreational use of the Refuge. Instead, these programs will attract waterbirds, enhancing the wildlife-dependent recreational experiences of the public. Wildlife-dependent activities, including hunting, wildlife observation and photography, and environmental education and interpretation, are likely to benefit from these efforts and are already deemed compatible. These activities will not materially interfere with or detract from the Refuge System's purpose and mission and will contribute to the purposes for which the Refuge was established.

Signature of Determination

Refuge Manager Signature and Date

Signature of Concurrence

Assistant Regional Director Signature and Date

Mandatory Reevaluation Date

2035

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