Compatibility Determination

Use:
Agriculture – Cooperative Farming Activities

Refuge Name:
Cibola National Wildlife Refuge

County:
La Paz County, Arizona

Establishing and Acquisition Authority(ies):

The Cibola National Wildlife Refuge was established on August 21, 1964, by Public Land Order 3442. It was reserved for use of the … United States Fish and Wildlife Service, as the Cibola National Wildlife Refuge "and" … subject to their use for reclamation purposes.

Most of the refuge's lands were withdrawn from the public domain for refuge purposes or for the Colorado River Storage Project, although some lands were acquired in fee title. There are presently no non-federal parcels (in-holdings), within the refuge boundary. In addition, the Refuge owns the bottom of the existing Colorado River where the river bypasses the "old river channel" as well as the Arizona side of the old river channel's bottom. The Fish and Wildlife Service has a 49-year lease agreement on the California side of the "old river channel" bottom.

Refuge Purpose(s):

Cibola National Wildlife Refuge is the only refuge on the lower Colorado River designated as having the fundamental purpose of mitigating the negative impacts of channelizing the Colorado River below Parker Dam in the Blythe, California area. Its establishment was encouraged and recommended by the Lower Colorado River Land Use Plan in 1964.

National Wildlife Refuge System Mission:

The mission of the Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use:

The Refuge occupies an area of 18,444 acres and is located along 12 miles of the lower Colorado River in Imperial County, California and La Paz County, Arizona. It is about 20 miles south of Blythe, California, and about 42 miles north of Yuma, Arizona. The Refuge contains wetland and riparian habitats that are rare in this arid ecoregion of dry washes and desert bench lands. The Refuge is composed of the 600-acre Cibola Lake, approximately 10 miles of Colorado River

backwaters, numerous moist soil management fields, about 2,000 acres cooperatively managed agricultural habitat, and 785 acres of desert ridge and dry-wash land.

Cooperative farming is utilized to manage a portion of the Refuge's agricultural habitat. The Refuge administers a cooperatively-managed farmland in order to provide food and habitat for wildlife. Approximately 1,262 acres of agricultural land on the Refuge are farmed under cooperative agreements in order to provide food and habitat for wildlife. The Refuge has the following primary agricultural management subunits:

Farm Subunit One: Located in the Arizona North Management Unit near the headquarters and is approximately 892 acres in size. This subunit consists of approximately 732 acres of alfalfa, 130 acres of corn, and 30 acres of wheat. Small quantities of milo and rye have also been planted in the subunit to complement or act as a substitute for corn. Subunit One is closed to public entry with the exception of Canada Goose Drive.

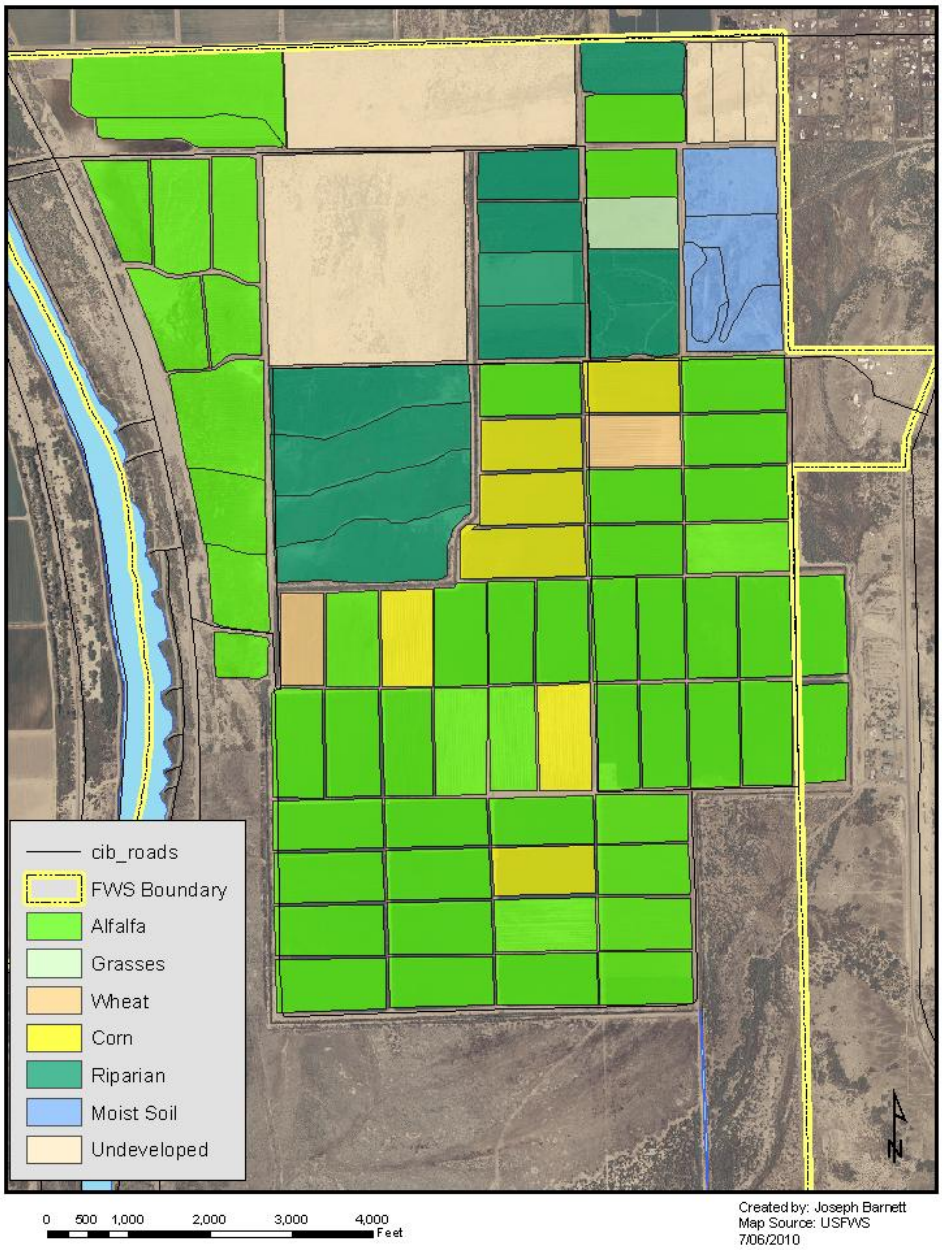

Figure 1: Farm Subunit One of Cibola National Wildlife Refuge, estimated 892 acres.

Farm Subunit Two: Located in the Hart Mine Management Unit near the center of the Refuge, this subunit suffers from severe alkalinity problems due to a high ground water table. The area once contained non-native vegetation until high water tables inundated and destroyed these trees. Most of the salt cedar trees remaining after 1988 were cleared by the cooperative farmer. This subunit consists mostly of alfalfa fields that were converted from Bermuda grass in 2006. Small

grain crops (wheat, rye, and peas) have been rotated in as experimental crop practices for wildlife forage. High salinity levels continue to degrade planted crops and force the return of Bermuda grass. This subunit is open to the public and is primarily used for goose hunting.

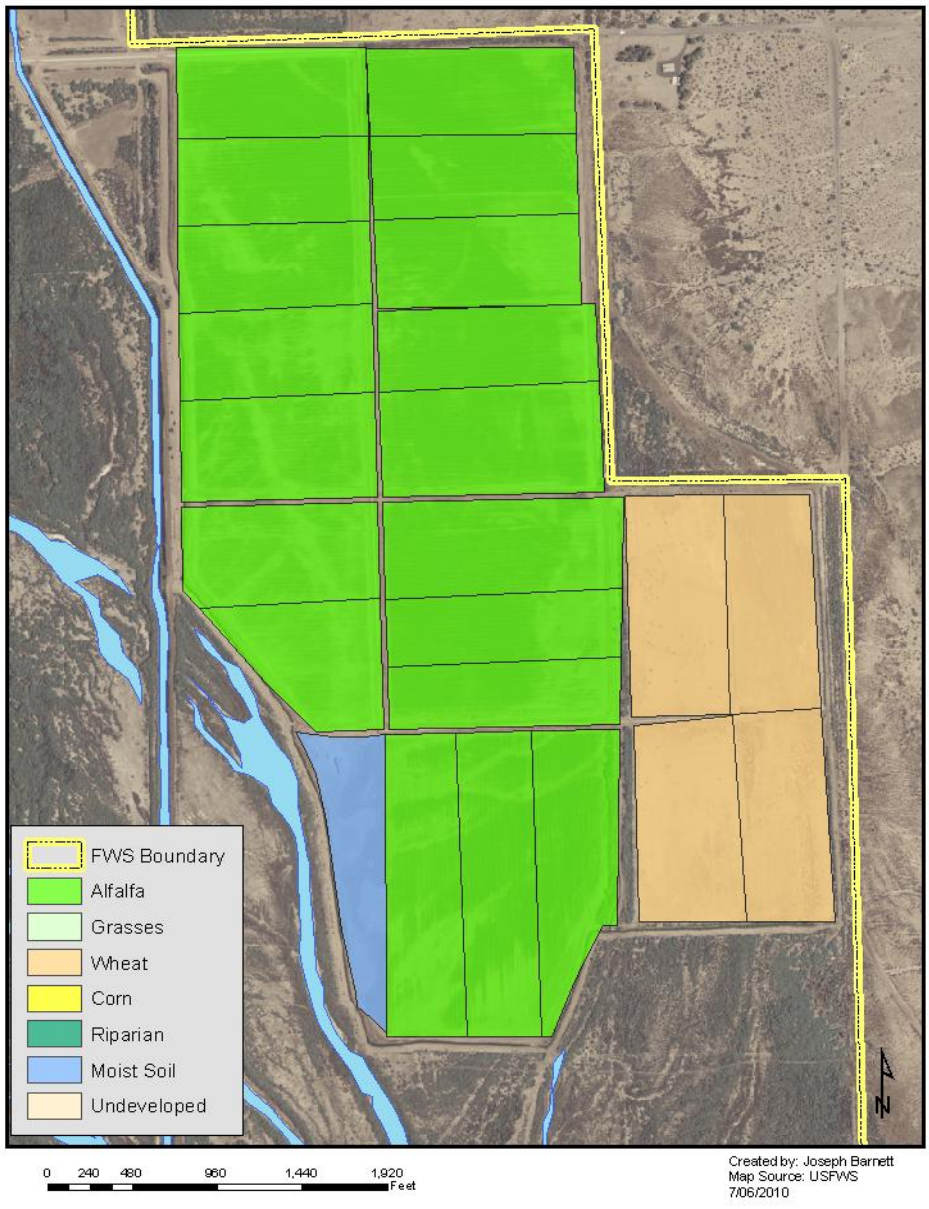

Figure 2: Farm Subunit Two of Cibola National Wildlife Refuge, estimated 300 acres.

Farm Subunit Three: This subunit sits within an area called the "Island Unit" and originally consisted of approximately 500 acres. Immediately following the floods of 1983, all farming ceased because of a high water table resulting in high alkaline conditions. Farming only

included refuge staff following the flood on around 160 acres and none of it was in a cooperative agreement. In recent years, a cooperative agreement has been established to cultivate approximately 70 acres of alfalfa on the north end of the unit. The remaining acreage that was once farmed in the subunit has been converted to moist soil managed wetlands, or has been reforested into mesquite or riparian habitat. This subunit is open to the public for waterfowl, mule deer, and upland game hunting.

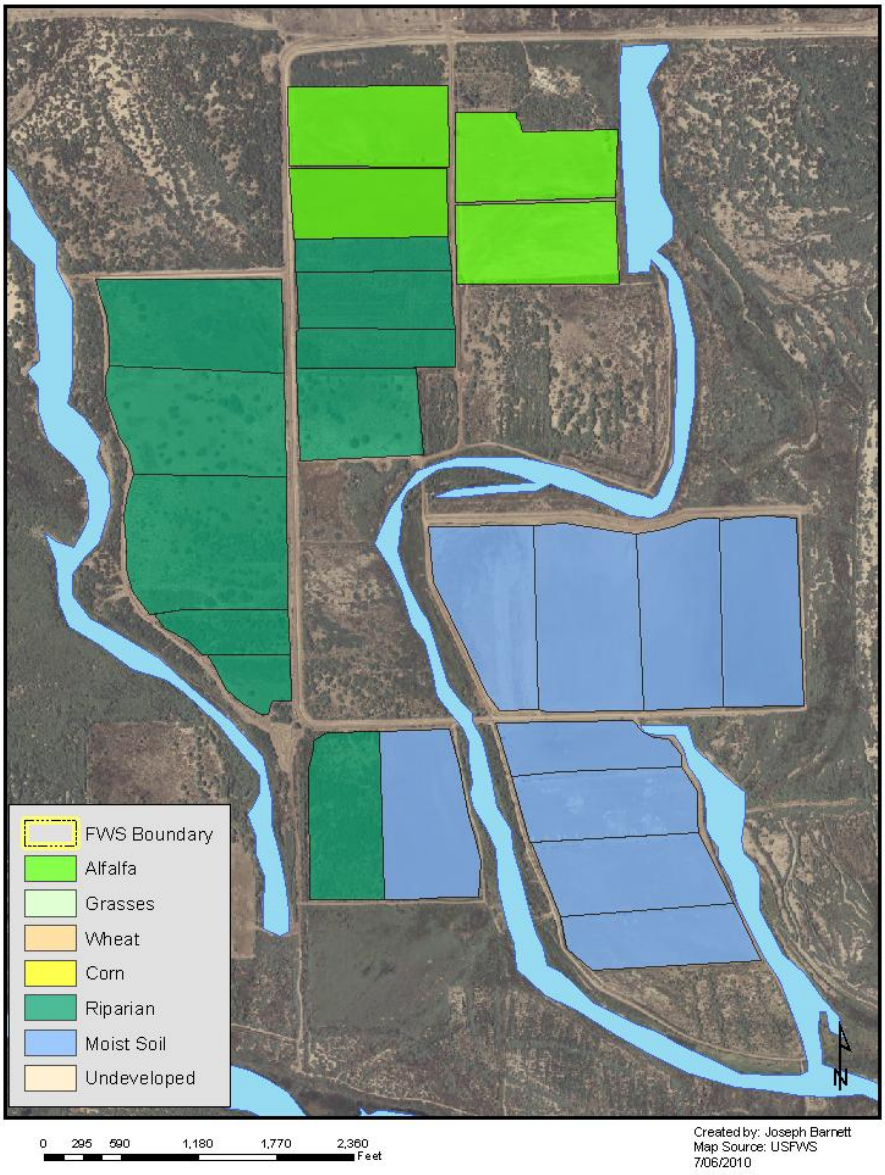

Figure 3: Farm Subunit Three of Cibola National Wildlife Refuge, estimated 70 Acres.

Approximately 1,262 acres of agricultural habitat on Cibola National Wildlife Refuge are cultivated to provide food for wildlife, and/or condition soils for future riparian habitat. The

acreage will vary depending upon the year and rotation of crops from alfalfa to corn. The alfalfa planting, growing, and harvesting season is from February to November of each year. Corn is planted in July each year and left un-harvested in order to provide waterfowl forage throughout the winter. Wheat, rye, or other small grains may also be included in the rotation depending on its benefit to wildlife. Alfalfa and other small grain crops (wheat, rye, and peas) are harvested during the summer and left for green browse in the winter. Currently, cooperative farmers manage 100% of the total agricultural acreage on the refuge.

The largest portion of the agricultural acreage is in the farm subunit one. Alfalfa is the largest crop grown and harvested by farmers but left as green browse throughout the winter season. Corn is planted in July and is the second largest crop grown. It is left un-harvested for waterfowl forage in the winter, and remains standing until bumped or mown down for free feeding by all wintering waterfowl**.** The cooperative agreement for subunit one identifies a 75/25 crop share agreement. Under this agreement an average crop rotation is 732 acres alfalfa and 130 acres corn. Less than 30 acres of other small grain crops (wheat and ryegrass) can be planted in the rotation that will benefit other migratory birds which includes dove and songbirds.

Farm subunit two is also farmed entirely under cooperative agreement, but done entirely to help maintain and/or remediate soil salt conditions. All of the area is planted in alfalfa or other small grain crops in a rotation to keep soil salinities from increasing. The entire unit is designated as a public goose hunting area from November through January. All crops planted (alfalfa, wheat, peas, and ryegrass) are beneficial to mule deer, songbirds, and other wildlife. The crops are harvested in summer but left as a green browse in the winter for geese, cranes, deer, and other wildlife. The future management of this farm unit has potential to change due to its hydrological connection with ground water levels in Hart Mine Marsh and the Colorado River.

Farm subunit three is partially managed by Refuge staff as moist soil wetlands, reforested riparian habitat, and also partially managed under a cooperative farming agreement. Only 70 acres of the unit are managed as a farm unit planted in alfalfa. All alfalfa planted is harvested between February and November, but left as green browse in the winter for geese, cranes, deer, and other wildlife. A crop of small grains (wheat, rye, and peas) can be planted in the rotation and harvested in summer allowing a green browse throughout the winter. The remaining acres in the unit are designated as semi-perennial wetlands, moist-soil wetland, or restoration areas.

Crop Rotations: All alfalfa/corn crop rotations are done so on a 4 to 5 year crop rotation due to the number of fields available in each subunit. Subunit one has a total of 50 fields in the rotation allowing 3 or 4 growing seasons of alfalfa, followed by one year of corn and some introduction of small grain crops (barley, millet, wheat, or oats**).** Small grain crops may be allowed to mature into grain for wildlife, plowed under as green manure, or harvested and used as nursery crops when planting the following year. The same rotation may apply to subunits two and three depending on soil conditions and the need for other forage crops for wildlife.

Alfalfa and other small grains (wheat, peas, and ryegrass) provide a source of green browse during the fall and winter months for geese, cranes, deer, and other wildlife. Corn provides high carbohydrate forage used by waterfowl, deer, and other wildlife during the colder months of winter. All crops planted in subunit two (alfalfa, wheat, peas, and ryegrass) are beneficial to

mule deer, songbirds, and other wildlife. These crops also benefit the soil by keeping salinities from increasing.

Integrated Pest Management practices are employed on the refuge to control plant pests. The Refuge and cooperative farmers apply only pesticides that are approved through the Pesticide Use Proposal process. The cooperators use pesticides to control weeds, but pesticide application is limited to prevent harm to non-target plants, water quality, or wildlife using refuge agricultural land. Service policy requires that only minimal amounts of pesticides are used on refuge lands. Some mechanical cultivation practices are used to control plant or weed growth instead of pesticide application. Mowing and discing methods are primarily used to control plants without the use of pesticides.

Availability of Resources:

Funding and staff are at a minimal level but are currently available to oversee the cooperative agricultural program. Cultivating and planting of agricultural crops that benefit wildlife are completed solely through cooperative farming and not by force account (refuge staff/funding). The Refuge does not have adequate staffing and funding to conduct an agricultural program carried out solely by Refuge staff at this time. The cost of fuel, equipment, seed, fertilizers, herbicides, and electric pumping costs for irrigation would be far too great for the Refuge to handle through its current staffing and budget. Currently Refuge staff responsibilities include administering Annual Cooperative Farming Agreements (10 hours), completing corn crop surveys (60 hours), managing pesticide use proposals and pesticide reporting (60 hours), assisting with crop rotation planning, and cooperative farm correspondence (planning, utilities, pumping, and repairs – 120 hours) that requires a minimum of 250 staff hours each year.

Anticipated Impacts of the Use:

<u>Short and Long-term Impacts:</u>
Agricultural and farming activities on the Refuge are directly related to and support the purposes for which the Refuge was established. The authority to undertake reclamation and restoration activities that enhance habitat condition is supported by an agricultural program that provides feeding and resting areas for wildlife. Farming will result in short-term disturbances and long-term benefits to both resident and migratory wildlife using the Refuge. Short-term impacts will include disturbances and displacement of wildlife that is typical of any heavy equipment operation.

Mowing and discing of agricultural fields may cause top soil loss and ground disturbance. These activities could cause the spread of invasives by preparing the seed bed and the seed dispersal of undesirables. The impacts of these activities are minimal and incidental, and therefore have little to no effect with benefits for the Refuge far outweighing the small chance occurrence of spreading of invasives or top soil loss. Maintaining agricultural areas also limits encroachment by undesirable woody species, and helps remove standing vegetation in areas being prepared for native plant restoration.

Positive long-term benefits result in providing food/habitat for migratory and resident wildlife, and minimizing crop depredation on neighboring farms. The crops grown on the Refuge provide food for an estimated wintering population of 7,000 Canada Geese, 1,000 Lesser Snow Geese, 2,800 Greater Sandhill Cranes, and as many as 25,000 ducks.

The current field conditions are fair to good, and the available habitat for wildlife is scattered throughout the Refuge in a diverse mosaic of wetland, riparian, and upland areas. Continuing the management of current agriculture activities will maintain and help increase the quality of the soils long term, and provide quality habitat for migratory and resident wildlife on the Refuge.

Pesticide use is limited to prevent or reduce acute or chronic adverse effects to wildlife. While some disturbance to ground nesting birds may result from the harvesting operations, the timing of harvests will be planned carefully and modified to minimize the impact to occupied nests.

Cumulative Impacts:
Farming only occurs on lands that have been previously cultivated. The impacts described above are minimal and short-term. The proposed action is not expected to incrementally add to any other state, private, or federal actions that are proposed or currently occurring in the area. The proposal benefits numerous wildlife species and supports hunting, wildlife observation, wildlife photography, environmental education, and interpretation. This activity does not significantly impact other Refuge activities or wildlife populations locally or nationwide.

Public Review and Comment:

A public comment period was held for the Cibola National Wildlife Refuge draft Environmental Assessment and Compatibility Determination between November 1st and December 5th of 2010. The Refuge distributed a news release to 19 local media outlets including Yuma Business Direct, Yuma Sun, Western Agri-Radio Networks Inc., 12 radio stations, and 4 television news networks. The Refuge simultaneously posted a public notice that established a 35-day comment period with a scheduled culmination date of December 5, 2010. The public notice was posted at the Cibola National Wildlife Refuge and at the public library in Blythe, CA.

During the public comment period the Refuge received a total of one comment. The comment was an email on behalf of Linda Taunt, Deputy Division Director of the Arizona Department of Environmental Quality, Water Quality Division. This email was thoroughly reviewed and the Refuge will continue to work cooperatively with the state to incorporate its suggestions into future projects while abiding by our Pesticide Use Proposal process (PUP) and Best Management Practices (BMPs).

Determination (check one below):

___ Use is Not Compatible
_X_ Use is Compatible with Following Stipulations

Stipulations Necessary to Ensure Compatibility:

Service policy, directives, and instructions in the Service Manual require reporting on farming and chemical weed management.

Justification:

The agricultural program supports the Refuge purposes by providing foraging areas for wildlife and by contributing to a diversity of habitat types. The acreage managed by farmers under a cooperative agreement greatly reduces the budgetary and manpower requirements that would be needed if the Refuge staff farmed all of the cropland. Cropland farming benefits wildlife by providing and maintaining alfalfa and small grain areas for feeding and resting, and corn crops for feeding and safe concealment areas. Maintaining agricultural areas also limits encroachment by undesirable woody species, and helps remove standing vegetation in areas targeted for native plant restoration.

Refuge croplands supplement natural food sources on the Refuge and provide undisturbed areas where wintering waterfowl can forage. Mule deer and other resident wildlife indirectly benefit from refuge agriculture areas by using fields for safety and concealment, for fawning grounds or foraging areas. Additionally, wildlife viewing opportunities are enhanced through concentrating birds in agricultural areas, while providing an "edge effect" along farm fields, irrigation canals, and drains. Agricultural fields and adjacent irrigation canals continue to be important nesting and feeding areas for numerous burrowing owls found scattered throughout Farm Subunit One of the Refuge.

Signature: Complex Manager 12-9-2010
(Signature and Date)

Concurrence: Regional Chief 12/15/10
(Signature and Date)

Mandatory 10-year Re-Evaluation Date (for uses other than the six-priority wildlife dependent public uses): 2020