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CITY OF CAPE CORAL
HABITAT CONSERVATION PLAN

February 2011
Rev. March 2011
Rev. June 2011
Rev. September 2011

Prepared by:

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CAPE CORAL HABITAT CONSERVATION PLAN

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Executive Summary

The City of Cape Coral (Applicant) has developed this City-wide Habitat Conservation Plan (HCP) as part of a future application for an Incidental Take Permit (ITP) from the U.S. Fish and Wildlife Service (USFWS), pursuant to Section 10(a)(1)(B) of the Endangered Species Act. The HCP was developed to address impacts to the state and federally threatened Florida scrub-jay (*Aphelocoma coerulescens*) that will result incidental to the development of currently occupied scrub-jay habitat at the City-owned Festival Park site and nearby privately owned residential lots that may be utilized by Florida scrub-jays.

This HCP is the result of a City-wide study conducted under an ESA Section 6 Planning Grant that was awarded to the Applicant in Fiscal Year 2008-2009 by the USFWS to determine the need to implement an HCP to resolve conflicts between development and federally listed species within the City of Cape Coral. This study included research and field reviews to determine which federally listed species occur within city boundaries, the species potentially affected by development, and which species would most benefit by inclusion within a citywide HCP. The Florida scrub-jay was found to be the only federally listed species currently occurring within the city and under imminent threat from development.

The proposed action consists of the development of Festival Park and all other occupied Florida scrub-jay habitat within the City of Cape Coral. Festival Park is located in Section 27, Township 43S, Range 23E in the City of Cape Coral, Lee County, Florida. Festival Park is a 215-acre parcel of which most has been purchased by the City for eventual development to public recreation uses. Three families of Florida scrub-jays have been documented within sub-optimal habitat at Festival Park, and take of this species will occur, incidental to the continued public use and development of Festival Park. The Applicant is requesting that the ITP authorize, for a period of 25 years, the take of three Florida scrub-jay families occupying 75 acres of habitat in Festival Park and nearby residential properties. Suitable habitat for the Florida scrub-jay does not occur elsewhere within the City, and results of surveys conducted in 2009 indicate no other occurrence of this species within Cape Coral. The City-wide HCP is being requested to cover nearby residential properties that could potentially be utilized by scrub-jays currently residing at Festival Park. Because of the poor quality of habitat, habitat fragmentation, and threats typical of suburban environments, the long-term viability of the three family groups at Festival Park is very low.

Measures will be taken to minimize impacts by conducting all construction outside of the Florida scrub-jay nesting season. Mitigation will take place in the form of restoration and long-term management of 125 acres of high quality scrub-jay habitat located on parcels within the Alva Scrub Preserve, Lee County Conservation 20/20 lands, in an effort to increase the local population of scrub-jays utilizing the regional network of public lands. The biological goals of this HCP include conducting restoration and long-term management of scrub habitat specifically for Florida scrub-jays on public lands, and to

contribute to the establishment of a long-term viable Florida scrub-jay population in Lee County.

Lee County Conservation 20/20 staff will be responsible for the long-term vegetation monitoring and management, the scrub-jay monitoring program, and annual reports to USFWS after the five-year post-restoration period is complete. The Applicant will provide the funding for the initial habitat restoration activities and the long-term management and monitoring.

The Plan Area for this HCP includes the entire geographic limits of the City of Cape Coral and the proposed mitigation areas, which include parts of Alva Scrub Preserve Parcel 325 (ASP 325) and Alva Scrub Preserve Parcel 357 (ASP 357). The Florida scrub-jay is the only species requested to be covered under this HCP.

1.0 Introduction

1.1 Overview

The City of Cape Coral (Applicant) has developed this Cape Coral Habitat Conservation Plan (HCP) as a result of citywide efforts to resolve conflict between human development and conservation of federally listed species. Proposed development of Festival Park and other nearby parcels occupied by the federally-listed threatened Florida scrub-jay (*Aphelocoma coerulescens*) (scrub-jay) will result in "take" of the scrub-jays.

A small population of scrub-jays, consisting of three family groups, has been documented on and immediately adjacent to the City-owned Festival Park site (Figure 1-1). Surveys conducted by W. Dex Bender & Associates, Inc. in 2009 concluded that approximately 75 acres of occupied scrub-jay habitat exist in this area. City-wide surveys conducted in 2009 revealed no other scrub-jays or suitable scrub habitat within the City of Cape Coral. The City intends to develop Festival Park to a multi-use recreational complex to benefit Cape Coral citizens and visitors. This development, as well as the development of nearby residential parcels, would impact habitat occupied by the scrub-jay and thus place the City of Cape Coral and residential lot owners in violation of federal and state law.

This HCP is being developed as part of a future application for an Incidental Take Permit (ITP) from the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 10(a)(1)(B) of the Endangered Species Act (ESA) of 1973, as amended. The Applicant is requesting that the ITP authorize take of the scrub-jay for a period of 25 years, incidental to development of properties within the City of Cape Coral.

1.2 Background

In Fiscal Year 2008-2009, the City of Cape Coral was approved to receive an ESA Section 6 Planning Grant from the USFWS for the development of a citywide HCP. HCP planning efforts have included research and field studies to determine the protected species occurring within the City, those potentially affected by development, and which species would most benefit by inclusion within a citywide HCP. The scrub-jay was found to be the only federally listed species currently occurring within the city and under imminent threat from development.


Mapped Extent
City of Cape Coral
Legend
Festival Park
N
0
600
Feet
Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 1-1
Festival Park
QUEST ecology
735 Lakeview Drive
Wimauma, FL 33598
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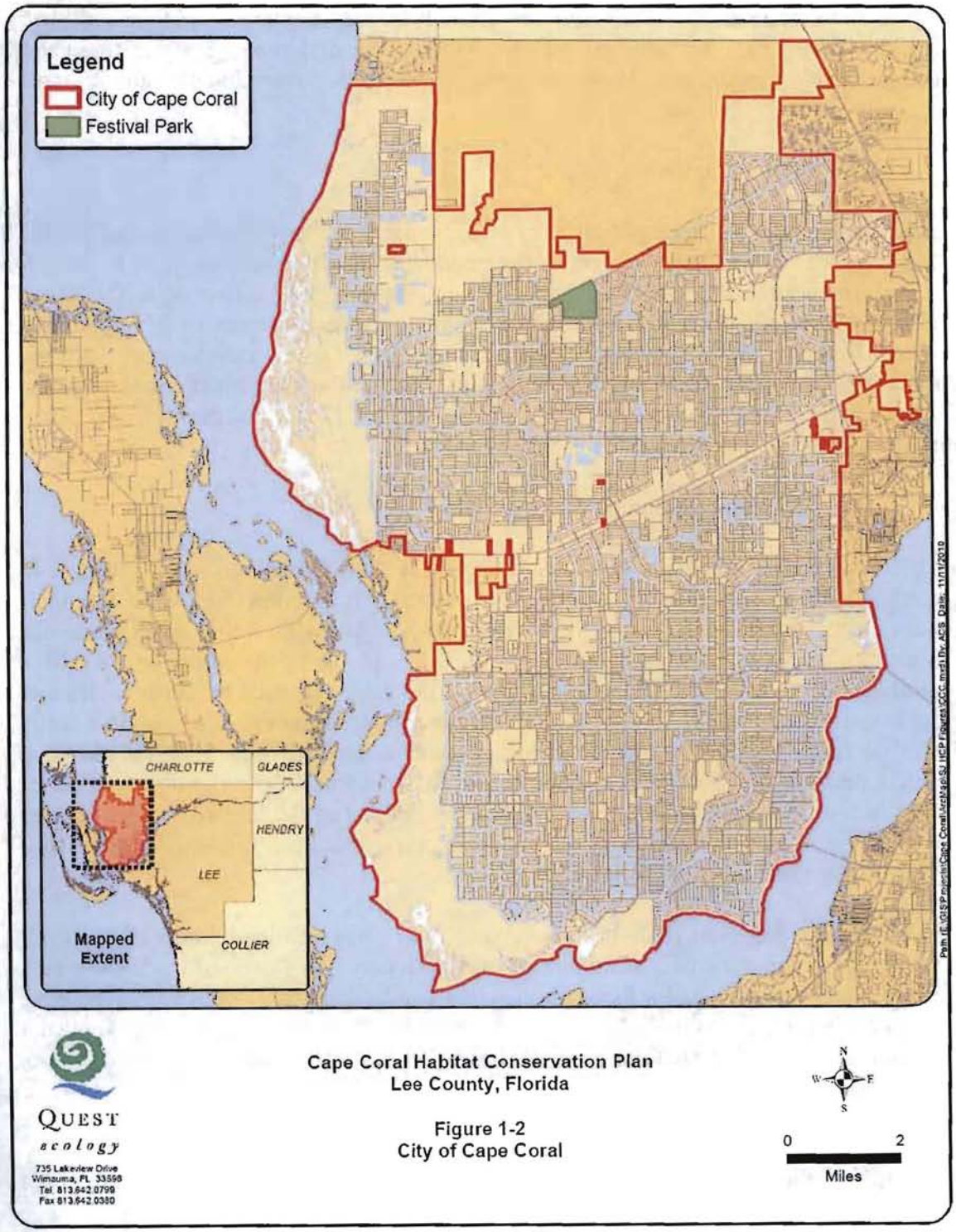
1.3 Proposed Action

The proposed action consists of the development of Festival Park and nearby private residential parcels. Festival Park is an approximately 215-acre area designated by the City of Cape Coral, and located in Section 27, Township 43S, Range 23E in Lee County, Florida (Figure 1-2). The site consists of cleared lots and associated roadways, with a large man-made lake, accessing the largest fresh-water canal system in the Cape. The lots are mowed regularly, and vegetation is limited to primarily turf grasses and scattered shrubs. Portions of the site are currently utilized for a remote control model airplane park and storage for spoil material. Florida scrub-jays have been documented on the site by City of Cape Coral staff, and the territories of three family groups were confirmed on site via detailed field surveys conducted in April and May of 2009 (Appendix A). Take of scrub-jays will occur as a result of the development of 75 acres of occupied Florida scrub-jay habitat at Festival Park and development of nearby residential parcels. Measures will be taken to minimize impacts to the resident scrub-jays during construction, to include conducting all construction outside of the nesting season within occupied habitat. Mitigation will take place in the form of habitat restoration and long-term management of 125 acres of high quality scrub-jay habitat located on Lee County Conservation 20/20 lands, in an effort to increase the local population of scrub-jays utilizing these public lands. The City of Cape Coral will provide the funding for the initial habitat restoration activities and the long-term management and monitoring. Details of the mitigation plan, restoration activities and long-term management and monitoring plans are provided in Section 4.0 of this document.

1.4 Purpose and Need

The purpose of this HCP is to allow for the lawful development of publicly owned lands for recreational uses and privately owned lands for residential use, while ensuring viable populations of scrub-jays are maintained regionally in the long term. The need for the development of an area that will serve as a festival gathering area is apparent in Cape Coral. This issue was raised numerous times in public workshops and in written survey comments. Currently, Cape Coral has no true designated special event or gathering area. Special events are typically held within downtown Cape Coral along Cape Coral Parkway or in City-owned parking lots. Private property in Tarpon Point in southwest Cape Coral was frequently used in the past; however, that area is no longer available for events, as development takes shape. The vision of Festival Park was identified in the Council-adopted Parks Master Plan in 2002, and this designated special event/gathering area will provide the opportunity for thousands of individuals to participate in activities in a safe location.


Legend
City of Cape Coral
Festival Park
CHARLOTTE
GLADES
HENDRY
LEE
COLLIER
Mapped Extent
QUEST
ecology
735 Lakeview Drive
Wimauma, FL 33598
Tel 813.642.0799
Fax 813.642.0380
Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 1-2
City of Cape Coral
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Miles

The City of Cape Coral has been acquiring private lots in and adjacent to the Festival Park site for a number of years, with the ultimate intent of developing this multi-use recreational complex. In order to realize the full financial return on this tax-payer investment, the entire site must be available for development, which includes the 75 acres of occupied scrub-jay habitat.

1.5 Permit Duration

The requested incidental take permit term is 25 years; however the exact timing for the development of Festival Park is yet to be determined, and will be predicated on collection of a park impact fee. During the "boom" years, the City was collecting $700,000 to $800,000 per month in impact fees which would provide resources in a very timely manner. However, with the current economy and lack of new development in Cape Coral, the fee collection has slowed significantly. While the need for the park remains, the timing is in question and construction could be 15 to 20 years from today. Subsequently, the requested incidental take permit term is 25 years.

1.6 Regulatory Framework for the HCP

The ESA was enacted by Congress in 1973 to protect plant and animal species that are in danger of extinction. Federal agencies are required by Section 7(a)(1) to use their authorities to further conservation of listed species. The USFWS is responsible for administration of the ESA. Section 9 of the ESA prohibits unauthorized take of a federally listed species. A "take" as defined by the ESA and used herein includes any direct or indirect impacts to scrub-jays including harming, harassing, injury, and/or death. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by impairing essential behavioral patterns (e.g., nesting or reproduction). An "incidental take" is defined as the take of a listed species such that the take is incidental to, and not the purpose of, carrying out an otherwise lawful activity (Section 10(a)(1)(B), ESA).

The Applicant's proposed Festival Park project and nearby residential development fall under the regulatory mechanism authorized under Section 10(a)(1)(B) of the ESA, which allows the incidental take of a listed species that results from, but is not the purpose of, carrying out an otherwise lawful activity. Section 10 of the ESA requires the Applicant to submit an HCP. The HCP is required to meet the following permit issuance criteria (USFWS 2009):

(i) taking will be incidental;
(ii) the Applicant will, to the maximum extent practicable, minimize and mitigate the impacts of the taking;
(iii) the Applicant will ensure that adequate funding for the plan will be provided;
(iv) taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and
(v) other measures, as required by the Secretary, will be met.

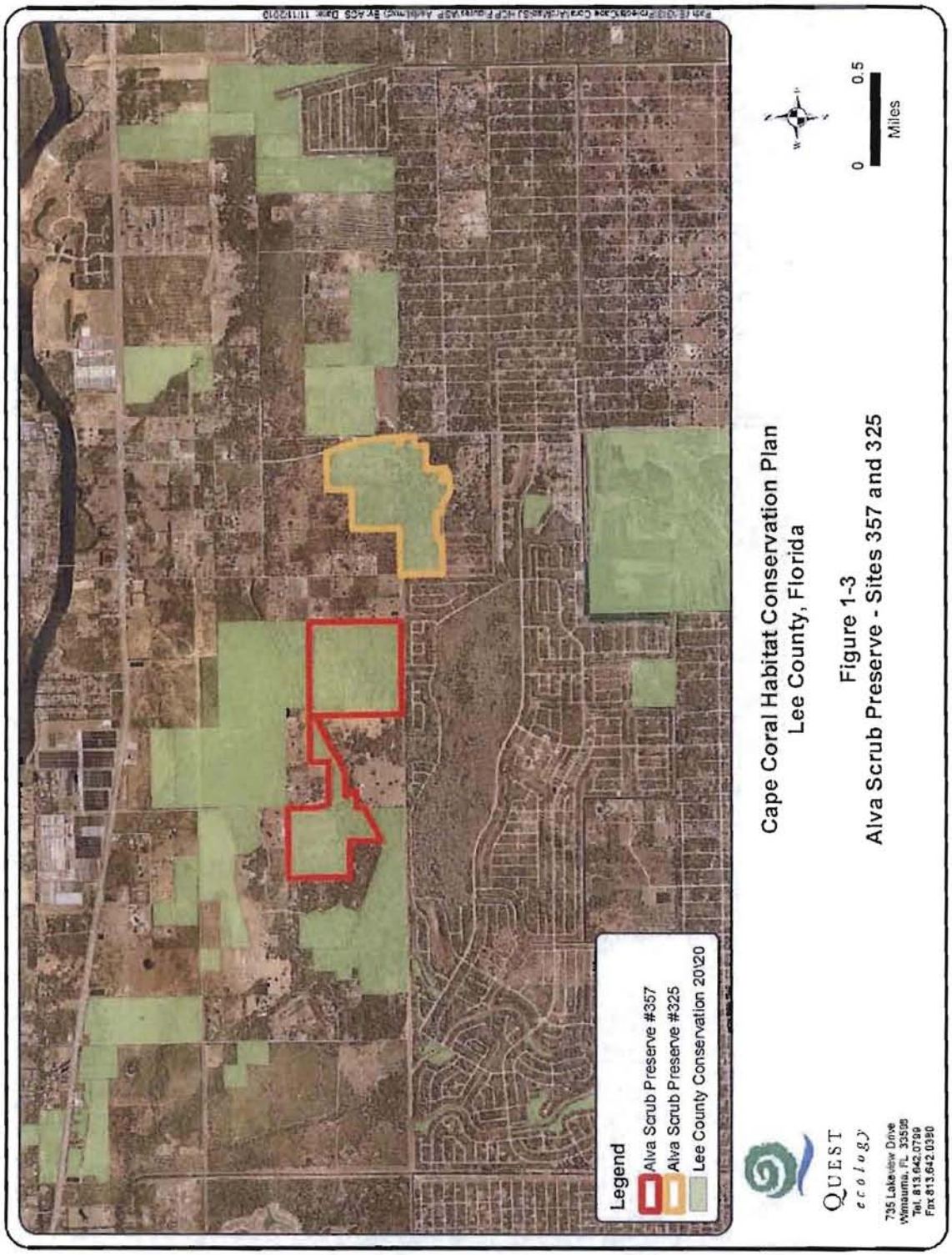
1.7 Plan Area

The areas covered by this HCP include the entire geographic limits of the City of Cape Coral (Figure 1-2) and the proposed mitigation areas, which are part of Alva Scrub Preserve Parcel 325 (ASP 325) and Alva Scrub Preserve Parcel 357 (ASP 357) (Figure 1-3).

The citywide coverage under this HCP is being requested to ensure all potentially current and future properties occupied by the scrub-jay are covered under this HCP. Although the documented scrub-jay habitat is primarily located within Festival Park, the Applicant is requesting assurance that private parcels will also be covered under this HCP in the event of dispersal from the Festival Park site.

1.8 Species to be Covered by Permit

The scrub-jay is the only species requested to be covered under this HCP. This species is listed as threatened by the USFWS under 50 CFR 17, and by the Florida Fish and Wildlife Conservation Commission (FWC) under Chapter 68A-27.004, F.A.C.


Legend
Alva Scrub Preserve #357
Alva Scrub Preserve #325
Lee County Conservation 20/20
Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 1-3
Alva Scrub Preserve - Sites 357 and 325
0
0.5
Miles
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2.0 Project Description

2.1 General Environmental Setting

The City of Cape Coral, located in southwest Lee County, Florida, encompasses approximately 120 square miles of a large peninsula bordered by the Caloosahatchee River to the south and east, and Matlacha Pass to the west, which separates Cape Coral from Pine Island (Figure 1-2). Cape Coral is the second largest city by land area and the eleventh largest by population in the state. The most recent population estimate in 2009 (162,852) shows a 64.2% increase in population from the previous decade; Cape Coral is one of the fastest growing areas in Florida and the United States (State of Florida 2009).

The climate in Cape Coral is humid and subtropical, dominated by bright, sunny days (an average of 335 days a year), with hot, humid, rainy summers, and cooler, drier winters. The annual average temperature is 74.4° F with a high average of 84.1° F and a low average of 64.7° F. Annual rainfall averages 53.37 inches.

2.2 Land Use / Vegetation Communities

Significant development in the City began in the 1950s and '60s, beginning with the rapid development of the Cape Coral community (Landers-Atkins 2000). Unlike the majority of Florida, which was initially developed as agriculture, residential and commercial development has dominated the City's landscape since its founding. According to the American Community Surveys from 2006-2008, there were 75,437 housing units, including 17,485 vacant housing units within the city limits (U.S. Census Bureau 2008). Development in the City is most dense in the south and east, moderate in the central portion of the peninsula, and less dense in the north and west, especially north of Pine Island Road (L. Blydenburgh, pers. comm.; Quest, pers. obs.).

Cape Coral has 400 miles of man-made canals, which is more than any other city in the world. The canal system is so extensive that local ecology and tides have been affected (Charlotte Harbor National Estuary Program 2006).

In addition to residential parcels and canals, Cape Coral also contains commercial, industrial, and recreational areas, mangrove swamps, coastal wetlands, and open land, mostly represented by cleared, undeveloped lots. Exotic, invasive species such as Brazilian pepper (*Schinus terebinthifolius*) and Australian pine (*Casuarina equisetifolia*) are abundant and problematic in Cape Coral. Few native habitat areas occur within the City limits, and are limited primarily to scattered remnant patches of pine flatwoods.

Occupied scrub-jay habitat occurs on the Festival Park site and nearby private parcels. The Festival Park site is bordered to the north by the Gator Slough Canal and to the east by the Zanzibar Canal. To the south of the site are the Northwind Canal and a portion of NW 27th Street. The western portion of the site is bordered by Chiquita Boulevard and NW 14th Avenue. The majority of the 215 acre parcel (approximately 140 acres) consists of undeveloped residential lots, which have been acquired by the City and are being maintained in a mowed state (Figure 2-1). Vegetation species present in the residential lots include bahiagrass (*Paspalum notatum*), natalgrass (*Melinis repens*), false buttonweed (*Spermacoce assurgens*), beggar's ticks (*Bidens* sp.), lantana (*Lantana*

camara), crowfoot grass (*Dactyloctenium aegyptium*), sand spur (*Cenchrus* sp.), carpet grass (*Axonopus* sp.), widely scattered slash pine (*Pinus elliottii*), Brazilian pepper, and live oak (*Quercus virginiana*). The widely scattered live oaks appear to be landscape varieties present throughout the site, and scrub oak species have not been observed (W. Dex Bender and Associates, Inc. 2009). Paved roads make up approximately 44 acres of the site. The remaining land uses include a residence, a remote controlled vehicle park, and spoil and fill areas.

2.3 Documented Species of Concern within City of Cape Coral

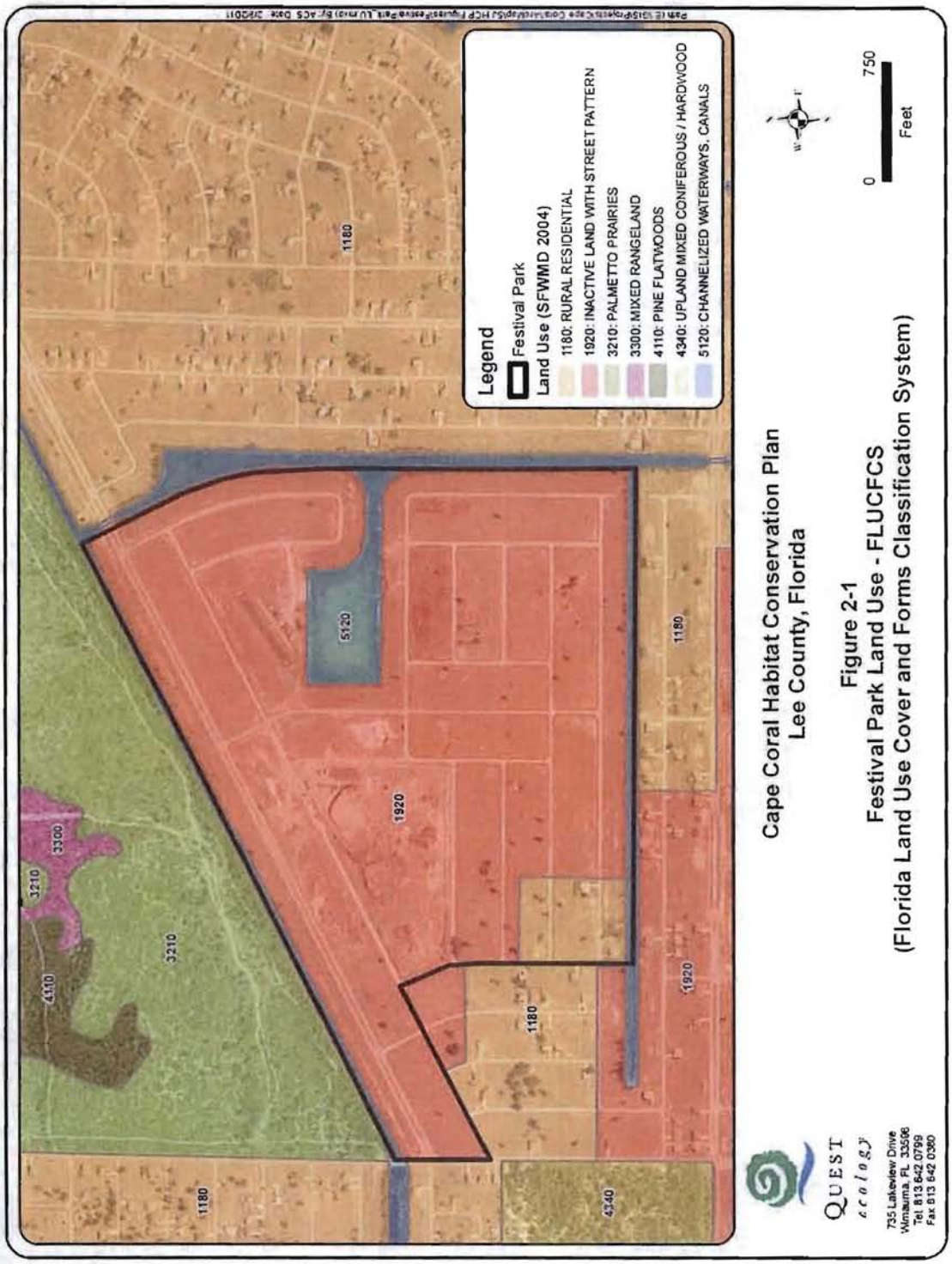
State and federally listed species that have been documented within Cape Coral include beautiful pawpaw (*Deeringothamnus pulchellus*), wood stork (*Mycteria americana*), gopher tortoise (*Gopherus polyphemus*), sandhill crane *(Grus Canadensis)*, least tern (*Sterna antillarum*), Florida scrub-jay, burrowing owl (*Athene cunicularia*), Sherman's fox squirrel (*Sciurus niger shermani*), and Eastern indigo snake (*Drymarchon couperi*). Of these, the species that were specifically discussed during preliminary project meetings and noted in the HCP Planning Grant Application as possibilities to include in the HCP include: beautiful pawpaw, gopher tortoise, scrub-jay, burrowing owl, Sherman's fox squirrel, and eastern indigo snake. The bald eagle (*Haliaeetus leucocephalus*) was also considered for inclusion, but it is no longer listed by the ESA (see below). It is likely that some of these species will be affected by the mitigation provided under the Cape Coral HCP; however, with the exception of the scrub-jay, they are not covered under this HCP, as discussed below.

Bald Eagle

The bald eagle was de-listed from the Federal List of Threatened and Endangered Wildlife in 2007 due to its recovery from near extinction. Although it is no longer protected by the ESA, it is still protected by the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (BGEPA), and the Lacey Act. The BGEPA recommends that a minimum buffer of 660 feet be established for any construction activity that is visible from the nest. Additionally, the City of Cape Coral adopted a local ordinance that provides a more restrictive and protective eagle management zone that extends 1100 feet from the nest. The ordinance has provisions for building during nesting season if a City-approved Bald Eagle Management Plan (BEMP) and a City-approved, Qualified Eagle Monitor is obtained. It is estimated that the City is home to 10-12 pairs of nesting bald eagles (L. Blydenburgh, City of Cape Coral, pers. comm.).

It was determined that sufficient protections via other regulations exist for the bald eagle, and based on the species' recent delisting, it was not considered appropriate to cover this species under this HCP.

It is unlikely that bald eagles or their nesting habitat will be affected by the Proposed Action, so mitigation is not necessary.


Legend
Festival Park
Land Use (SFWMD 2004)
1180: RURAL RESIDENTIAL
1920: INACTIVE LAND WITH STREET PATTERN
3210: PALMETTO PRAIRIES
3300: MIXED RANGELAND
4110: PINE FLATWOODS
4340: UPLAND MIXED CONIFEROUS / HARDWOOD
5120: CHANNELIZED WATERWAYS, CANALS
1180
5120
1920
3300
3210
3210
4110
1180
1920
1180
4340
1180
0
750
Feet
Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 2-1
Festival Park Land Use - FLUCFCS
(Florida Land Use Cover and Forms Classification System)
QUEST
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735 Lakeview Drive
Wimauma, FL 33598
Tel 813 642 0799
Fax 813 642 0380

Gopher Tortoise

The gopher tortoise is currently listed as threatened by the State of Florida and receives protection via current state laws. There is currently no mechanism for take in place, so land owners planning to clear or develop their land must obtain a permit to relocate gopher tortoises either on-site or to an approved off-site recipient site. Coverage under the HCP was therefore deemed unnecessary. If gopher tortoises within the City are affected by proposed development, the appropriate permits will be obtained by the affected property owner, and the tortoises will be relocated per State of Florida requirements.

Eastern Indigo Snake

The eastern indigo snake has been listed as a threatened species by the State of Florida and by the USFWS under the ESA since 1978. This species is difficult to observe and thus to survey or monitor. Occasional sightings have been reported in Cape Coral, but no mortalities of the eastern indigo snake have been recorded (L. Blydenburgh, City of Cape Coral, pers. comm.). Lack of observations combined with survey data indicate limited occurrence of this species within the City of Cape Coral. Should this species be encountered on proposed development parcels, Standard Construction Guidelines (http://www.fws.gov/verobeach/images/pdflibrary/Eastern_Indigo_Snake_Conservation_Guidelines.pdf) will be required to be followed by the property owner. The Applicant remains liable for any take of this species and the appropriate actions will be taken if eastern indigo snakes are located within Festival Park or any future development sites within the City.

Beautiful Pawpaw

Beautiful pawpaw (*Deeringothamnus pulchellus*) is federally listed as endangered. Lack of observations combined with survey data indicate limited occurrence of this species within the City of Cape Coral. The only known location data for this species is limited to the Charlotte Harbor Preserve State Park. Surveys conducted for beautiful pawpaw within the City concluded there is sufficient habitat for a population to persist on land that is already preserved, and insufficient documentation of occurrence on potential development sites precludes the need for inclusion in the HCP.

Burrowing Owl

The Florida burrowing owl is listed as a Species of Special Concern (SSC) by the FWC. This classification indicates that the species is vulnerable to factors that may lead to its listing as a threatened species without the proper protection or management. Cape Coral supports the largest population of burrowing owls in the state (Bowen 2001). Any construction that would result in the take of a burrowing owl nest (burrow) requires a permit from FWC. Burrowing owls and their nests are also afforded federal protection from harassment and disturbance under the Federal Migratory Bird Treaty Act (MBTA). Rules promulgated under this act (Title 50, Code of Federal Regulations (CFR), Part 21) require a special purpose permit from the USFWS prior to destruction of active nests. In addition, City regulations require the property owner or designee to conduct a site inspection and submit a Burrowing Owl Affidavit with all building permits, reporting the

presence of any burrows (City of Cape Coral 2010). This notarized affidavit is verified by site checks if there is an inconsistency with a city database of burrow locations.

Studies completed by the FWC have demonstrated that construction occurring outside a 50-foot radius buffer of an owl burrow rarely disturbs nesting (FWC 2009). In Cape Coral, because residential lots are small and a 50-foot radius is not feasible, if construction can be conducted outside of a 10-foot radius buffer around the burrow, it may proceed without obtaining any permits and at any time of the year (A. Williams, FWC, pers. comm.). The City has reported cases in which development has continued without causing significant disturbance to the owls or resulting in nest failure.

A citywide burrowing owl survey was conducted in 2009 in order to determine the extent of occupied habitats and whether it was appropriate to include this species in the City-wide HCP. An analysis was conducted using GIS and GPS owl point location data from the 2009 survey, and a City GIS layer showing developed and undeveloped lots was included to document occupied owl habitat in areas of less than 60% build-out. These areas were focused on because according to the current literature, owls can remain successful in developed, urban habitats as long as development does not exceed 60% (Wesemann and Rowe 1987; Millsap and Bear 2000). Data from this survey were used to develop a Burrowing Owl Adaptive Management Plan, offering several alternatives for a Habitat Preservation Plan and differing levels of management for the species. However, the City has opted not to officially adopt this plan, pending more current published data on owl habitat utilization. At such time, staff will bring forward an appropriately updated Management Plan for City Council consideration. Because the burrowing owl is not currently protected under the ESA, and due to economic constraints, the Applicant has elected not to cover this species in the HCP.

2.4 Covered Species in the Plan Area

The Florida scrub-jay is the only species requested to be covered under this HCP. This species is listed as threatened by the USFWS under 50 CFR 17, and by the FWC under Chapter 68A-27.004, F.A.C.

2.4.1 Biological Overview of the Florida Scrub-jay

Description

The scrub-jay is a blue and gray bird, of 9.8–11.7 inches in length, and weighing approximately 2.68 ounces (USFWS 1999a). The head, neck, nape, and tail are blue while the back and breast are pale gray. They are similar in appearance to the non-listed blue jay (*Cyanocitta cristata*), but lack the crest, white-tipped feathers, and black bars. There is no apparent sexual dimorphism. For the first five months, juveniles lack the blue on the crown and nape; these areas are instead gray or brown. Immature scrub-jays complete a partial molt in the late summer or early fall, losing their juvenile plumage, thus becoming visibly identical to the adults (Woolfenden 1996). Scrub-jays are a relatively long-lived species; the oldest was documented at 15.5 years (Woolfenden and Fitzpatrick 1996; USFWS 1999a).

General Habitat Requirements

The scrub-jay is a species endemic to Florida with a range restricted to frequently-burned xeric communities in peninsular Florida. Historically, the scrub-jay evolved in pyrogenic scrub communities due to the frequent fires caused by lightning strikes, which maintained the desirable condition of a low growing, open habitat. Scrub includes xeric oak scrub, scrubby flatwoods, sand pine scrub, rosemary scrub, sand scrub, turkey oak scrub, sandhill, and palmetto scrub. These vegetation communities are characterized by well-drained, often nutrient poor, sandy soils with an abundance of low growing scrub oaks, including sand live oak (*Quercus geminata*), Chapman oak (*Q. chapmanii*), myrtle oak (*Q. myrtifolia*), and scrub oak (*Q. inopina*). The overstory varies depending on the vegetation community, but may include slash pine, longleaf pine (*Pinus palustris*), sand pine (*P. clausa*), and turkey oak (*Q. laevis*). The midstory also varies with the vegetation community, but often includes saw palmetto (*Serenoa repens*), rosemary (*Ceratiola ericoides*), rusty lyonia (*Lyonia ferruginea*), tarflower (*Befaria racemosa*), wax myrtle (*Myrica cerifera*), and gallberry (*Ilex glabra*). The ground cover is usually sparse, but often includes runner oak (*Q. pumila*), gopher apple (*Licania michauxii*), milk peas (*Galactia* spp.), lichens (*Cladonia* spp.), scrub St. John's wort (*Hypericum reductum*), pennyroyal (*Piloblephis rigida*), beak rush (*Rhynchospora* spp.), and a variety of grasses (Poaceae) (Meyers 1990; Fitzpatrick et al. 1991; USFWS 1999b).

Range and Status

The scrub-jay is the only avian species endemic to peninsular Florida. Historically, scrub-jays occurred in 39 of the 40 peninsular counties south of and including Levy, Gilchrist, Alachua, Clay, and Duval, with the exception of Monroe County (Woolfenden 1996). They have since been extirpated from nine counties including Gilchirst, Alachua, Clay, Duval, St. Johns, Pinellas, Hendry, Broward, and Dade (Stith 1999). By 1993, 10 or fewer pairs were reported in six additional counties, including Levy, Putnam, Flagler, Orange, Hernando, and Hardee (Woolfenden 1996; Pranty et al. 1997; Stith 1999). Woolfenden (1996) asserts that scrub-jay populations along the Gulf Coast (Levy south through Collier County) are perilously close to extirpation due to extensive clearing. Scrub-jays were listed as threatened in 1975 by the Florida Game and Freshwater Commission, now the Florida Fish and Wildlife Conservation Commission, and in 1987 by the USFWS (Woolfenden 1996; USFWS 1999a).

The first attempt at a statewide population inventory of the scrub-jay was conducted by Jeffrey Cox in 1987 (Cox 1987). Subsequent to that survey, a more thorough state-wide population inventory was undertaken between 1992 and 1993 by Fitzpatrick et al. (1994). The extent of population decline of scrub-jays was estimated by Cox (1987) at 50%. Following this study, it was determined that a decline of about 90% of the historical population had occurred, to about 10,000 birds (Fitzpatrick et al. 1994). The overall population decline can be attributed to habitat loss, degradation, and modification. Habitat loss is primarily because of conversion to agriculture or urban-suburban development. Scrub-jay populations within suburban areas are expected to decline further as residential build-out continues (Stith et al. 1996). Fire suppression and

invasive and exotic plant encroachment have further contributed to habitat degradation and modification (Woolfenden 1996).

Specific Habitat Requirements

Scrub-jays forage on or near the ground in openings within the vegetation, or along edges. They visually search for food by hopping or running on the ground or hopping among the shrubs (McGowan and Woolfenden 1990; USFWS 1999a). The optimal habitat for scrub-jays is scrub that contains early successional scrub oaks that are between 3-10 feet in height, where the oak cover exceeds 50%, and open sandy patches cover approximately 10% of the area (Cox 1987; Fitzpatrick et al. 1991). Canopy trees are absent or scattered and in quality habitat rarely represent more than 15-20% of the cover and the herbaceous layer is sparse (Cox 1987; Woolfenden 1996). This optimal scrub is often surrounded by secondary habitat which may not be characterized as scrub or scrubby flatwoods. This secondary habitat is often within a scrub-jay family group's territory (Breininger et al. 1991). The optimal habitat occurs in scrub that burns every 10-20 years (Fitzpatrick et al. 1991; Woolfenden 1996).

Scrub-jays in Residential Landscapes

The habitat structure and landscape matrix utilized by suburban scrub-jays differs from scrub-jays within native scrub landscapes. Scrub within suburban areas is often fragmented and isolated by houses and the associated infrastructure. The patches of scrub are also frequently overgrown because of fire suppression and may host a high percentage of non-indigenous vegetation. The overgrown scrub inhibits scrub-jays' ability to detect hawks (Buteos, Accipiters), increasing predation and lowering reproductive success (Breininger et al. 1999). This decrease in size and suitability of the habitat frequently leads to a decrease in demographic success in suburban areas (Breininger et al. 1995; Breininger et al. 1996; Breininger 1999; Mumme et al. 2000; Bowman 2001).

Other threats within suburban areas include predation by free-ranging cats (*Felis catus*), competition and predation by blue jays, collisions with cars, and the consumption of pesticide-laden insects (Breininger et al. 1991; Fitzpatrick et al. 1991; Breininger 1999; USFWS 1999a; Stith 1999).

Suburban scrub-jays often occupy smaller territories than jays in more natural landscapes (Toland 1999). The highest densities of scrub-jays in Central Florida, occurred in suburban areas where less than 33% of the area was developed (USFWS 1999a). This initial increase in density may be due in part to supplemental feeding. However, populations generally decline after the initial increase in density as residential build-out occurs. These suburban populations generally have lower adult and juvenile survivability than populations in more natural landscapes, which may lead to higher mortality than recruitment, and eventual extirpation (USFWS 1999a; Stith 1999; Bowman 2001).

Conservation Implications

Scrub-jay reserves must be based on the demographic and habitat requirements of the species. Providing enough contiguous habitat to support the local population, without

depending on long distance immigration to remain viable, is of particular importance to the southwest Florida populations. Creating a core population center that can support as many scrub-jays as possible should be the highest priority in conservation planning (Miller and Stith 2002).

2.4.2 Site Specific Information

As described above, the Festival Park site and nearby residential parcels are sub-optimal and atypical habitat for scrub-jays, consisting of cleared and regularly mowed lots with very limited shrub cover. The presence of the three family groups is an anomaly for several reasons. The most obvious is the lack of suitable habitat or vegetation structure anywhere in Festival Park, or the entire City, that typically supports scrub-jays. The habitat at Festival Park would be classified as improved pasture or old field, and typically neither habitat is exclusively utilized by scrub-jays. In addition, the soil types within the site are not a scrub soil type; the soil types are called Matlacha series and are described as moderately rapid to rapidly permeable soils on filled and disturbed sloughs, flats, and depressions. These soils formed in material produced by dredging, fill, and earthmoving operations, thus it is highly disturbed. Although scrub-jays are found in habitats that are supported by dryer flatwood soil types, the soil types in the Festival Park area historically supported wet pine flatwoods, which is not a typical scrub-jay habitat. Between the Festival Park jays and the nearest documented scrub-jays, 8 miles away, there is very limited scrub habitat found, and scrub habitat within this radius is fragmented by agriculture, urban and suburban areas, expansive forest, natural waterways and bays; all of which make immigration from the nearest scrub-jay populations nearly impossible. Subsequently, the long term viability of the three family groups at Festival Park, where the habitat is very atypical for scrub-jays and no scrub habitat is found, is very low and local extinction is a likely eventuality.

In the short term, threats to the local population include further habitat loss, predation by free-ranging cats, and collisions with cars. As habitats become increasingly fragmented and degraded, the survival of fledgling scrub-jays declines and failed nesting attempts increase, which in turn causes the population to decline and become vulnerable to extirpation.

2.4.3 Field Surveys for Covered Species

Field surveys were conducted throughout the Plan Area between February and July 2009 to identify protected species occurring within the City, and determine species to be covered under the HCP. All previously reported sightings of scrub-jays were investigated, and all potential habitats were visited to confirm suitability and confirm presence or absence. Scrub-jays were confirmed only in the Festival Park area.

In order to determine the approximate territories and extent of occupied habitat, a formal five-day survey was conducted between April 29, 2009 and May 5, 2009. The survey was conducted in accordance with the "Scrub-jay Survey Guidelines (Updated 8/24/2007)" as recommended by the USFWS. Surveys were performed each day by two

or three ecologists over a five-day period to establish the approximate territory boundaries. The surveys were initiated each day at different starting points in order to ensure that each area onsite was surveyed during the most favorable conditions (minimal wind and cooler temperatures). A recording of scrub-jay territorial scolding was played at pre-set playback stations in an attempt to attract jays. At each station, a recording was broadcast for one minute in all four cardinal directions for a total of four minutes at each station. The recording, which includes the female "hiccup" call, was purchased from Archbold Biological Station.

Scrub-jays were observed during each of the five survey days. On three of the survey days, at least two groups were observed. Often the group or groups being observed would follow the surveyor playing the tape recording. On one occasion, two scrub-jay groups interacted in territorial displays.

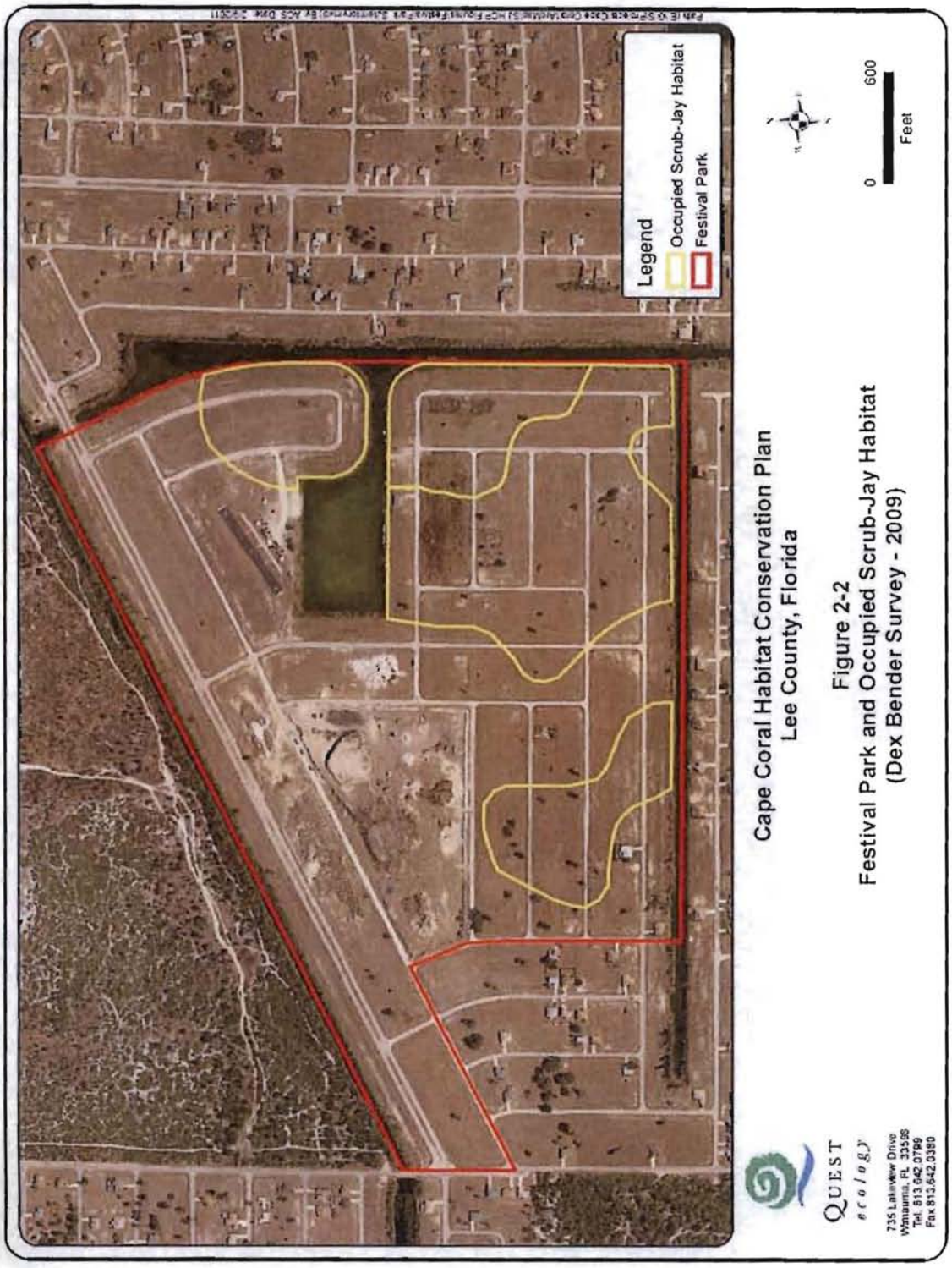
The survey report concluded that two to three groups of scrub-jays are utilizing the southern and eastern portions of the Festival Park site (W. Dex Bender and Associates, Inc. 2009; Appendix A). Scrub-jays were observed flying into and out of the Festival Park site, indicating that they are also using habitat elsewhere. Based on survey observations, 74.8 acres of occupied scrub-jay territories were delineated (Figure 2-2). The observed territorial ranges are large and may overlap, which is likely due to the poor quality habitat and lack of scrub oak species found in preferred habitat (W. Dex Bender and Associates, Inc. 2009). Only adult scrub-jays were observed during the surveys.

2.5 Activities Covered by Permit

Covered activities include the development of the Cape Coral Festival Park site for use as a public recreation facility as previously described. Additional activities covered include any development that may occur on privately owned lots that could result in a take of occupied Florida scrub-jay habitat within the City of Cape Coral. Development on private properties is a requested covered activity due to the possibility of the dispersal of the existing scrub-jays to other properties within the City.

2.6 Biological Goals

The biological goal of this HCP is to conduct restoration and long-term management of scrub habitat specifically for Florida scrub-jays on public lands such that, at a minimum, three family groups will immigrate to the Alva Scrub Preserve (ASP) Parcels. The restoration and management of existing Lee County 20/20 property will increase the amount of habitat available to the Florida scrub-jay on public lands in the County. This will serve to achieve the ultimate goal of maintaining viable scrub-jay populations within the region in the long-term, through restoration and permanent management of suitable habitat.


Legend
Occupied Scrub-Jay Habitat
Festival Park
0
600
Feet
Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 2-2
Festival Park and Occupied Scrub-Jay Habitat
(Dex Bender Survey - 2009)
QUEST
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735 Lakeview Drive
Wimauma, FL 33598
Tel. 813.642.0799
Fax 813.642.0380

3.0 Biological Impacts and Take Assessment

3.1 Direct, Indirect, and Cumulative Impacts

3.1.1 Direct Impacts

Direct impacts to the Florida scrub-jay consist of the loss of 75 acres of occupied habitat that will occur as a result of the development of the Festival Park site and any additional properties that may be utilized by this species currently or in the future.

3.1.2 Indirect Impacts

Indirect impacts that could occur as a result of the project include mortality of individuals through increased levels of traffic and vehicle collisions; increased likelihood of depredation from free-ranging house pets; and disturbance caused by increased human use of the park and associated noise which could result in nest failure or interference with foraging.

3.1.3 Cumulative Impacts

This HCP is being prepared as part of an ITP application and includes measures to minimize and mitigate for loss of occupied habitat. Because the jays potentially affected by the development of the Festival Park site and nearby residential parcels are reproductively isolated and utilizing atypical, sub-optimal habitat, this project does not involve loss of scrub habitat that could otherwise result in cumulative losses to the species.

3.2 Requested Take

Take is being requested for 75 acres of occupied habitat that has been documented as supporting up to three family groups. The amount of take has been quantified based on the results of detailed territory surveys conducted on the site in 2009. These surveys concluded 74.8 acres of occupied habitat consisting of 2 or 3 scrub-jay territories were present on the Festival Park site (Figure 2-2). Based on historic observations, scrub-jays have been documented in the past also utilizing residential lots in the vicinity of Festival Park (Appendix B). The requested take of the 75 acres at Festival Park is appropriate, however, based on consistency with the accepted average territory size for typical non-urban scrub-jay family groups (Fitzpatrick 1991). The 75 acres of requested take therefore covers the three family groups potentially affected, regardless of whether the occupied habitat is contained within Festival Park or occurs elsewhere, on private lots as has been observed in the past.

4.0 Minimization and Mitigation Measures

4.1 Minimization Measures

Impacts will be minimized by ensuring clearing and construction activities are limited to the non-nesting season, and by replanting the site with native scrub oak species, where possible, following completion of any construction activities that occur during the restoration period.

4.2 Mitigation Measures

Mitigation for the take of 75 acres of occupied Florida scrub-jay habitat in the City of Cape Coral will take place through the restoration and long-term management of 125 acres of previously disturbed habitat on portions of Lee County's Alva Scrub Preserve Parcels 325 and 357. The restoration and management of existing Lee County Conservation 20/20 property will increase the amount of habitat available to the Florida scrub-jay on public lands in the County. This will serve to achieve the ultimate goal of maintaining viable scrub-jay populations within the region in the long-term, through restoration and permanent management of suitable habitat.

4.2.1 Alva Scrub Preserve Background

Alva Scrub Preserve (ASP) is located in northeastern Lee County within Section 03, Township 44 South, Range 27 East; and Sections 32-35 Township 43 South, Range 27 East. The Preserve includes six Parcels, nominations 57, 127, 136, 195, 325, and 357, which were acquired between 2000 and 2008 through the Lee County Conservation 20/20 (C20/20) Program for just under $15 million (Lee County Dept. of Parks and Recreation 2010). The C20/20 Program was established in 1996 after Lee County voters approved a referendum that increased property taxes by up to $500,000 per year for the purpose of purchasing and protecting environmentally sensitive lands.

The entire Preserve is approximately 846 acres in size. ASP lies south of State Road 80 extending from Bateman Road (western boundary) to the eastern side of Edwards Drive (eastern boundary) and is approximately 10 miles east of I-75 (Figure 4-1). Four of the Preserve's six parcels share a common boundary. Joel Boulevard and a sliver of privately owned land separate Parcel 325 from Parcel 195. Parcel 357 is bisected by Goggin Road. Approximately 0.25 miles of privately owned land separates ASP 357 from ASP 325.

Portions of ASP have historically been used for agriculture (crops and cattle grazing) and as a site for outdoor recreation (e.g., camping, shooting, hunting, off-road activities). The surrounding land is primarily agriculture, single family residences, and other conservation lands; however, platted streets of undeveloped single family lots lie south of Parcels 195 and 325. According to the Alva Scrub Preserve Land Stewardship Plan (Plan) prepared by the Land Stewardship Section of Lee County Department of Parks and Recreation (August 2010), there are no public recreation amenities proposed for ASP other than a walkthrough gate for hiking access onto part of ASP 357. The County is limiting public access primarily due to resource management activities required for management of listed species, active cattle leases, and accessibility issues.


Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 4-1
Alva Scrub Preserve
Legend
Alva Scrub Preserve
Public Lands
Hickey Creek Mitigation Park/WEA
Hickey Creek/ Greenbriar Connector
106
325
357
87
133
127
0
0.5
Miles
QUEST ecology
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Wauchula, FL 33598
Tel 813.642.0788
Fax 813.642.0380

Alteration to the historic hydrologic patterns and lack of a fire regime has altered the plant communities on ASP. Interior ditches and borrow pits, as well as the canals and ditching on adjacent lands have created drier conditions on some portions of the Preserve and wetter areas in other portions. All of these impacts have created disturbances that have encouraged the establishment of invasive exotic plants (Lee County 2010).

4.2.2 Biological Resources of ASP

The ASP Plan describes 19 natural and altered plant communities within the Preserve; the majority of which consists of mesic flatwoods, abandoned fields, hydric hammocks and strand swamps. Over 11% of the plant communities are designated as "disturbed" typically due to alterations in the fire regime and/or changes in the natural drainage patterns (Lee County 2010).

ASP supports a high diversity of fauna including numerous state and federally listed wildlife. The list of wildlife observed at ASP through Lee County staff field work and the Lee County Bird Patrol volunteer program is included in Appendix C.

4.2.3 Florida Scrub-jay Habitat on ASP

Florida scrub-jays have been observed on and in the vicinity of ASP, and in 2010 ASP Parcel 195 supported two Florida scrub-jay families. Parcel 195 is located immediately to the east of ASP 325, where mitigation is proposed.

Hickey's Creek Mitigation Park (HCMP), managed by the FWC also supports scrub-jays, and borders the western boundary of ASP. This connection to HCMP creates a travel corridor for scrub jays and other species. Two scrub-jay groups currently reside on ASP Parcel 195, and the FWC has documented several families at HCMP. With restoration and management, there is potential to increase the number of scrub-jays that will utilize ASP, including those currently residing on undeveloped single family lots in Lehigh Acres. Figure 4-2 depicts the locations in the vicinity of ASP where scrub-jays have been documented.

The Florida scrub jay is present in Lee County in very limited numbers (Lee County 2010). Many historically documented territories no longer exist, mainly due to development and lack of proper management of land that was once occupied by jays (Figure 4-3). Lee County C20/20 staff has committed to focusing management efforts on ASP to improve habitat specifically for the Florida scrub-jay. Based on historic occurrences, and availability of suitable, but unmanaged habitat, these lands are ideal for the offset of the impacts proposed to occupied, but very poor quality, isolated habitat in Cape Coral.

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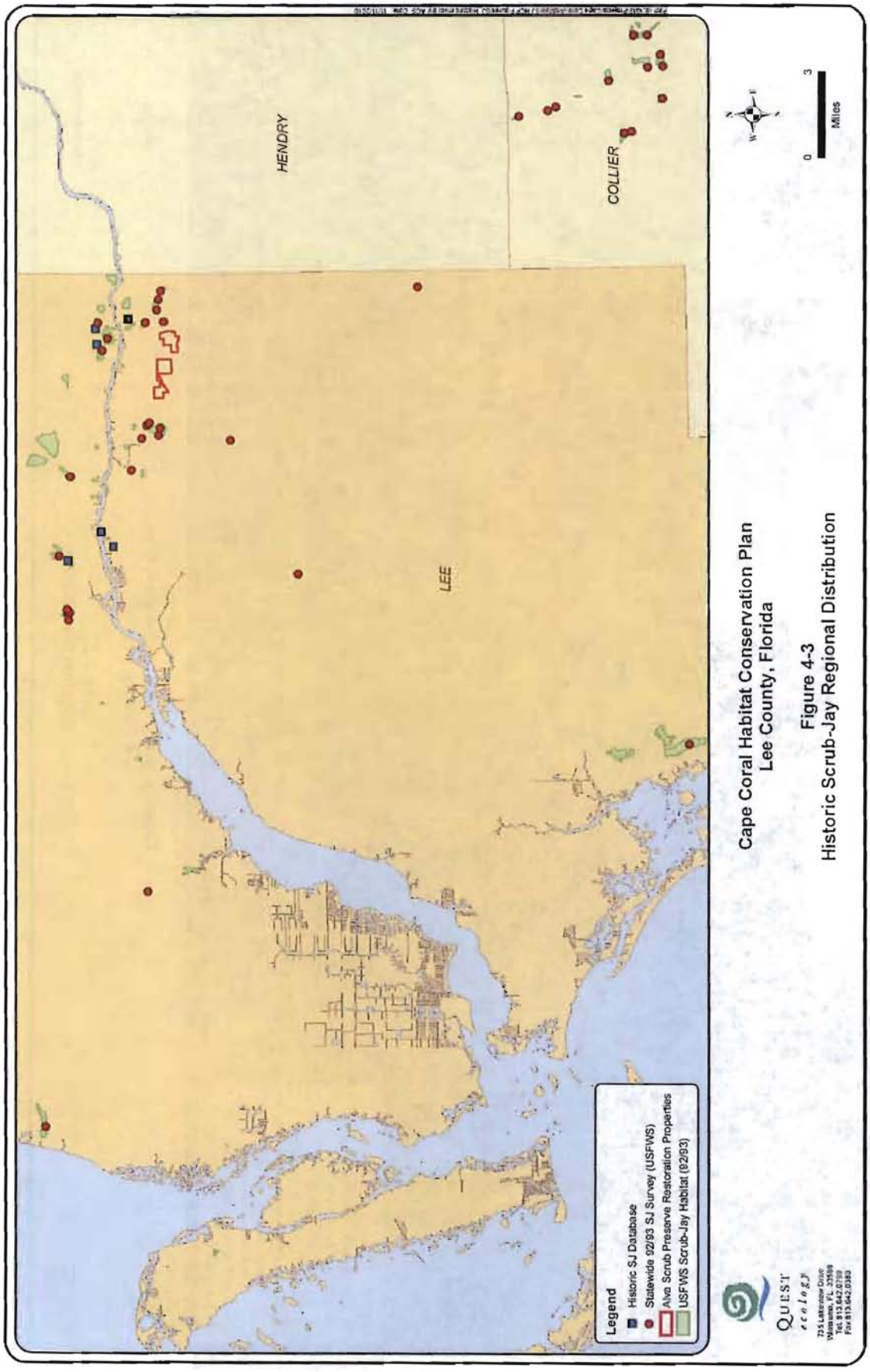
Fax 813.642.0380

Cape Coral Habitat Conservation Plan
Lee County, Florida

Figure 4-2
Scrub-Jay Regional Distribution


HENDRY
COLLIER
LEE
Legend
Historic SJ Database
Statewide 92/93 SJ Survey (USFWS)
Alva Scrub Preserve Restoration Properties
USFWS Scrub-Jay Habitat (92/93)
0
3
Miles
Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 4-3
Historic Scrub-Jay Regional Distribution
QUEST
ecology

4.3 Protection and Management of ASP

The Alva Scrub Preserve Land Stewardship Plan was prepared by the Land Stewardship Section of Lee County Department of Parks and Recreation in August 2010. The stated goal of this plan is to: "...identify Preserve resources, develop strategies to protect the resources and implement restoration activities to restore ASP to a productive, functional and viable ecosystem while ensuring that the Preserve will be managed in accordance with Lee County Parks and Recreation's Land Stewardship Operations Manual." In addition, the Vision Statement of the Land Stewardship Plan specifically references maintaining habitat for the Florida scrub-jay:

> It is the vision of the land stewards in the Lee County Department of Parks and Recreation and the Conservation 20/20 Program to restore Alva Scrub Preserve to a productive, functional and viable ecosystem. Portions of the Preserve are home to families of Florida scrub jays, a State and Federally listed Threatened species. The primary stewardship objectives for the Preserve will be maintaining the existing habitat for scrub jays as well as enhancing disturbed upland ecosystems. Enhancements will include prescribed fire, plantings, pasture restoration and removal of invasive exotic plants and animals. The conservation objectives for the stewardship of this Preserve will be maintaining the fire dependant ecosystems with prescribed fire and removing invasive exotic plants and animals. A secondary goal is the enhancement of wetland habitats by restoring pastures to natural plant communities, reintroducing historic flowways where possible and removing invasive exotic plants. Ultimately, the objectives for the stewardship of Alva Scrub Preserve will improve and protect wildlife habitat in a rapidly growing portion of Lee County.

The Lee County Comprehensive Plan addresses conservation lands and the protection of natural resources. The entire Lee Plan is available online (http://www3.leegov.com/dcd/Leeplan/Leeplan.pdf). The three chapters of primary interest, relative to the management of ASP, are Chapter II – Future Land Use, Chapter IV – Community Facilities and Services and Chapter VII – Conservation and Coastal Management.

Specifically, Chapter VII, Objective 107.4: ENDANGERED AND THREATENED SPECIES IN GENERAL provides Lee County will continue to protect habitats of endangered and threatened species and species of special concern in order to maintain or enhance existing population numbers and distributions of listed species. Policy 107.4.1 states to identify, inventory, and protect flora and fauna indicated as endangered, threatened, or species of special concern in the "Official Lists of Endangered and Potentially Endangered Fauna and Flora of Florida," Florida Fish and Wildlife Conservation Commission (FWC), as periodically updated. Lee County's Protected Species regulations will be enforced to protect habitat of those listed species found in Lee County that are vulnerable to development (Lee County 2010).

4.4 Mitigation Site Selection

The ASP Parcels were chosen for their fundamental physical and ecological features that indicate the potential to support habitat appropriate to viable scrub-jay populations. The appropriateness to serve as mitigation for impacts is based on key factors that include: protected status of the parcels, proximity of the parcels to the affected scrub-jay habitat, location of the parcels within the Lee metapopulation, connectivity to existing occupied scrub-jay habitat, and scrubby flatwoods restoration potential.

The March 16, 2009 memorandum from the USFWS, Amended Guidance for Assessing Mitigation Needs for Florida Scrub-Jays (FWS/R4/ES-JAFL), was reviewed with regard to mitigation site selection. It was determined that the chosen parcels are consistent with the following overall procedures defined in the memorandum in that:

1. They will provide for the restoration and management of protected public lands that are located within the closest USFWS-designated scrub-jay Mitigation Service Area and within a significant metapopulation (Lee).
2. They are adjacent to protected public lands containing scrub-jay occupied habitat (ASP 195), and within two miles of public lands containing occupied and managed habitat (Hickey Creek Mitigation Park).
3. They will provide restorable habitat of approximately 125 acres that could potentially support five scrub-jay families. When considered in conjunction with adjacent occupied habitat on other ASP Parcels and Hickey Creek Mitigation Park, this complex will easily support more than ten families of demographically connected scrub-jays.

Based on studies conducted at Archbold Biological Station, typical scrub-jay territory size in a native habitat is 25 acres (Woolfenden 1996). The 125 acres to be restored on the ASP Parcels therefore provides potential habitat for up to five family groups, exceeding the biological goal of 3 family groups intended to compensate for those existing on the Festival Park site. The restoration will also decrease barriers to travel between existing scrub-jay sites, thereby significantly improving connectivity of existing occupied habitat within the vital Lee metapopulation (Lee and North Collier Scrub-Jay Metapopulation (M8)). Once these parcels have been restored, conditions will exist for jays in nearby occupied territories to disperse into these areas. These restored habitats will provide dispersal corridors and links to other occupied and unoccupied scrub-jay habitats and existing conservation parcels in the region, further increasing the opportunity to expand current scrub-jay populations.

Two scrub-jay families were observed on the south end of the 953-acre HCMP and two observations occurred north of the transmission power line easement on the park in 2007 (S. Shattler, FWC, pers. comm.). Steve Shattler of the FWC has occasionally observed an additional family on the southwest corner of the parcel. This family is believed to spend a majority of its time in Lehigh Acres to the south. Three additional observations were made in Lehigh Acres in 2007. Two observations were made along a transmission power line easement east of HCMP, and two families were observed on ASP 195 from 2007 to 2010 (Lee County 2010). In 2008 scrub-jays were observed at the northwest

corner of ASP 357 (Laura Greeno Lee County, pers. comm.). Florida scrub-jays have been documented dispersing further than jays at Archbold Biological Station due to the spatial distribution of scrub being more patchy in southwest Florida and less contiguous than on the Lake Wales Ridge (David Gordon, Quest Ecology, pers. comm.). This observation is supported by Steve Schattler and Laura Greeno (Lee County) who have records of scrub-jays traveling between ASP 195 and HCMP. From this information it appears the area supports a population of about 10 families that may be more stable if the proposed mitigation sites were restored and managed, creating habitat for as many as five additional scrub-jay families.

4.5 Existing Conditions

4.5.1 ASP Parcel 325

4.5.1.1 Vegetation Communities

ASP 325 includes approximately 47 acres of formerly scrubby flatwoods habitat that has been disturbed by past land uses and invaded by undesirable species. This parcel has undergone successional changes due to fire suppression that have resulted in vegetation that is inhospitable to scrub-jays (Figure 4-4). Large slash pine, live oak, and laurel oak (*Q. laurifolia*) are the dominant species comprising the canopy. Understory and shrub layer consist of tall thickets of sabal palmetto (*Sabal palmetto*), Brazilian pepper, muscadine grape (*Vitis rotundifolia*), and saw palmetto. Open areas are dominated by young live and laurel oak, sabal and saw palmetto, blackberry (*Rubus* sp.), and Caesarweed (*Urena lobata*). Also present on the parcel in open areas are flag pawpaw (*Asimina obovata*), buckthorn (*Sideroxilon* sp.), goldenrod (*Solidago* sp.), three-awn grass (*Aristida* sp.), panic grass (*Panicum* sp.), bluestem grass (*Andropogon* sp.), pineland heliotrope (*Heliotropium polyphyllum*). Several of these are typical native scrubby flatwoods species which indicate this parcel is a good candidate for restoration of a scrubby flatwoods habitat. Photographs depicting existing site conditions are included in Appendix D.

A small forested depressional wetland occurs in the central portion of the restoration site. This area is dominated by a dense stand of intermediate-age pond cypress (*Taxodium ascendens*) with an understory of pond apple (*Annona glabra*), myrcine (*Rapanea punctata*), Brazilian pepper (along edges), wax myrtle, golden polypody (*Phlebodium aureum*), Virginia chain fern (*Woodwardia virginica*), swamp fern (*Blechnum serrulatum*), and cardinal airplant (*Tillandsia fasciculata*). Although this wetland does not provide nesting or typical foraging habitat for scrub-jays, it does add to the overall diversity and ecological value of the site. Restoration activities will remove Brazilian pepper and other exotic invasive plants from this area. Prescribed burns for adjacent scrubby flatwoods habitat will be allowed to also burn into wetland ecotone areas to improve herbaceous species richness and diversity and extend scrub-jay foraging habitat. Scrub-jays have been known to forage along the edges of adjacent open wetland habitats.


Legend
Alva Scrub Preserve #325
Proposed Restoration Area (47 ac)
Plant Communities
Hydric Hammock (1.54 ac)
Impoundment/Artificial Pond (1.46 ac)
Mesic Flatwoods (23.10 ac)
Mesic Flatwoods - Disturbed (0.00 ac)
Pasture - Improved (0.12 ac)
Scrubby Flatwoods (11.84 ac)
Scrubby Flatwoods - Disturbed (5.58 ac)
Strand Swamp - Disturbed (3.30 ac)
Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 4-4
Alva Scrub Preserve #325
Land Use
0
200
Feet
QUEST

4.5.1.2 Soils

Scrub-jay habitat is closely associated with soil type and thus soils can be used as a predictor of habitat restoration success. According to the Lee County Soil Survey (Henderson 1984), the majority of the restoration area is mapped with two soil units: Oldsmar sand (#33) and Boca fine sand (#13) (Figure 4-5). These are scrub-jay associated soil types and are the same as those found on adjacent occupied sites in Lee County, including ASP 195 located immediately to the northeast, and HCMP. Both of these soils are characterized as nearly level, moderately deep to deep, sandy or loamy, and poorly drained. Water table depths are within 10 inches during the wettest months of the year and below 40 inches during the driest months, and natural vegetation is described as flatwoods. During the site visits soils were sampled in upland areas to a depth of approximately three feet and generally consisted of yellowish brown sand to a depth of two feet, and light yellowish brown to yellow sand from two to three feet. No evidence of hydric conditions was observed.

4.5.2 ASP Parcel 357

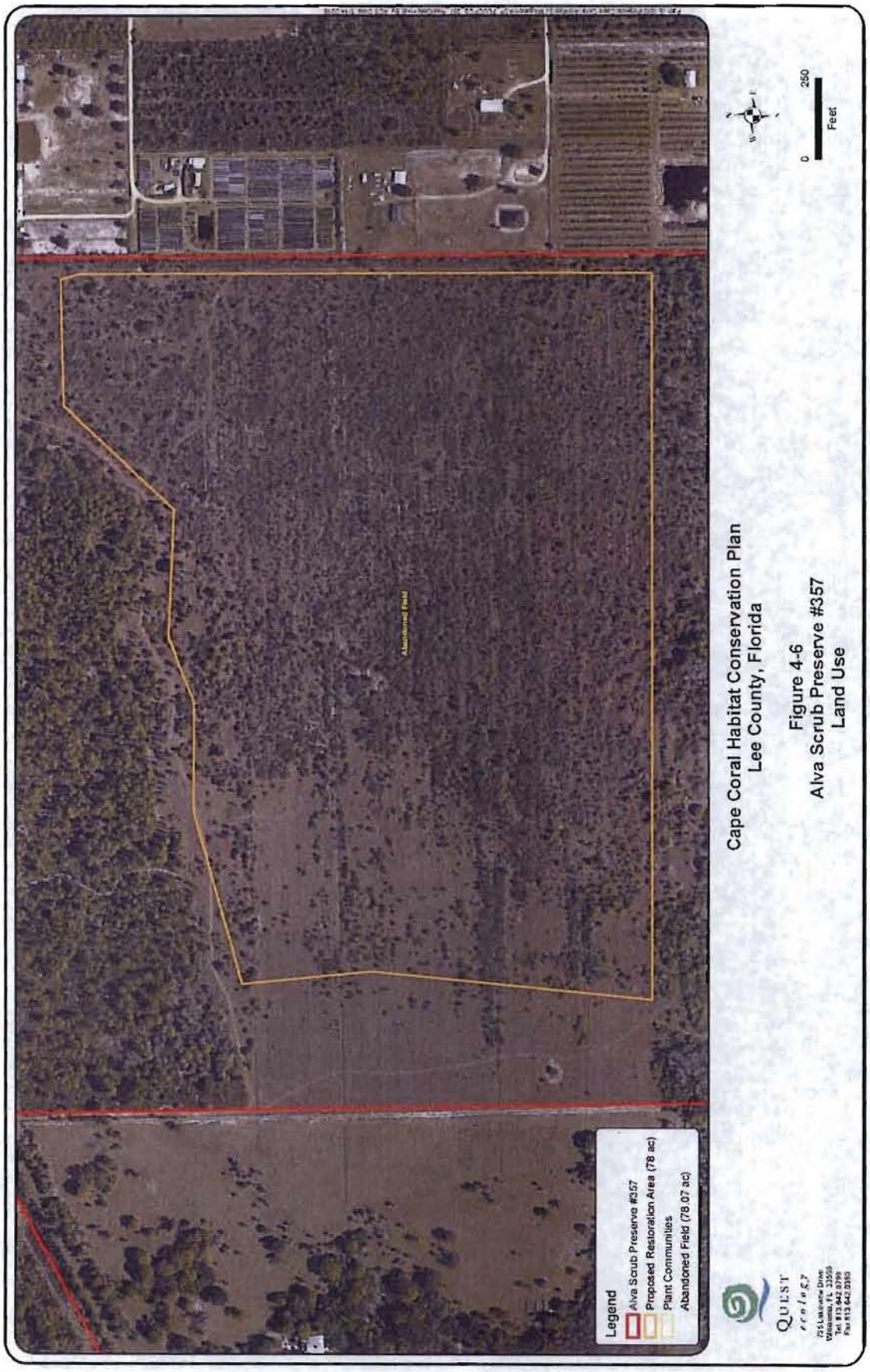
4.5.2.2 Vegetation Communities

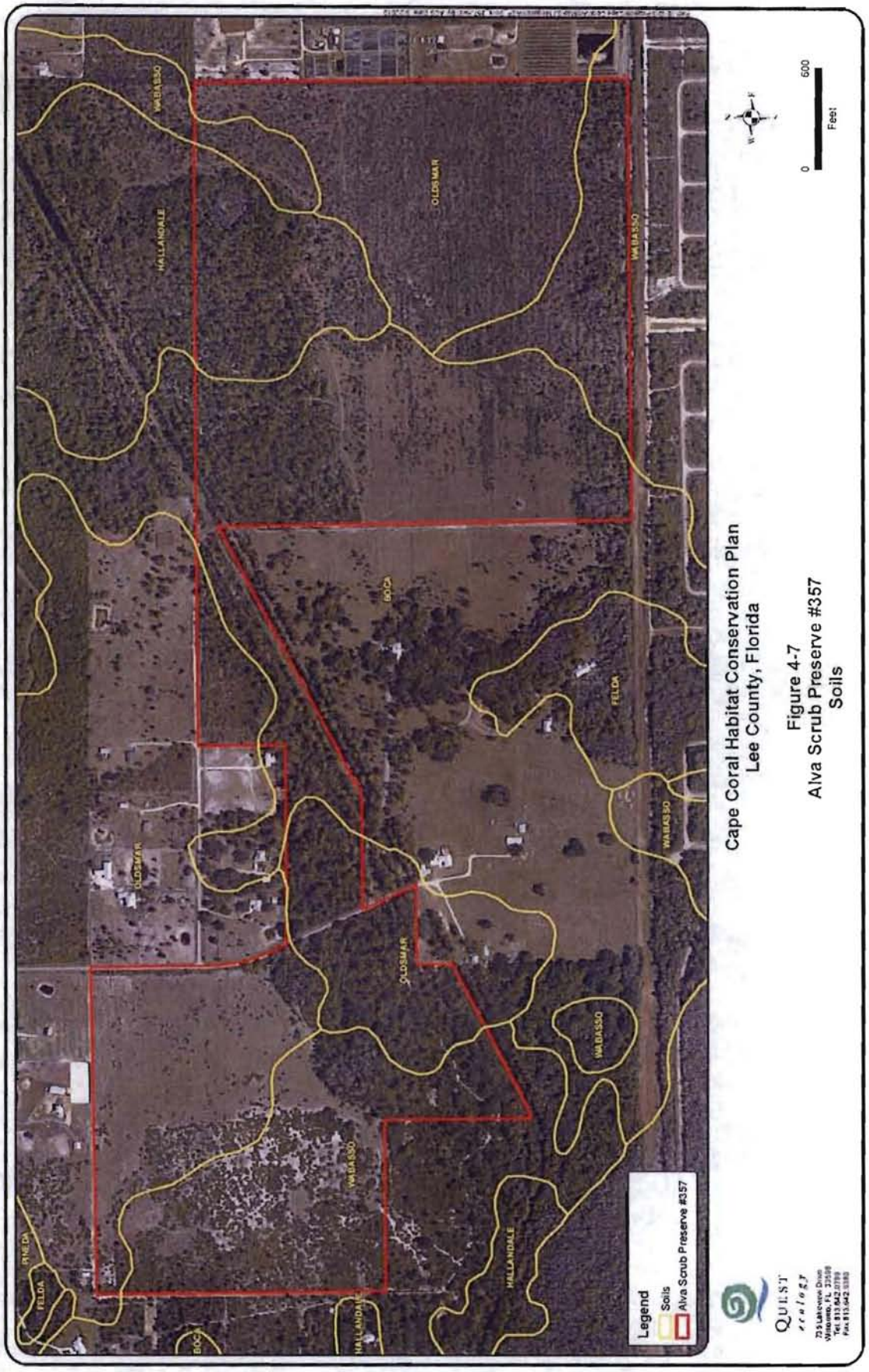
ASP 357 includes approximately 78 acres of formerly scrubby flatwoods habitat that has been disturbed by past land uses, supports undesirable species, and has attained a forested structure that is not conducive for scrub-jay occupation (Figure 4-6). Slash pine dominates the sparse canopy. The understory and shrub layer consist of tall clumps of wax myrtle, Brazilian pepper, groundsel tree (*Baccharis halimifolia*), muscadine grape, and beautyberry (*Callicarpa americana*). Open areas are dominated by a carpet of bahiagrass, but also present are pawpaw, runner oak, saw palmetto, buckthorn, and bluestem. These are scrubby flatwoods species and indicators that the area was at one time a native scrubby flatwoods habitat and is a good candidate for restoration.

4.5.2.3 Soils

According to the Lee County Soil Survey (Henderson 1984), the majority of the restoration area is mapped to three soil units: Oldsmar sand (#33), Boca fine sand (#13) and Wabasso sand (#35) (Figure 4-7). These soil types are associated with scrub-jay habitat in Lee County, and are the same as those found on adjacent occupied sites, including HCMP. All of these soils are characterized as nearly level, moderately deep to deep, sandy or loamy, and poorly drained. Water table depths are within 10 inches during the wettest months of the year and below 40 inches during the driest months, and natural vegetation is described as flatwoods. Soils were sampled in upland areas to a depth of approximately three feet and generally consisted of light gray sand to a depth of two feet, brownish yellow sandy clay loam from two to two and a half feet, a light gray to white sandy clay layer with numerous small brownish yellow mottles to around three feet and below that limestone. Evidence of hydric conditions occurs between two and three feet deep (Hurt 2007).


Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 4-5
Alva Scrub Preserve #325
Soils
Legend
Soils
Alva Scrub Preserve #325
0
550
Feet
BOCA
MINOMALEE
COPELAND
ISLES
OLDSMAR
PINELDA
WABASSO
MALABAR


Abandoned Field
Legend
Alva Scrub Preserve #357
Proposed Restoration Area (78 ac)
Plant Communities
Abandoned Field (78.07 ac)
0
250
Feet
Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 4-6
Alva Scrub Preserve #357
Land Use


Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 4-7
Alva Scrub Preserve #357
Soils
Legend
Soils
Alva Scrub Preserve #357
0
600
Feet
WABASSO
OLDSMAR
HALLANDALE
FELDA
BOCA
EVERGLADES
QUEST

4.6 Restoration Activities

Restoration will occur within applicable portions of two of the ASP Parcels: 47 acres at ASP 325 (Figure 4-8) and 78 acres at ASP 357 (Figure 4-9).

Initial clearing activities have taken place adjacent to ASP 325; however, lack of management funds has prevented Lee County from conducting further restoration into the foreseeable future. This mitigation plan will allow for restoration to proceed, and prevent these areas from becoming further overgrown and degraded.

Habitat restoration will focus on establishing the proper vegetation structure and species composition to provide appropriate habitat conditions for scrub-jays. Optimal scrub-jay habitat includes a shrub structure of 1-3 meters in height; jays tend to abandon habitat where structure exceeds 3 meters (9.8 feet) (Fitzpatrick 1991). The goal is to create a scrubby flatwoods habitat having a sparse pine canopy, a low shrubby understory, patches of exposed soil, and a prescribed fire regime adapted to the specific conditions of each parcel. Restoration will consist of tree thinning, roller chopping, exotic vegetation removal/control, limited disking, prescribed burning, and planting as described in more detail below.

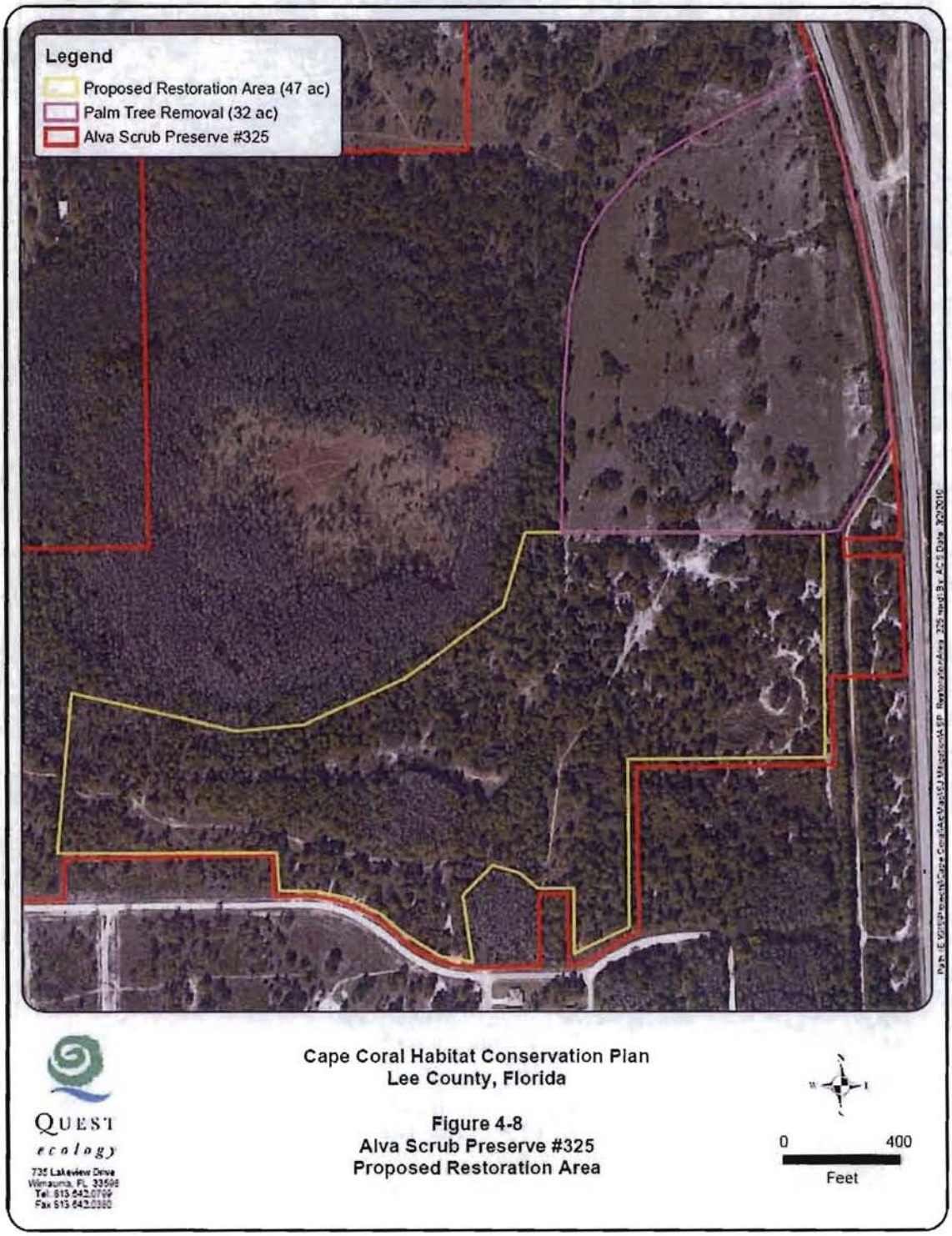
These techniques have been implemented on portions of HCMP and positive signs have been observed over the last several years of more intensive management. The HCMP scrub-jays utilize habitats that have been improved mechanically and with fire. There is often a rapid shift into these areas following treatment. Long-range dispersal to the site, exchange within the adjacent territories, and recruitment within scrub-jay families has been observed. Additionally, there have been no recent losses of territories (Shattler 2006).

4.6.1 ASP Parcel 325

Restoration of the applicable portions of ASP 325 will consist of removing large oak and pine trees on 47 acres of former scrubby flatwoods habitat, with the goal of reducing the structure on the parcel.

Modification of the existing vegetation on the 47 acres will consist of mechanical treatments to remove 80 percent of oaks greater than 9.8 feet in height, and reduction in canopy pines to less than 15 percent. Existing scrub oaks and desirable native shrubs of 9.8 feet in height or less will remain. In addition to thinning oaks, saw palmettos will be thinned and/or mowed in overgrown areas to achieve desired results and to prevent crown fires or intense fires from occurring. Herbicide treatment of all Florida Exotic Pest Plant Council (FLEPPC) 2009 Category 1 listed exotics will then take place followed by limited disking where necessary to create bare patches.

In addition to the above activities, additional tree clearing will take place on approximately 32 acres in the north easternmost portion of ASP 325. The tree structure in this previously cleared area will be reduced by removal of existing palm trees that are currently scattered throughout this area, which is located immediately across the road from ASP Parcel 195, where two jay groups currently reside. The goal of structure reduction in this area is to increase the line of sight for scrub-jays moving from the occupied land at ASP 195 to the 47 acre mitigation parcel at ASP 325.


Legend
Proposed Restoration Area (47 ac)
Palm Tree Removal (32 ac)
Alva Scrub Preserve #325
QUEST
ecology
735 Lakeview Drive
Wimauma, FL 33598
Tel: 813.642.0709
Fax 813.642.0880
Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 4-8
Alva Scrub Preserve #325
Proposed Restoration Area
0
400
Feet


Legend
Proposed Restoration Area (78 ac)
Alva Scrub Preserve #357
QUEST
ecology
735 Lakeview Drive
Winsauma, FL 33598
Tel: 813.642.0799
Fax 813.642.0380
Cape Coral Habitat Conservation Plan
Lee County, Florida
Figure 4-9
Alva Scrub Preserve #357
Proposed Restoration Area
0
400
Feet

Prescribed fire will be introduced within eight to 36 months of mechanical restoration activity. Short-term goals, achieved primarily through mechanical treatments, are to reduce the vertical fuel structure and bring them closer to the ground by eliminating most of the overstory structure. This will restore the low shrubby structure and facilitate prescribed fire as the primary management method in the long-term. Required frequency of prescribed fire for long-term management of this habitat will be based on an adaptive management technique determined by the growth rate of shrubby vegetation and fuel build up on the parcel, but is likely to be needed every two to five years. Managing scrub communities with prescribed fire will ultimately provide the appropriate habitat conditions for Florida scrub-jays.

An active cattle lease exists on ASP 325, and cattle grazing will also be used as a form of vegetation management. The entire parcel is expected to act as a travel corridor for scrub-jays.

4.6.2 ASP Parcel 357

Restoration of ASP 357 will be conducted through modification of the existing vegetation community and structure. Mechanical treatments (rollerchopping and/or tree cutting) will be conducted to remove overgrown thickets of wax myrtle and other undesirable shrubby vegetation. Existing scrub oaks and desirable native shrubs of 9.8 feet in height or less will remain. Saw palmettos will be thinned or mowed in overgrown areas to achieve a more open structure and to prevent crown fires or intense fires from occurring. Short-term goals are to reduce the vertical fuel structure and eliminate the overstory structure, thereby restoring the low shrubby structure and facilitating prescribed fire as the primary management method in the long-term. Herbicide treatment of existing non-native grasses and all FLEPPC 2009 Category 1 listed exotics will then take place followed by disking of established turf areas to create bare mineral soil patches. Following removal of undesirable shrub and groundcover, scrub oaks will be planted in clusters throughout the site, with the goal of achieving an oak shrub cover of 25-75%. The number and spacing of the oaks to be planted will be determined at the time of restoration, as this will depend on site conditions following mechanical and chemical treatments.

Prescribed fire will be introduced within eight to 36 months of mechanical restoration activity. Prescribed burning goals will focus on preventing hardwoods from encroaching into restored scrubby flatwoods and to maintain the majority of the vegetation to a maximum height of 10 feet for the benefit of Florida scrub-jay. Additional goals include reducing the coverage of native shrubs that can become invasive such as wax myrtle and fetterbush (*Lyonia* sp.) to less than 30%. Tree canopy coverage will be maintained at a maximum of 15%. Required frequency of prescribed fire for long-term management of this habitat will be based on an adaptive management technique determined by the growth rate of shrubby vegetation and fuel build up on the site, but is likely to be needed every two to five years. Managing scrub communities with prescribed fire will ultimately provide the appropriate habitat conditions for Florida scrub-jays.

In August 2009, Lee County 20/20 staff installed a cow well in the center of this unit, which has an active cattle lease. Cattle grazing will continue in this unit as a management technique for pasture grasses.

4.7 Mitigation Plan Goals and Objectives

The goal of this mitigation plan is to restore and maintain scrubby flatwoods habitat to optimal condition for use by the Florida scrub-jay, such that a minimum of three family groups will move into the site from adjacent, currently occupied areas. The overall goal for the entire ASP is to increase the amount of habitat available to the Florida scrub-jay on public lands in the County. This will serve to achieve the ultimate goal of maintaining viable scrub-jay populations within the region in the long-term, through restoration and permanent management of suitable habitat.

To achieve this goal, the following are the primary objectives of the restoration:

- Reduce vertical structure of vegetation such that the majority of the height of shrub and tree cover is maintained at less than 10 feet.
- Maintain the forested structure (species over 15 feet in height) to less than 15% canopy cover.
- Plant scrub oaks to achieve a shrub cover of 25-75% to provide nesting habitat opportunities.
- Create and maintain open, sandy areas for food caching by disking caching areas if naturally open areas become encroached upon. Open sandy areas will represent no more than 30% of the total habitat being restored.
- Restore the vegetation community that can be maintained with prescribed fire as the primary management tool in the long-term.

4.8 Long-term Management Plan

The goal of long-term management of the ASP 325 and ASP 357 parcels will be to manage and maintain native scrub habitats to the historical habitat structure and composition, and to maintain stable populations of scrub endemic flora and fauna, scrub-jays in particular, using prescribed fire as the primary management tool to mimic natural ecological processes. The purpose of a fire management plan is to safely manage and maintain native habitats with prescribed fire such that their ignition and timing mimic, as closely as possible, the results of a naturally occurring lightning strike fire.

A fire return interval is defined as a range of time (years) in which fire is required in order to maintain a desirable habitat structure. Typically the fire return interval to maintain scrubby flatwoods and scrub habitats is between 6 and 19 years, respectively (Main and Menges 1997), with the fire return interval being directly related to the desired shrub vegetative structure (height). Data collected from the vegetation monitoring program described below will allow land managers to refine fire return intervals to best meet the goal(s) of maintaining shrub structure at or below 10 feet, which is optimal for scrub-jays. Shrub structure and fine fuel cover will be the main physical characteristics that will dictate when fire should be introduced. When the average shrub height reaches

over 10 feet and fine fuel cover is greater than 60%, prescribed fire will be used to maintain the necessary vegetation succession regime and the desired vertical and cover structure. Prescribed burns will also take place during suitable weather conditions such that a top kill of oaks may be achieved as needed.

Lee County 20/20 staff will be responsible for conducting prescribed burns, and will depend on the results of vegetation monitoring events and overall site and weather conditions to determine the timing of each event. A burn prescription plan will be prepared and include details such as weather (e.g., temperature, humidity, wind direction and speed, drought index), time, equipment to be mobilized, containment plans should the fire get outside of the prescribed area, and necessary permits. A State certified burn boss is responsible for reviewing the pre-burn protocols, writing each burn prescription, and will be present with the burn crew during each fire. Lee County staff includes personnel highly experienced in conducting prescribed burns and will prepare burn plans and make the decisions regarding timing of each event.

In addition to fire management, pursuant to the ASP Land Stewardship Plan, long-term management activities will include ongoing debris removal, restricting construction of maintenance trails in certain areas, and enforcement of no littering and no motorized vehicles (Lee County Dept. of Parks and Recreation 2010). County staff will maintain boundaries with fencing and signs to discourage illegal access to the Preserve. County staff will also remove any debris and take action to prevent future dumping on the site.

It is anticipated that annual vegetation monitoring will occur. The annual event will take place in August of each year. Monitoring will document average height and cover of the forested, shrub and herbaceous strata of Type I and Type II scrub-jay habitats, identify any nuisance or exotic species, and make maintenance and management recommendations. Sample plots will be established and monitored along multiple line transects at a frequency to adequately capture the monitoring parameters above, and site conditions will be captured through photographic stations and expanded through the report narrative.

Control of invasive exotic vegetation will be achieved through annual maintenance events conducted by Lee County staff. The ultimate goal is to remove/control the exotics during initial restoration activities, followed by treatments of re-sprouts and new seedlings. Maintenance goals will be to maintain vegetation cover comprising less than 5% by invasive exotic species.

County staff will use adaptive management techniques to make any necessary changes to ongoing management and monitoring to ensure the long-term viability of the ecosystems and the scrub-jay population on the Preserve.

4.8.1 Adaptive Management

Adaptive management is the systematic acquisition and application of reliable information to improve natural resource management over time (Wilhere 2002). It is required by the USFWS to be a part of all current HCPs. Adaptive management allows monitoring and research to be incorporated into long-term management and restoration by establishing cause-and-effect relationships and thus providing a basis on which to make management decisions. Subsequently, management plans that come from HCPs are not set in stone and can be altered based on the needs of the habitat or species being covered. For example, if monitoring programs indicate fire regimes are not meeting the biological goals of the HCP, the frequencies can be changed in order to meet those biological goals or objectives.

The proposed monitoring programs discussed below include methods for tracking the success of the restoration activities and the status of scrub-jays within and adjacent to the restoration parcels. An adaptive management strategy that employs the data produced from each monitoring event will be utilized to determine when monitoring or management techniques may need to be adjusted to ensure a more successful project. The results of long-term monitoring will be used as needed to refine and enhance ongoing management activities. The timing of controlled burns, for example, will be based on the results of monitoring at each parcel, versus predetermined intervals. This allows for flexibility to adapt techniques to manage for site-specific needs. An adaptive management policy allows the land manager to react to changes observed within the restoration areas that may affect the achievement of optimum conditions for scrub-jays.

4.8.2 Climate Change Considerations

Climate change is not anticipated to be a significant issue in this case. The ASP parcels are located well inland, and scrub habitats occur at relatively high elevations, so sea level rise should not be a factor. Changing weather patterns that could be associated with climate change will be addressed through adaptive management. Weather conditions are important in determining the timing of prescribe fire, so will be an ongoing consideration throughout the long-term management of the sites.

4.9 Monitoring and Reporting

4.9.1 Florida Scrub-jay Monitoring

A scrub-jay monitoring and banding program will be initiated for all scrub-jays in the HCMP/ASP area for the first five years following restoration. Priority will be given to the scrub-jay families occupying ASP 195 as they are nearest in proximity to the proposed mitigation parcels. Monitoring and banding will also take place at Festival Park, with banding to occur immediately upon receipt of the ITP. This banding will allow the movements of the jays currently utilizing the site to be tracked and monitored.

Scrub-jay monitoring will follow Fitzpatrick et al. (1991) presence/absence surveys. Presence/absence surveys will be conducted annually in late July to identify jays present,

including any surviving juveniles fledged during the breeding season. The timing of this sampling period will allow for the determination of annual survival of adults, helpers and juveniles over time.

In addition to the annual surveys, an auxiliary color banding program will be implemented in order to band all scrub-jays on ASP Parcels 325, 357, and 195 and in the near region (within 2.5 miles of ASP). This will assist in documenting immigration into the population and emigration from the area. Banding will also allow for the identification of individual scrub-jays as to their sex, age, and family status. Identification of banded individuals, as to their site fidelity, can be used to measure the effectiveness of habitat management activities. Banding will be conducted concurrently with semi-annual monitoring when possible; however, additional site visits may be required.

Lee County 20/20 staff will be responsible for the monitoring events, and for the acclimation of scrub-jays to potter traps, to assist with catching the birds for banding. An authorized Master Bird Bander will be retained by the County to conduct the banding activities. FWC biologists will continue to monitor and band the ASP scrub-jay population in conjunction with HCMP banding contract work through Archbold Biological Station (Lee County Dept. of Parks and Recreation 2010).

All of the above data will be collated into an annual report to be submitted to Lee County, the City of Cape Coral, and the USFWS by October 1 of each year. Following the five year post-restoration period, an annual report will be prepared by Lee County 20/20 staff and provided to the USFWS and the City of Cape Coral to document the status of the mitigation sites and the HCP through the 25-year duration of the ITP.

4.9.2 Vegetation Monitoring

The success of restoration efforts will be tracked through annual quantitative vegetation monitoring at each site for the first five years following restoration. Transects will be established throughout the two ASP units, in different scrub soil types and habitat types. Sampling plots will be established along each transect; the number of sampling plots and distance between each will depend on the length of each transect. A 5-meter square sampling plot will be used to sample herbaceous, shrub, and canopy strata along each transect. Geographical Positioning System (GPS) points will be taken at the endpoints of each transect and at the center of each plot, to be centered along each transect. All plant species will be identified by stratum, and the cover by each species will be visually estimated within their respective stratum. Heights of the tallest herb, shrub and forested species will be measured in each plot. Five foot sections of rebar, hammered half-way into the ground, will be used to permanently locate the center point of each 5 meter square sample plot, and the beginning and end points of each transect. The rebar will be sleeved with a 10 foot long, 1/2 inch diameter galvanized pipe. Photographs will be taken facing into the transect from each beginning and end points.

Several vegetative parameters will be sampled and reported to determine the condition of the scrub polygons including: total and average cover of each strata and species composition within each strata, and average maximum height within each strata.

The personnel sampling each transect will also note herbaceous, shrub, and tree species that occur within the parcel, but do not occur within sampling plots in an attempt to identify as many plant species as possible. A qualitative assessment of the overall condition of each parcel will also be made.

Quantitative monitoring will be conducted annually by Lee County 20/20 staff during the growing season for the first five years following completion of restoration activities. An annual monitoring report will be submitted to USFWS, along with the results of the scrub-jay monitoring by October 1 of each year.

After the first five years post-restoration, the ASP 325 and ASP 357 parcels will be monitored concurrently with the entire Alva Scrub Preserve, according to the ASP Land Stewardship Plan. ASP is part of a countywide quarterly site inspection program conducted for all C20/20 Preserves. During these inspections, staff will monitor any impacts and/or changes to the Preserve and record all animal sightings and new plant species that are found (Lee County Dept. of Parks and Recreation 2010). This monitoring will allow Preserve managers to act accordingly when management is needed. Annual reports will continue to be submitted to the USFWS by Lee County 20/20 staff through the life of the permit, to document the status of the mitigation and the HCP.

5.0 Funding

The City of Cape Coral will fund all elements of this HCP. The City will make efforts to obtain grants to try to offset the expense of implementing the mitigation plan for the Florida scrub-jay. Although grants will be utilized when available, the City of Cape Coral accepts the responsibility to provide adequate funding for management, monitoring, and reporting within the covered area. Estimated costs for conducting the initial restoration, monitoring and long-term maintenance are provided in Table 5-1 on Page 5-2.

The City is currently considering a number of alternative funding mechanisms, including, but not limited to an "environmental fee" associated with new building permits. This Environmental Fee could be affixed to each building permit issued by the City for any new structure in the City on previously unimproved land, and for any remodeled structure in the City on previously improved land. This Environmental Fee would be used to fund the costs of the restoration as prescribed in the HCP.

Funding for long term maintenance, subsequent to the first five years, shall be provided through a non-wasting trust fund. The non-wasting trust fund will continue to pay all expenses for the life of the HCP. The trustee for the non-wasting fund will be Wildlife Foundation of Florida Mitigation Trust Funds, Inc., a Florida not-for-profit corporation. This subsidiary of the Wildlife Foundation of Florida, Inc. is being established solely to provide funding for the maintenance and land stewardship of projects established by trust agreements entered into by various grantors with the Wildlife Foundation of Florida, Inc. for the protection of natural resources and serve as trustee of such trusts.

In accordance with the Department of the Interior's "No Surprises" policy, as long as the City remains in compliance with the provisions of the HCP and the conservation actions are being adequately implemented, no commitments of additional lands, additional funds, or restrictions beyond those identified within the City of Cape Coral HCP will be imposed by USFWS.

QUEST ecology

Table 5-1

Manhour and Fixed Fee Costs

City of Cape Coral Scrub-Jay Mitigation Plan

Lee County 20/20 Alva/Scrub Preserve Sites 357 and 325

	Unit	No. of Units	Unit Cost	Total Unit Cost
Task 1: Initial Restoration Activities				
Preparation of Bid Documents and Bid Management (Lee County)	Day	2	$400.00	$800.00
Roller chopping of 47 acres at ASP Site 325 and 78 acres at ASP Site 357	Acre	125	$50.00	$6,250.00
Palm tree removal on 32 acres north of ASP Site 325 (Lee County)	Event	1	$500.00	$500.00
Oak and Palm removal at ASP Site 325 using heavy equipment	Acre	47	$2,000.00	$94,000.00
Hauling of trees debris from Site 325 (based on an estimate of 200 trees/acre)	Load	500	$500.00	$250,000.00
Pile burning of remaining cut debris at Site 325 (Lee County)	Day	3	$1,200.00	$3,600.00
Treatment of nuisance & exotic vegetation	Acre	125	$165.00	$20,625.00
Planting of scrub oaks at ASP Site 357	Tree	1000	$15.00	$15,000.00
Oversight of Restoration Activities (Lee County)	Day	10	$400.00	$4,000.00
Banding of existing scrub-jays on adjacent properties	Per Event	1	$4,000.00	$4,000.00
				$398,775.00
Task 2: Year 1 Site Monitoring				
Vegetation/Success Criteria Monitoring	Per Event	1	$3,500.00	$3,500.00
Scrub-jay monitoring and trap acclimation (Lee County)	Per Event	5	$550.00	$2,750.00
Scrub-jay banding	Per Event	2	$2,500.00	$5,000.00
Annual reports	Per Event	1	$2,000.00	$2,000.00
			PER YEAR FOR FIVE YEARS	**$13,250.00**
Task 3: Years 2-5 Site Monitoring				
Annual Monitoring & Maintenance	Year	4	$13,250.00	$53,000.00
				$53,000.00
Total for Initial Restoration and Five Years Monitoring				**$465,025.00**

Task 4: Long-Term Annual Management Costs				
Nuisance & Exotic Vegetation Maintenance,	Acre	125	$60.00	$7,500.00
Controlled Burns	Event	1	$2,000.00	$2,000.00
		0	$0.00	$0.00
PER YEAR IN PERPETUITY (VIA NON-WASTING TRUST FUND)				**$9,500.00**

Cost for Initial Restoration & 5 Years Monitoring	$465,025.00
Non-Wasting Trust Fund to pay Long-Term Annual Management	$323,000.00
Total Proposed HCP Costs	$788,025.00

6.0 Alternatives Analysis

Alternatives to the proposed action have been considered and evaluated, and are discussed below.

6.1 Alternative 1 – No Action

The No Action alternative is to not conduct any development within the Festival Park area, leaving the site in the current condition, as a regularly mowed, exotic turf grass-dominated area of poor habitat. Because of the poor quality of the habitat, and the isolation of the Festival Park area from any source of immigrant scrub-jays, it is not likely that a viable scrub-jay population will persist at this site over the long term. Thus, the No-Action alternative is likely to result in extirpation of the existing on-site scrub-jays.

From an economic perspective, the No Action alternative is not feasible for the City, due to the significant investment in land acquisition that has already taken place for Festival Park. The development of this future park area is important for the future growth and economic well being of the City and its residents. Therefore, for both biological and economic reasons, "No Action" is neither a reasonable nor acceptable alternative.

6.2 Alternative 2 – Manage and Restore On-site Habitats

Alternative 2 consists of the option to restore the Festival Park site to scrub habitat with the structure and vegetative community more conducive to support scrub-jays. Although this alternative may temporarily preserve the family groups that currently reside on the site, it will not provide long-term viability for scrub-jays within the City, as a viable population does not exist within the surrounding area. This option would provide an "island of scrub habitat" in the middle of a developed residential area. Scrub-jays that persist within the restored habitat would be subject to the many threats found in such areas, such as roads and vehicle mortality, and free ranging cats and other non-native predators. The costs associated with restoration would be significant, and effective habitat management in this urban environment would be difficult.

Similar to the No Action alternative, this option is not financially feasible to the City of Cape Coral, and because of the low likelihood for the site to support a long-term viable scrub-jay population, the restoration alternative is not reasonable or acceptable.

6.3 Alternative 3 - The Nature Conservancy Compensatory Fund

Under this alternative, Festival Park would be developed as proposed, however mitigation would be provided by paying into the compensatory fund established through a Statewide "Umbrella" HCP for the Florida scrub-jay. In 2006, the USFWS teamed with The Nature Conservancy (TNC) to create a mitigation fund (Florida Scrub-jay Conservation Fund) to rapidly acquire scrub-jay conservation lands and to ensure in-lieu mitigation fees would be used to best promote the Statewide recovery of the species

(USFWS Federal Register Volume 72, Number 135).With proper restoration and management, these lands are intended to provide optimal habitat to scrub-jays and other scrub dependent species. Details regarding this program can be found in the following document:

http://www.fws.gov/northflorida/ScrubJays/Docs/Umbrella/FSJ_Umbrella_HCP_EA.pdf

Under this alternative, lands that may be acquired would not necessarily be located within Lee County and a net loss to the regional scrub-jay population could result. This option is also cost-prohibitive; mitigation cost per acre is estimated to be $ 53,794, and at a minimum, the cost for mitigating the 75 acres of occupied habitat at a 2:1 ratio would exceed $8 million. This is not economically feasible, and therefore not a reasonable or acceptable alternative.

6.4 Alternative 4 – Preferred Alternative

The Preferred Alternative, as proposed by this HCP is to develop Festival Park and provide mitigation through the restoration and long-term management of suitable scrub-jay habitat on public lands within Lee County's Conservation 20/20 Land Program. As described in Section 4.0, a total of 125 acres of previously disturbed scrubby flatwoods habitat will be restored and maintained at the Alva Scrub Preserve Parcels 325 and 357. Because of the proximity to currently occupied habitat, and the connectivity to additional large parcels of public conservation lands, this plan provides the best potential for the establishment of a long-term stable regional population of scrub-jays within Lee County.

The costs associated with this alternative, proposed funding sources, and funding administration are discussed in Section 5.0.

This alternative allows for the development of Festival Park to proceed, while providing economically and biologically feasible means to mitigate for impacts to the scrub-jay.

7.0 Plan Implementation and Unforeseen Circumstances

7.1 Plan Implementation

It is anticipated that the City of Cape Coral HCP will be implemented immediately upon receipt of the ITP from the USFWS. Although the development of Festival Park may not take place for several years, the restoration activities will be initiated within one year of approval of the ITP. This will ensure mitigation is under way well in advance of any proposed impacts.

The City of Cape Coral will be the ITP Permittee and will be the responsible party to ensure the conditions of the HCP are followed, and will provide all of the necessary funding for the mitigation, including long-term management, as explained in section 5.0. The actual restoration, monitoring and management activities will be conducted by Lee County 20/20 staff, and they will be responsible for securing the required contractors and dedicating County staff to the project. Lee County staff will conduct and/or oversee the monitoring programs and will be responsible for annual reporting and any coordination that may be required with the USFWS. An Interlocal Agreement between the City and Lee County has been approved and outlines the roles and responsibilities of each party (Appendix E).

7.2 Changed Circumstances

Circumstances that can affect the Plan area or the covered species, and are reasonably foreseeable as possible to occur in the future, include hurricanes or other severe weather events, wildfires, flooding, occasional freezes, and unanticipated population declines due to disease, predation, or habitat degradation caused by unanticipated events. Scrub-jay losses associated with this HCP, whether at the Festival Park site or the Alva Scrub Preserve, as a result of one or more of these circumstances will not result in changes to the HCP, and full mitigation will still be provided.

7.3 Unforeseen Circumstances

According to the Endangered Species Habitat Conservation Planning Handbook (USFWS and NMFS 1996), "unforeseen circumstances" are defined as "changes in circumstances surrounding an HCP that were not or could not be anticipated by HCP participants and the Service, that result in a substantial and adverse change in the status of a covered species".

It is understood that unforeseen circumstances could arise that might affect the HCP, and the City of Cape Coral is committed to addressing these to the extent reasonably practicable. In accordance with the Department of the Interior's "No Surprises" policy, as long as the City remains in compliance with the provisions of the HCP and the conservation actions are being adequately implemented, no commitments of additional lands, additional funds, or restrictions beyond those identified within the City of Cape Coral HCP will be imposed by USFWS. Catastrophic or other unforeseen events could

cause the USFWS and FWC to review any changes in the viability of the covered species. The USFWS and FWC will reinitiate consultation and changes will be agreed upon by all parties (USFWS, FWC, and Lee County). It is agreed that any actions that may be required to address unforeseen circumstances will be similar to those proposed by the HCP, and shall consist of adaptive management, alterations to schedules, or adjustments to monitoring programs.

The monitoring program to be implemented as a result of the HCP will provide the information to determine whether unforeseen circumstances have arisen within the Plan Area or that may affect the target species such that these need to be addressed.

7.4 Climate Change Effects

Climate change has been moving to the forefront of conservation issues in recent years. Possibly the biggest threat to Florida is sea level rise associated with climate change. With the City of Cape Coral surrounded by water on three sides, and the Festival Park site in close proximity to the Pine Island Sound, these habitats are at long-term risk, and the scrub-jay population faces uncertain long-term stability of suitable habitat within the City.

One approach to combating sea level rise in regards to fulfilling requirements for the HCP is to provide multiple scrub reserves above the elevation of predicted future water levels. The proposed mitigation plan provides for this scenario, and according to Lee County sea level rise projections, the ASP sites are predicted to remain unaffected (Figure 7-1).

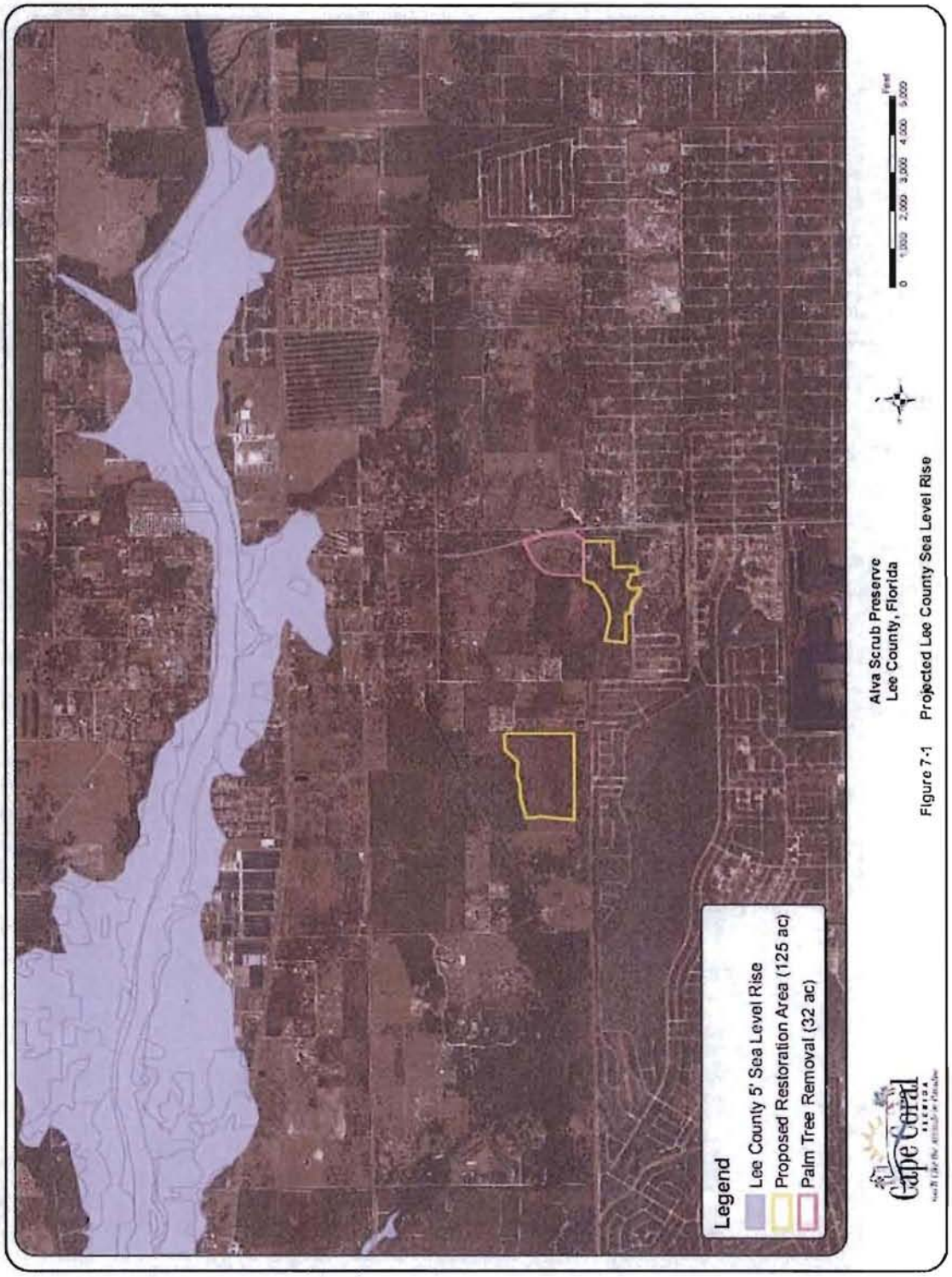


Figure 7-1 Projected Lee County Sea Level Rise

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INTERLOCAL AGREEMENT BETWEEN
LEE COUNTY AND THE CITY OF CAPE CORAL
FOR FLORIDA SCRUB JAY HABITAT IMPROVEMENTS WITHIN
ALVA SCRUB PRESERVE

THIS AGREEMENT is entered into by and between LEE COUNTY, a political subdivision and Charter County in the State of Florida (hereinafter referred to as "COUNTY"), and THE CITY OF CAPE CORAL, a municipal corporation of the State of Florida (hereinafter referred to as "CITY").

WHEREAS, COUNTY owns Conservation 20/20 Lands known as the Alva Scrub Preserve located and described in attached Exhibit "A" (the "Preserve"); and

WHEREAS, COUNTY is the entity responsible for maintenance and restoration of the Preserve; and

WHEREAS, CITY desires, as part of the Florida Scrub Jay Habitat Conservation Plan ("HCP"), to finance the restoration and maintenance of a 125-acre portion of the Preserve, encompassing portions of Conservation 20/20 Land Nominations 325 and 357, described in attached Exhibit "B" (the "Property"); and

WHEREAS, CITY is actively pursuing federal, state, and local approvals pertaining to the HCP and related Incidental Take Permit ("ITP") within COUNTY's adopted Alva Scrub Preserve Land Stewardship Plan (the "Stewardship Plan"); and

WHEREAS, COUNTY is willing to restore and maintain the Property described in Exhibit "B", in accordance with the HCP, the ITP, and the Stewardship Plan, provided CITY obtains the necessary approvals and provides financing for the restoration and maintenance in accord with this Interlocal Agreement; and

WHEREAS, the Conservation Lands Acquisition and Stewardship Advisory Committee ("CLASAC") and its Management Subcommittee ("MSC") have reviewed this Interlocal Agreement and recommend approval; and

WHEREAS, CITY and COUNTY have the right and authority to enter this Agreement pursuant to F.S. §163.01; and

WHEREAS, CITY and COUNTY believe this Interlocal Agreement is in the best interests of their respective constituencies.

NOW, THEREFORE, in consideration of the faithful and timely performance of, and compliance with, the terms and conditions stated herein, the parties agree as follows:

1. Recitals. The above recitals are true and correct and are included herein as though fully set forth below.

C9a

6-21-11

2. Effective Date. The effective date of this Interlocal Agreement is the date the Board of County Commissioners approves this Agreement as a regular agenda item. COUNTY has no obligation to proceed with restoration activity until CITY successfully obtains the HCP and ITP approvals and provides complete copies of the approvals to COUNTY.

3. Term. This Interlocal Agreement will remain in effect until: (a) completion and final approval of the restoration activity that is the subject of the HCP and ITP approvals CITY is required to obtain under this Interlocal Agreement and the long-term maintenance non-wasting trust fund is fully funded to provide perpetual maintenance as determined by this Agreement; or (b) CITY fails to obtain the HCP and ITP approvals contemplated under this Agreement by December 31, 2016.

4. Purpose of Agreement. This Interlocal Agreement is intended to provide a mutual benefit to COUNTY and CITY. The benefit to COUNTY lies in receipt of permitting approvals and financial assistance for mitigation, restoration, and enhancement of Conservation 20/20 Lands. The benefit to CITY is the provision of mitigation necessary for the HCP and ITP. COUNTY understands that CITY seeks to have the HCP and ITP issued to CITY pursuant to this Agreement serve as the full extent of CITY's obligations for the Florida Scrub Jay (*Aphelocoma coerulescens*) within the City of Cape Coral and that CITY will not be obligated to further mitigation, restoration, enhancement, monitoring, maintenance, or any associated activities for Florida Scrub Jays. COUNTY has no objection to CITY's pursuit of such an approval from the issuing entities. However, the parties acknowledge that COUNTY does not have the authority to grant the approval sought by CITY.

5. Responsibility of the Parties.

a. CITY Responsibility.

(1) CITY must obtain the HCP and ITP approvals necessary to allow restoration activity on the Property in a manner consistent with the Stewardship Plan dated August 10, 2010, and on file with Lee County Parks and Recreation at the Terry Park location.

(2) CITY must promptly provide to COUNTY contemporaneous copies of all submittals and responses with respect to obtaining the HCP and ITP approvals.

(3) Upon receipt of the HCP and ITP approvals, CITY must provide written notice to COUNTY regarding the approvals and request commencement of restoration activity. As part of this request, CITY must include a good faith deposit of 20% of the funds necessary for the restoration and site monitoring contemplated. In accordance with the cost estimates for restoration, site monitoring, and maintenance, as provided in the attached Exhibit "C", CITY's good faith deposit is $93,005.00.

(4) CITY must promptly reimburse COUNTY for the costs incurred to complete the restoration activity upon receipt of a detailed invoice for these costs from COUNTY. CITY understands and agrees that reimbursement will be periodically required and that COUNTY may cease restoration activity in the event CITY fails to provide reimbursement upon request. CITY, with prior written authorization from COUNTY, which authorization may not be unreasonably withheld, has the right to conduct any portion of the restoration activities on its own, or by a contractor approved by COUNTY, and thereby avoid the need to reimburse COUNTY for such associated costs. CITY agrees any portion of the restoration activities conducted by CITY or its contractor will be in compliance with the HCP and ITP approvals and this Agreement. CITY will provide COUNTY with written reports/updates regarding work completed. COUNTY will have the right to oversee the activity.

(5) CITY is responsible for all costs associated with restoration, site monitoring, and long-term maintenance of the Property consistent with the HCP and ITP approvals and this Agreement.

If the HCP or any other approvals must be modified in the future, CITY will coordinate the modification with COUNTY prior to submitting the application to the U.S. Fish & Wildlife Service or the proper permitting agency. However, CITY will be responsible for all costs associated with the modification and paperwork. COUNTY agrees not to unreasonably withhold approval or authorization for modifications that are consistent with the Stewardship Plan.

(6) CITY will meet with COUNTY on an annual basis in March of each year to review the maintenance activities completed the previous year and anticipated in subsequent years. CITY will cooperate with respect to preparing a budget for, and securing necessary funds to accomplish, the maintenance necessary to maintain compliance with the HCP and ITP approvals and this Agreement.

(7) CITY will pursue grant funding opportunities to offset the costs associated with the Florida Scrub Jay Mitigation. Grants awarded for the Florida Scrub Jay Mitigation will be provided to COUNTY and will be deemed an offset for any reimbursement requests submitted by COUNTY to CITY. CITY agrees to be responsible for reporting associated with receipt of the grant funding.

(8) Funds for the first five years of restoration, site monitoring, and maintenance activity, as identified in the attached Exhibit "C", will be included in CITY's 2014 Capital Improvement Program ("CIP") budget.

(9) Funding for long-term maintenance beyond the first five years will be provided through a non-wasting trust fund in an amount mutually determined by CITY and COUNTY. The funds to establish the non-wasting trust fund will be included in CITY's 2018 CIP budget. It is

anticipated that the non-wasting trust fund will continue to pay all maintenance expenses for the life of the HCP as administered through the Conservation Lands 20/20 Program or its successor. COUNTY will be a direct beneficiary of the trust fund.

(10) CITY agrees to be bound by any and all applicable requirements for restoration, monitoring, maintenance, or associated activities on the Property to the same extent as COUNTY, or any other entity, is or will be bound.

b. COUNTY Responsibility.

(1) COUNTY will grant necessary permit application consents to CITY.

(2) COUNTY will review and comment in a prompt and diligent manner regarding CITY's permit applications and any permit modifications pursued by CITY for the Property.

(3) Upon CITY's receipt of all approved permits and upon COUNTY's receipt of 20% of the costs of the restoration, site monitoring, and maintenance, as provided under 5.a.(3) above, from CITY, COUNTY will commence the restoration activity.

(4) COUNTY will conduct the activities identified in the HCP in accordance with the permit approvals.

(5) COUNTY will provide requests for reimbursement, with detailed information regarding the activities for which reimbursement is sought, to CITY on an interim basis as work is completed.

(6) Upon completion of the restoration project, COUNTY will continue to: (a) perform the required ongoing maintenance and monitoring; (b) provide detailed reimbursement requests to CITY for these activities; and (c) seek reimbursement from CITY or the long-term maintenance trust fund, as appropriate.

(7) COUNTY will meet with CITY on an annual basis in March of each year to review the maintenance activities and related costs for both the previous year and the next year. COUNTY will coordinate maintenance costs with CITY to the extent reasonably practicable to facilitate the necessary budgeting requirements of CITY.

(8) In the event COUNTY fails to conduct restoration or maintenance activities required by the HCP or associated permit approvals, and that failure results in damages to CITY directly related to the HCP or ITP, COUNTY's liability for damages will be limited to responsibility for the costs associated with bringing the project back into compliance with the HCP or ITP; provided, however, in the event CITY chooses to conduct restoration activities in accordance with 5.a.(4) above,

COUNTY will not be held responsible for damages suffered by CITY associated with or directly related to the activity conducted by CITY under the HCP or ITP and, instead, CITY will be responsible for the costs associated with achieving compliance.

6. Termination.

a. This Agreement may be terminated by COUNTY or CITY for failure to obtain any required permit within a reasonable period of time, or for any revocation of a permit after it has been issued. For purposes of this provision, a reasonable time period is three years from the date of the initial HCP/ITP application. In the event the Agreement is terminated for lack of necessary permits, COUNTY will return to CITY any funds transferred to COUNTY for anticipated maintenance or restoration activity that has not been completed. Likewise, upon COUNTY's presentation to CITY of detailed information regarding the activities for which reimbursement is sought, CITY will reimburse COUNTY for any restoration or maintenance activity that was completed, but not reimbursed, prior to revocation of the underlying permits.

Once all necessary fund transfers have been completed, including the creation and funding of the long-term maintenance trust fund, this term of the Interlocal Agreement will be deemed satisfied. However, the provisions with respect to title claims and the obligations of the parties to maintain and fund maintenance will remain in effect for as long as the Stewardship Plan is viable and is being actively implemented.

b. If COUNTY fails to perform maintenance as required under the HCP or ITP, CITY may terminate this Interlocal Agreement for cause upon 30 days written notice to COUNTY. Provided, however, COUNTY will have at least 30 days to cure the failure to perform. In the event of a natural disaster, such as a hurricane or other act of God, the time for COUNTY's performance or cure will be reasonably extended based upon mutual written agreement of the parties.

7. Use of Property and Consideration. The nature and extent of the work to be conducted on the Property, the location of the work, and scheduling of the work will be in accord with the HCP, the ITP, and the Stewardship Plan. COUNTY retains the right to engage in any and all management activities not inconsistent with this Interlocal Agreement. Nothing in this Agreement affects COUNTY's ownership interest in the Property.

8. Access. COUNTY agrees to grant CITY permission to enter upon the Property for the purpose of inspecting the restoration, mitigation, monitoring, maintenance, and associated activities upon the written request of CITY.

9. Property Rights and Claim of the Title. CITY understands and agrees that title to the Property remains in Lee County and CITY may not claim title to the Property by virtue of its location, use, or payment for activity contemplated under this Interlocal Agreement.

10. Liability. To the extent allowed by law and subject to the provisions and limitations contained in F.S. §768.28, COUNTY and CITY, as separate parties, will be deemed liable for injury or loss of property, personal injury, or death caused by the negligent or wrongful act or omission of any employee or contractor of COUNTY or CITY while working within the Property and acting within the scope of office or employment under circumstances in which COUNTY or CITY, if a private person, would be liable to the claimant for a tort claim. This provision is not intended to waive any right or claim of sovereign immunity held by either COUNTY or CITY pursuant to F.S. §768.28.

11. Assignment. The rights and obligations identified in this Interlocal Agreement may not be assigned.

12. Venue. Venue is in Lee County, Florida.

13. Prohibitions Against Liens or Other Encumbrances. This Interlocal Agreement does not grant or provide CITY with rights to create liens or encumbrances against the Property, including but not limited to, mechanics liens, construction liens, or mortgages.

14. Partial Invalidity. If any term, covenant, condition, or provision of this Interlocal Agreement is determined by a court of competent jurisdiction to be invalid, void, or unenforceable, the balance will remain in full force and effect.

15. Notice. All notices given under this Interlocal Agreement must be in writing and sent by certified mail to the addresses set forth as follows:

COUNTY: LEE COUNTY
ATTN: County Manager
3410 Palm Beach Blvd.
Fort Myers, FL 33916

AND

Lee County Parks & Recreation
ATTN: C20/20 Sr. Supervisor
3410 Palm Beach Boulevard
Fort Myers, FL 33916

CITY: CITY OF CAPE CORAL
ATTN: City Manager
P.O. BOX 150027
Cape Coral, FL 33915-0027

AND

CITY OF CAPE CORAL
ATTN: Department of Community Development
P.O. BOX 150027
Cape Coral, FL 33915-0027

16. Governing Law. This Interlocal Agreement is governed by the laws of the State of Florida.

17. Exhibits. The modification of the Exhibits attached to this Agreement by reviewing agencies will not diminish the resource protection and preserve enhancement outlined in this Agreement.

18. Entire Understanding. This Agreement sets forth the entire understanding between the parties and may only be amended by execution of a document with the same formality.

In accordance with the foregoing, the parties execute this Interlocal Agreement on June 21, 2011.

ATTEST:
CHARLIE GREEN, CLERK

By: Marcia Wilson
Deputy Clerk

BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA

By: _____
Chair

Approved as to Form:

By: _____
Office of County Attorney

ATTEST:
CITY OF CAPE CORAL, CLERK

By: Rebecca van Deventer
Clerk

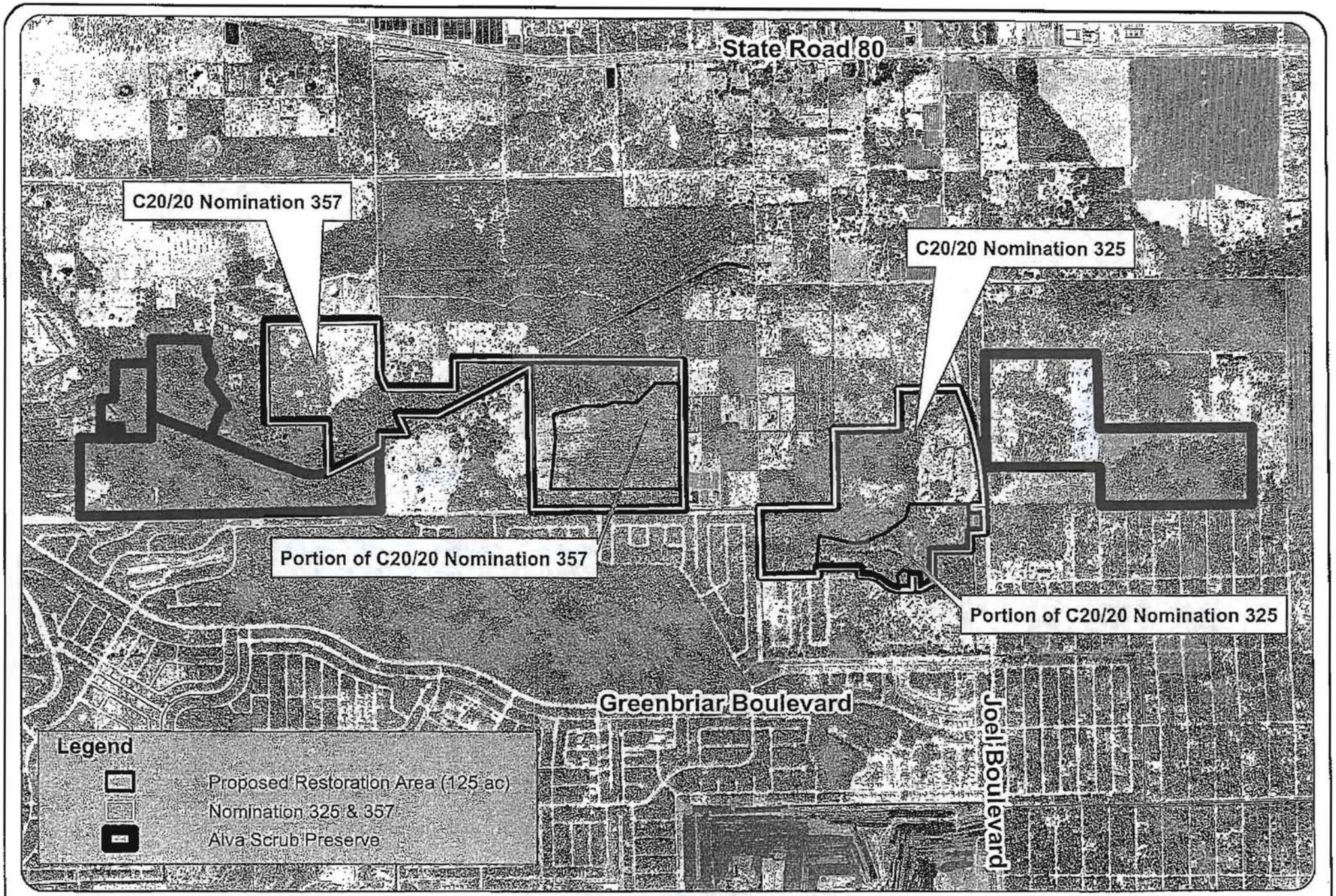
CITY OF CAPE CORAL

By: _____
Mayor

Approved as to Form:

By: _____
Office of City Attorney

I CERTIFY THIS DOCUMENT TO BE A TRUE AND CORRECT COPY OF THE ORIGINAL ON FILE IN MY OFFICE
CHARLIE GREEN, CLERK CIRCUIT COURT
LEE COUNTY, FLORIDA
DATED: 6-24-11
BY: Marcia Wilson
Deputy Clerk



Cape Coral FLORIDA
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Conservation 20/20 Lands
Known as the Alva Scrub Preserve
Lee County, Florida

N
W E
S

0 1,000 2,000 3,000 4,000 Feet

May 9, 2011

Exhibit A

Portion of C20/20 Nomination 325

Description of Proposed Restoration Area:

A parcel of land for administrative purposes situated in the State of Florida, County of Lee, lying in Section 3, Township 44 South, Range 27 East, being more particularly bounded and described as follows:

Commencing at the corner common to Sections 34 and 35, Township 43 South, Range 27 East, and Sections 2 and 3, Township 44 South, Range 27 East, Lee County, Florida; Thence S89°21'00"W a distance of 312.38 feet along the north line of said Section 3, to the Point of Beginning; Thence S02°11'14"E a distance of 774.21 feet to the northeasterly corner of a parcel of land recorded in OR Book 3877 at Page 53 in the Public Records of Lee County, Florida; Thence S89°16'38"W a distance of 679.21 feet along the northerly line of said the last described parcel of land to the northwesterly corner; Thence S00°43'09"E a distance of 569.57 feet along the westerly line of the last described parcel of to an intersection with the northerly line of Wolverton Court, being a point on a non-tangent curve concave to the southeast, having a radius of 330.00 feet; Thence southwesterly along said curve to the left a distance of 121.08 feet, through a central angle of 21°01'23", said curve is subtended by a chord which bears S62°19'15"W a distance of 120.41 feet to a point of reverse curvature with a curve concave to the northwest having a radius of 270.00 feet; Thence southwesterly along said curve to the right a distance of 150.85 feet through a central angle of 32°00'40", said curve is subtended by a chord which bears S67°48'53"W a distance of 148.89 feet to the southeasterly corner of a parcel of land recorded in OR Book 4048 at Page 3942 in the Public Records of Lee County, Florida; Thence N00°37'18"W a distance of 250.13 feet, leaving said northerly line of Wolverton Court, along the easterly line of the last described parcel of land to the northeasterly corner; Thence S89°06'58"W a distance of 99.97 feet along the northerly line of the last described parcel to the northwesterly corner; Thence N51°34'06"W a distance of 93.24 feet leaving the northwesterly corner of the last described parcel of land; Thence N75°37'58"W a distance of 86.41 feet; Thence S45°41'08"W a distance of 125.76 feet; Thence S09°10'00"E a distance of 247.34 feet to a point on the northerly line of Wyandotte Way, and the point of curvature of a non-tangent curve concave to the northeast having a radius of 401.97 feet, and a point on the northerly line of a 60 foot wide deeded right of way; Thence northwesterly along said curve to the right a distance of 315.95 feet through a central angle of 45°02'05", said curve is subtended by a chord which bears N68°17'02"W a distance of 307.88 feet to a point of reverse curvature with a curve concave to the southwest having a radius of 461.97 feet; Thence northwesterly along said curve to the left a distance of

362.66 feet through a central angle of 44°58'45", said curve is subtended by a chord which bears N68°15'21"W a distance of 353.42 feet to a non-tangent point of tangency on the northerly line of said 60 foot wide deeded road right of way; Thence S89°17'32"W a distance of 91.10 feet along said right of way line to the southeasterly corner of a parcel of land recorded in OR Book 4233 at Page 3131, of the Public Records ; Thence N00°44'26"W a distance of 140.11 feet leaving the northerly line of said deeded 60 foot wide deeded right of way along the easterly line of the last described parcel to the northeast corner; Thence S89°13'29"W a distance of 729.83 feet along the northerly line of the last described parcel to the northwesterly corner; Thence N05°24'30"E a distance of 535.22 feet, leaving the last described parcel; Thence S77°15'57"E a distance of 566.82 feet' Thence N84°22'10"E a distance of 241.96 feet; Thence N65°38'15"E a distance of 386.80 feet; Thence N54°06'09"E a distance of 435.11 feet; Thence N16°25'45"E a distance of 246.24 feet to a point on the north line of Section 3, Township 44 South, Range 27 East; Thence N89°21'00"E a distance of 1015.40 along the north line of said Section 3, to the Point of Beginning, said parcel containing 47.000 Acres, more or less.

The bearings within this legal description were derived from a boundary survey prepared by Bean, Whitaker, Lutz & Kareh, Inc. dated: 12-13-2006, and based on the North American Datum of 1983/1990, with the south line of Section 34, Township 43 South, Range 27 East, as bearing S89°21'00"W.

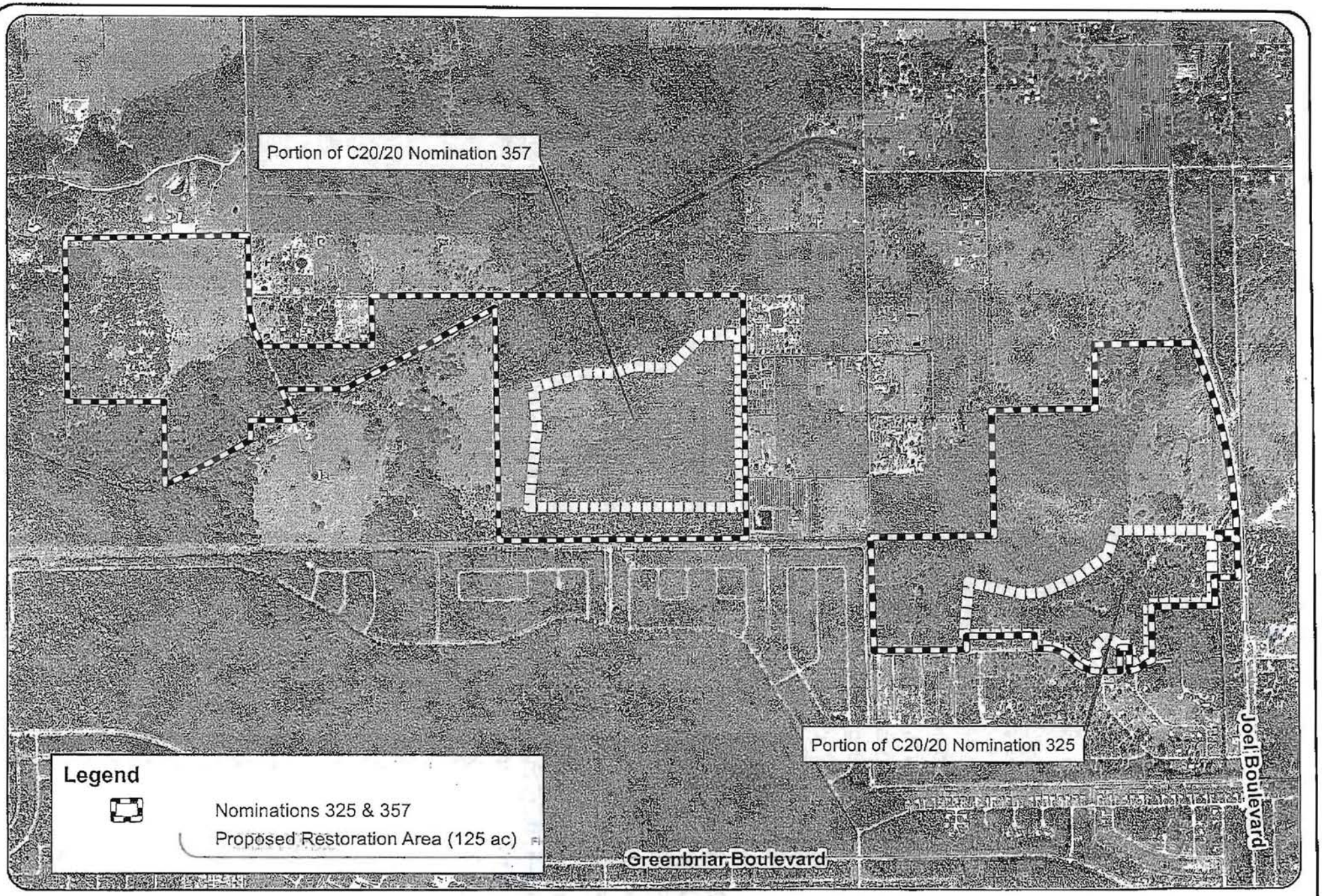
Portion of C20/20 Nomination 357

Description of Proposed Restoration Area:

A parcel of land for administrative purposes situated in the State of Florida, County of Lee, lying in Section 33, Township 43 South, Range 27 East, being more particularly bounded and described as follows:

Commencing at the corner common to Sections 33 and 34, Township 43 South, Range 27 East, and Sections 2 and 3, Township 43 South, Range 27 East, Lee County, Florida; Thence N00°35'48"W a distance of 350.64 feet along the east line of the southeast one-quarter of said Section 33; Thence S89°30'51"W a distance of 52.37 feet to the Point of Beginning; Thence continuing S89°30'51"W a distance of 2266.42 feet along a line 350.64 feet north of, and parallel with, the south line of the southeast one-quarter of said Section 33; Thence N05°41'40"E a distance of 889.50 feet; Thence N05°40'31"W a distance of 405.53 feet; Thence N74°05'24"E a distance of 557.75 feet; Thence S89°47'41"E a distance of 336.33 feet; Thence N68°43'01"E a distance of 217.39 feet; Thence S87°27'48"E a distance of 396.41 feet; Thence N42°50'49"E a distance of 471.92 feet; Thence N88°32'26"E a distance of 406.95 feet; Thence S00°35'48"E a distance of 1838.94 feet along a line 52.37 feet west of, and parallel with, the east line of the southeast one-quarter of said Section 33, to the Point of Beginning, said parcel containing 78.000 Acres, more or less.

The bearings within this legal description were derived from an ALTA/ACSM Land Title survey prepared by Agnoli, Barber & Brundage, Inc. dated: 6-23-2008, and based on the North American Datum of 1983/1990, with the south line of Section 33, Township 43 South, Range 27 East, as bearing S89°30'51"W.



Cape Coral FLORIDA
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May 9, 2011

Restoration Area

Exhibit B
Page 4 of 4

N W E S

0 500 1,000 1,500 2,000 Feet

EXHIBIT "C"

Cost Estimate for Restoration, Site Monitoring, and Maintenance Activities

City of Cape Coral Scrub-Jay Mitigation Plan

Lee County 20/20 Alva/Scrub Preserve Sites 357 and 325

	Unit	No. of Units	Unit Cost	Total Unit Cost
Task 1: Initial Restoration Activities				
Preparation of Bid Documents and Bid Management (Lee County)	Day	2	$400.00	$800.00
Roller chopping of 47 acres at ASP Site 325 and 78 acres at ASP Site 357	Acre	125	$50.00	$6,250.00
Palm tree removal on 32 acres north of ASP Site 325 (Lee County)	Event	1	$500.00	$500.00
Oak and Palm removal at ASP Site 325 using heavy equipment	Acre	47	$2,000.00	$94,000.00
Hauling of trees debris from Site 325 (based on an estimate of 200 trees/acre)	Load	500	$500.00	$250,000.00
Pile burning of remaining cut debris at Site 325 (Lee County)	Day	3	$1,200.00	$3,600.00
Treatment of nuisance & exotic vegetation	Acre	125	$165.00	$20,625.00
Planting of scrub oaks at ASP Site 357	Tree	1000	$15.00	$15,000.00
Oversight of Restoration Activities (Lee County)	Day	10	$400.00	$4,000.00
Banding of existing scrub-jays on adjacent properties	Per Event	1	$4,000.00	$4,000.00
				$398,775.00
Task 2: Year 1 Site Monitoring				
Vegetation/Success Criteria Monitoring	Per Event	1	$3,500.00	$3,500.00
Scrub-jay monitoring and trap acclimation (Lee County)	Per Event	5	$550.00	$2,750.00
Scrub-jay banding	Per Event	2	$2,500.00	$5,000.00
Annual reports	Per Event	1	$2,000.00	$2,000.00
			PER YEAR FOR FIVE YEARS	**$13,250.00**
Task 3: Years 2-5 Site Monitoring				
Annual Monitoring & Maintenance	Year	4	$13,250.00	$53,000.00
				$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
				$53,000.00
Total for Initial Restoration and Five Years Monitoring				**$465,025.00**