

Compatibility Determination

Use: Agriculture - Cooperative Farming Activities

Refuge Name: South Texas Refuge Complex (STRC)
Lower Rio Grande Valley National Wildlife Refuge (LRGV NWR)
Laguna Atascosa National Wildlife Refuge (LA NWR)

Establishing and Acquisition Authorities:

- Fish and Wildlife Act of 1956 [16 U.S.C. 742f(a)(4)], [16 U.S.C. 742f(b)(1)]
- An Act Authorizing the Transfer of Certain Real Property for Wildlife, or other purposes [16 U.S.C. 667b]
- Refuge Recreation Act, as amended [16 U.S.C. 460k-1], [16 U.S.C. 460k-2]
- Migratory Bird Conservation Act [16 U.S.C. 715d]
- National Wildlife Refuge System Improvement Act of 1997

Refuge Purpose(s): As excerpted from the enabling legislation used to authorize the acquisition of the Refuge, the following are the Refuge purposes:

“... 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 ...” [16 U.S.C. 742f(b)(1)] (Fish and Wildlife Act of 1956)

”... particular value in carrying out the national migratory bird management program.” [16 U.S.C. 667b] (An Act Authorizing the Transfer of Certain Real Property for Wildlife, or other purposes)

”... suitable for: (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” [16 U.S.C. 460k-1] “... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” [16 U.S.C. 460k-2] (Refuge Recreation Act [16 U.S.C. 460k-460k-4], as amended)

”... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” [16 U.S.C. 715d] (Migratory Bird Conservation Act)

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System is “to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of

Americans.” (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee])

Description of Use:

(a) What is the use?

Cooperative farming is utilized to manage a portion of the Refuge’s croplands.

(b) Where is the use conducted?

Of the 92,740 acres in LRGV and 97,007 acres at Laguna Atascosa (total of 189,747 ac), only 7,995 acres (4.2%) were available for farming in FY2010. During the Fall 2009 through Summer 2010 farming season 7,995 acres were available for farming although only 7,401 acres (4%) were actually farmed. Of the total acres available, the main crops grown were sorghum (7,069 ac = 88.4%) and corn (roundup-ready) (316 ac = 3.9%). The remaining acres were in fallow fields (381 acres=4.8%), vegetables such as onions and watermelons (16 ac = 0.2%), and 213 acres (2.7%) of cropland were removed from production and planted back to native brush (Table 1).

(c) When is the use conducted?

Cooperative farmers produce and harvest agricultural crops on Refuge croplands under annual agreements from September 1 through August 31 of the following year.

(d) How is the use conducted?

The Cooperative Farming Program has existed on LRGV NWR since 1980 and at Laguna Atascosa since the 1950’s. The program was phased out at Laguna Atascosa until new lands were acquired and added to the refuge that were farmland at the time of acquisition. Over the years the program has evolved as more knowledge was acquired regarding native habitat restoration techniques and as more resources became available to the Refuge.

Farmers keep all crops produced in exchange for habitat restoration activities they complete on the cropland they are assigned. These activities include: providing native brush seedlings, soil preparation, planting, irrigation, and invasive species control. The Cooperative Farming Program accounts for more than 95% of the native brush restoration projects completed each year.

(e) Why is this use being proposed?

The Refuge manual states that objectives for farming can include “prevention of the invasion of undesirable brush or trees (6 RM 4.2(D))” and”control of noxious weeds...(6 RM 4.2(E))”.

Land acquisition is still ongoing within the four-county Refuge acquisition area on scattered tracts, and the majority of the land that is acquired is intensively farmed cropland. By maintaining these lands in crop production until they can be planted back to native brush species, the farmers are preventing these lands from being invaded by non-native, invasive grasses that would require additional time, funding and manpower to control prior to restoration if the land was left fallow. The invasive grass species are primarily bufflegass, Guineagrass, Kleberg bluestem, Johnson grass and Bermuda grass.

Table 1. Summary of STRC Cooperative Farming Program FY 2010.

Tract	Tract Size Ac	Amt Farmland Ac	Amt Farmed Ac	Milo	Corn-rr*	Soybeans	Onions	Veggies	Fallow Ac	Reveg Ac
Monte Christo	2,701	1,717.7	1,717.7	1,717.7					0.0	0.0
Ranchito	3,815	1,123.8	1,123.8	1,123.8					0.0	0.0
Goodfields	358	38.3	3.2	0.0				3.2	35.1	0.0
La Coma	720	155.5	155.5	34.9	120.6				0.0	0.0
Marinoff	432	60.8	57.0	57.0					3.8	0.0
Rancho Viejo	1,692	131.8	77.8	77.8					0.0	54.0
Southmost	336	185.1	185.1	185.1					0.0	0.0
Sal Del Rey	5,381	1,558.2	1,268.2	1,268.2					290.0	0.0
Los Ebanos	1,199	298.2	298.2	298.2					0.0	0.0
La Joya	2,154	392.9	392.9	392.9					0.0	0.0
Anzalduas	163	156.6	126.7	126.7					5.6	24.3
Caballero Banco	248	184.3	184.3	184.3					0.0	0.0
Tocayo-LANWR	427	375.0	324.2	324.2					0.0	50.8
La Casita	1,495	1,041.4	1,041.4	845.9	195.6				0.0	0.0
La Casita W	531	189.4	189.4	189.4					0.0	0.0
Los Fresnos Banco	567	197.4	123.5	110.7			12.7		35.2	38.7
Valadeces Banco	208	189.1	132.3	132.3					11.5	45.3
Total	22,427	7,995.5	7,401.2	7,069.1	316.2	0.0	12.7	3.2	381.2	213.1
Percent of Total		35.65	92.57	88.4	3.9	0.00	0.16	0.04	4.7	2.7
Percent of Farmed				95.5	4.3	0.00	0.17	0.04		

*Roundup-ready corn (Corn-rr) was planted at La Casita and La Coma but roundup was not used due to adverse weather conditions.

Approximately 300-500 acres of Refuge lands are being restored to native habitat each year. The restoration program is currently undergoing changes due to new information acquired through adaptive management. Restoration sites are primarily bare-dirt croplands removed from production, although sites may also be former restoration sites that had limited success, and abandoned lands which will be enhanced to help connect adjacent tracts or to meet density and/or diversity goals.

As part of the farming program, and to help meet the complex’s goal of converting cropland back to native brush habitat, the use of genetically modified crops (GMCs) was allowed on some sites for about three years. The many scattered tracts of land that make up the refuge are essentially islands in a sea of non-native invasive grasses and non-native invasive grasses can quickly take over a field planted to native brush species and out-compete new seedlings and/or provide fine fuels that burn frequently and destroy native species. The majority of the lands are

dry-land type sorghum farms with no reliable irrigation. Without irrigation, use of GMC corn or soybean crops is not economically sound due to the high initial cost of GMC seed. During the 2009-10 farming season only 3.9% of the acres available for farming were planted to GMC's (Roundup-ready corn –Table 1). Because GMCs were used infrequently by cooperators, the use was discontinued for the 2011 farming season and into the future.

Availability of Resources:

Administration and oversight of Annual Cooperative Farming Agreements requires about 1,000 staff hours each year. The cooperators provide all supplies and equipment to farm the lands under their agreements. As Refuge tracts are fully restored, the amount of effort will be reduced. However, any additions of cropland to the Refuge through acquisition will require additional effort. The entire lower Rio Grande Valley area is experiencing rapid urbanization. As this occurs, more and more cropland is being converted to urban uses, making remaining cropland more valuable for producing vegetables and grains. This means that there should be a demand for use of Refuge croplands as long as they exist. Because the majority of the restoration work is funded by the cooperators, there should be ample resources for accomplishing needed site preparation and planting operations for the foreseeable future. Currently, the limiting resource for the restoration program is availability of native brush species in quantities necessary to restore sites with the desired density and diversity.

Anticipated Impacts of the Use:

Short-Term Impacts – The Cooperative Farming Program is designed to restore native habitat on Refuge lands. After habitat is restored, all farming operations will be eliminated permanently. At 400 acres per year, the currently farmed area of approximately 7,800 acres can be restored in about 20 years. However, because new croplands are being acquired and abandoned or fallow lands are being restored, it is uncertain when all restoration activities will be complete. For the existing croplands, any potential negative impact to soil and water resources will be temporary in nature.

Soil impacts will be minor. Erosion due to farming practices is the most significant concern regarding the Farming Program. Farming agreements are for 1-year terms so practices can be amended as necessary to minimize any major soil erosion that may occur.

Impacts to water resources include minor increases in siltation and turbidity due to runoff and the potential for some minor contamination from agricultural chemicals. Restrictions on the types of chemicals that can be used and recommended buffers around water bodies significantly reduces the potential for contamination.

The short term impact on native vegetation is minor, since most native vegetation was eliminated on Refuge croplands before they were acquired by the Service. Once cropland is removed from production and planted to native species, native vegetation will become dominant.

Cropland has little value to most wildlife in the area of the Refuge. However, because corn and grain sorghum are the primary crops grown on the Refuge, there is at least some benefit to

wildlife from waste grain left after harvest. Also, as adjacent fields are planted to native habitat, wildlife populations will increase and use remaining cropland more frequently.

Long-Term Impacts – As croplands and other sites are restored to native habitat, all farming activities are eliminated. This, in turn, will eliminate or reduce soil erosion, improve water quality, and eliminate the potential for agricultural chemical contamination of wetlands. The long term effect on wildlife populations will be extremely positive. As native habitat matures it will provide habitat for a wide variety of wildlife.

Cumulative Impacts – Continuing the cooperative farming program is essential to restoring Refuge lands to native habitat. If allowed to remain fallow for more than one year, these lands would become non-native, invasive grass savannahs. Without the program, huge amounts of manpower and funding would be needed annually just to maintain the Refuge lands in their current condition. Restoration of these lands using only existing force-account labor and materials would slow progress to a fraction of the current rate. Farming only occurs on lands that have been previously farmed. 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:

This compatibility determination was made available for public review and comment by posting the Draft CD at the Visitor Center from November 1-December 5, 2010. No comments were received.

Determination (check one below):

- Use is Not Compatible
- Use is Compatible With the Following Stipulations

Stipulations Necessary to Ensure Compatibility

Cooperative Farmers are managed under Cooperative Agreements on an annual basis. The annual issuance of cooperative farming agreements that include special conditions for conducting the activity, along with routine inspections of the fields to insure compliance with the terms of the agreements, will ensure that compatibility is maintained. The services necessary to justify their access to Refuge lands for farming is based on services that prepare the land properly for habitat restoration and prevent or reduce invasive species. Crop varieties allowed are restricted to grains and vegetables that are not dependent upon intensive chemical use (cotton and sugar cane are not allowed). Farmers are restricted in their use of pesticides to only those chemicals approved through the Pesticide Use Proposal process. Use of Refuge water rights for

irrigation is accomplished through a Service employee to ensure tracking of water use is monitored. Upon obtaining sufficient native plants of the correct variety of species, lands will be removed from cultivation and converted to wildlife habitat. The availability of native species seedlings is the current limiting factor toward completing the Refuges' restoration objectives.

Justification:

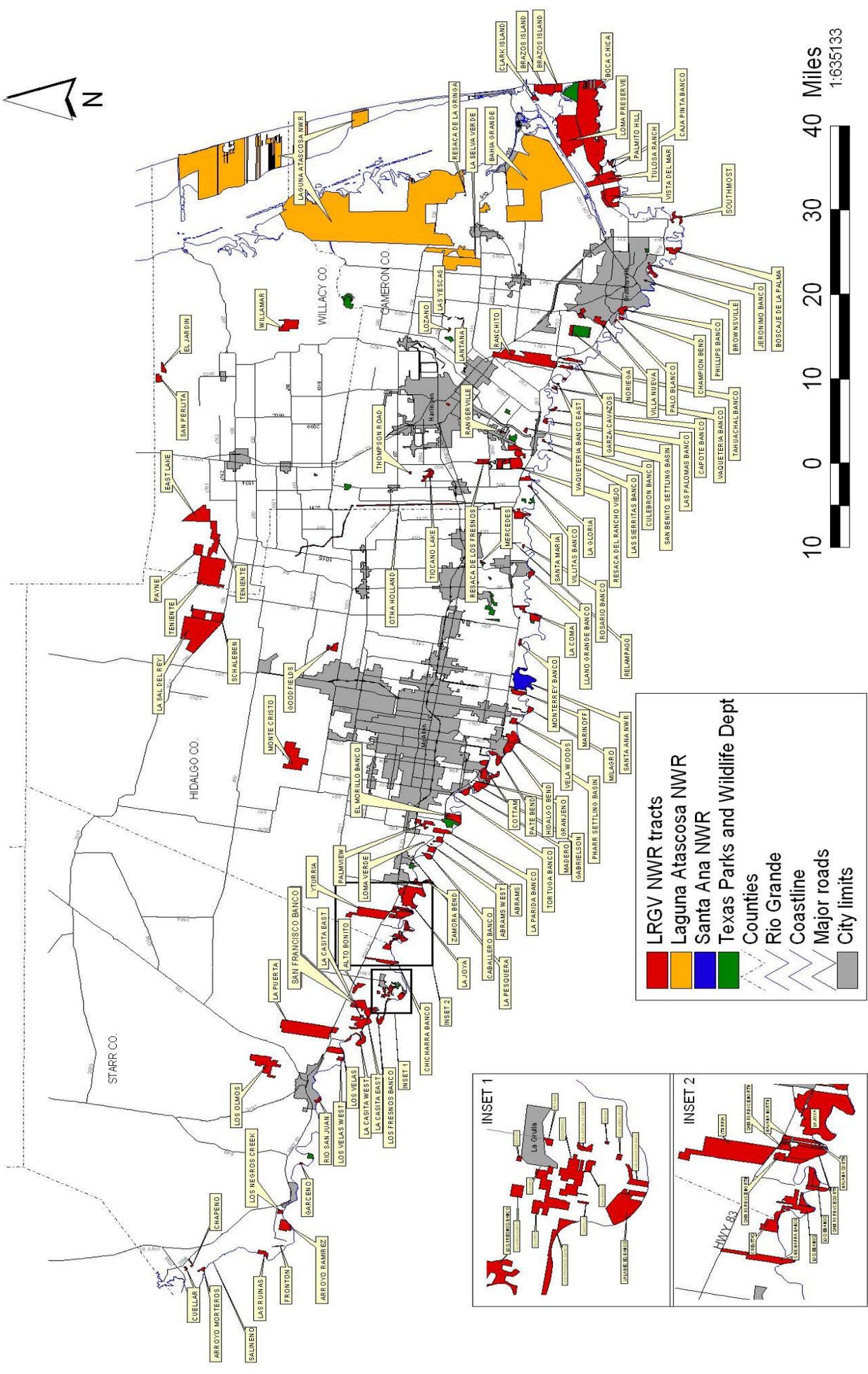
The Cooperative Farming Program is critically important to the Refuge. Lands added to the STRC Refuges have included native habitat, farmlands, and a variety of the two. More often than not in recent years, new lands added to the Refuges were poor quality habitat (that requires reforestation or augmentation) or cropland. Cooperative farming on the Refuge is consistent with local practices and is accomplished on land suitable for such management. These croplands are kept in agricultural production until some point in the future when the cooperators' in-kind services fully restore the land. This can, and has, taken up to 15-20 years, depending upon the size of the tract. It is very important that lands are managed as croplands and kept as bare dirt in between crops to ensure that one of several invasive grass species does not invade between the time of land acquisition and at some point in the future when sufficient native plant seedlings of the proper variety are obtained to complete the full habitat restoration at the site.

Signature: Refuge Manager *Peyan R Winton* 12-16-2010
(Signature and Date)

Concurrence: ^{Acting} Regional Chief *Tony Sade* 12-21-10
(Signature and Date)

Mandatory 10-or15-year Re-evaluation Date: Dec 2020

LOWER RIO GRANDE VALLEY WILDLIFE CORRIDOR



LRGV NWR tracts
 Laguna Atascosa NWR
 Santa Ana NWR
 Texas Parks and Wildlife Dept

Counties
 Rio Grande
 Coastline
 Major roads
 City limits

