

Environmental Assessment For the Siting of a National Cemetery Sarasota County, Florida

Volume I



Prepared For
Department of Veterans Affairs
National Cemetery
Administration
811 Vermont Avenue NW
Washington, DC 20005

Prepared By
 **MACTEC**

404 SW 140th Terrace
Newberry, FL 32669

October 2005

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Newberry, FL 32669**

Allen Conger
Project Manager

Ann B. Shortelle, PhD
Project Principal

**MACTEC Project No.:
6671-05-0315**

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List of Acronyms and Abbreviations

APE	Area of Potential Effect
bgs	below ground surface
bls	below land surface
BMPs	Best Management Practices
CWA	Clean Water Act
CZMA	Federal Coastal Zone Management Act
EA	Environmental Assessment
EMS	Emergency Medical Services
EPA	Environmental Protection Agency
ERP	Environmental Resource Permit
FFWCC	Florida Fish and Wildlife Commission
FL DHR	Florida Division of Historical Resources
FNAI	Florida Natural Areas Inventory
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy
GPS	Global Positioning System
GU	Government Use
MACTEC	MACTEC Engineering and Consulting, Inc.
NCA	National Cemetery Administration
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OUE-1	Open Use Estates (1 house per 5 acres)
OUR	Open Use Rural (1 house per 10 acres)
PCB	polychloryl bi phenyl
ppt	parts per thousand
SCAT	Sarasota County Area Transit
SCS	USDA Soil Conservation Service
SHCA	Strategic Habitat and Conservation Area
SHPO	State Historic Preservation Officer
SWFWMD	Southwest Florida Water Management District
TDRs	transferable development rights
UMAM	Uniform Mitigation Assessment Method
USFWS	U.S. Fish and Wildlife Service
VA	US Department of Veterans Affairs
VCP	Voluntary Cleanup Sites

Executive Summary

On November 11, 2003, the President of the United States signed Public Law 108-109, authorizing the creation of several new National Cemeteries, including one to serve southwest Florida. The National Cemetery Administration (NCA) is evaluating the development potential of three ranches as possible sites for a new National Cemetery in southwest Florida, an area with a great need for additional national cemetery facilities. The three sites under consideration are located in northern Sarasota County. As required by law, the NCA has completed an Environmental Assessment (EA) of the alternatives in order to comply with the National Environmental Policy Act (NEPA). The evaluation is described in detail in the attached report.

The NCA coordinated with a number of local groups, county committees and congressional offices in an effort to identify suitable sites for a new cemetery. Nearly 20 parcels of land in four counties were initially considered. This EA contains a detailed analysis of four alternatives including the No Action alternative.

The analysis conducted for this EA indicates that the major challenge for cemetery development at any of the three sites is proximity of groundwater. The shallow depth-to-groundwater (approximately 2.5 feet at each of the sites) will prohibit vault placement without alteration of the natural hydrology and/or placement of substantial fill material. This issue will result in engineering challenges for this project. Cemetery development at any of the three alternative sites may require the addition of several feet of fill to increase surface elevations above the water table. The filling activities will need to be completed with attention to using material that will provide the proper drainage characteristics.

Vehicles associated with cemetery operation may experience traffic delays on Fruitville Road (Sites 3 and 4) because the road is congested and out of compliance with County concurrency regulations.

Prehistoric artifacts were collected at Site 4 during site reconnaissance activities. The extent of the archaeological site would require further investigation, and possible protection, should Site 4 be selected for cemetery development.

Federally listed threatened and/or endangered species in addition to several state-listed species are known to occur at each of the alternative sites, though none are known to be resident on the subject parcels. Consultation with wildlife officials to ensure that there is no incidental "take" during construction or operation will be required. This should include an analysis of how rifle salute noise may impact wildlife use of the cemetery.

Although cemetery design and site planning has not been completed for any of the alternative sites, it is assumed that some of the on-site wetlands may be filled for cemetery construction.

Should this occur, mitigation would be required. Excellent opportunities for on-site mitigation are present at all three sites in the form of exotic/invasive species management in affected wetlands, restoration of natural hydrology via removal of drainage ditches, and improving habitat quality for aquatic wildlife, especially the threatened and endangered species.

Since cemetery development will be conducted in accordance with the US Department of Veterans Affairs (VA) design standards, in accordance with federal law, and with appropriate site-specific mitigation measures (as discussed in this EA), the impacts should be minimal at any of the three sites (Table ES-1) although Site 2 received the highest ranking among the three candidate sites. The analysis is consistent with finding of no significant impact for each of the alternative sites.

Table ES-1. Effects Summary

Attributes	Alternatives			
	No Action	Site 2	Site 3	Site 4
Aesthetics	0	0	0	0
Air Quality	0	0	0	0
Cultural Resources	0	0	0	-1
Economic Activity	0	0	0	0
Floodplains, Wetlands, Coastal Zone, etc.	0	-1	-1	-1
Geology and Soils	0	-2	-2	-2
Hydrology and Water Quality	0	-1	-1	-1
Land Use	0	0	0	0
Noise	0	-1	-1	-1
Potential for Generating Substantial Controversy	0	0	0	0
Real Property	0	0	0	0
Resident Population	0	0	-1	0
Solid / Hazardous Waste	0	0	0	0
Traffic, Transportation and Parking	0	-1	-2	-2
Utilities	0	0	0	0
Vegetation and Wildlife	0	-1	-1	-1
Provide Burial Services to Veterans	-3	1	1	1
Total Rank	-3	-6	-8	-8

Source: MACTEC, 2005.

Created by: JLD Checked by: ABS

Note:

- 1 = Beneficial Effect
- 3 = Severe Effect
- 2 = Moderate Effect
- 1 = Minimal Effect
- 0 = No Significant Effect

1.0 Project Purpose and Description of Need

The National Cemetery Administration (NCA) is the entity within the U.S. Department of Veterans Affairs (VA) that is responsible for establishing, constructing, and maintaining national cemeteries in order to provide reasonable access to burial benefits for veterans pursuant to the provisions of the National Cemeteries Act of 1973 and other statutes. NCA considers reasonable access to burial benefits to mean that a first interment option is available within 75 miles of the veterans residence. Once the need is identified, NCA follows a multi-step process for building new national cemeteries:

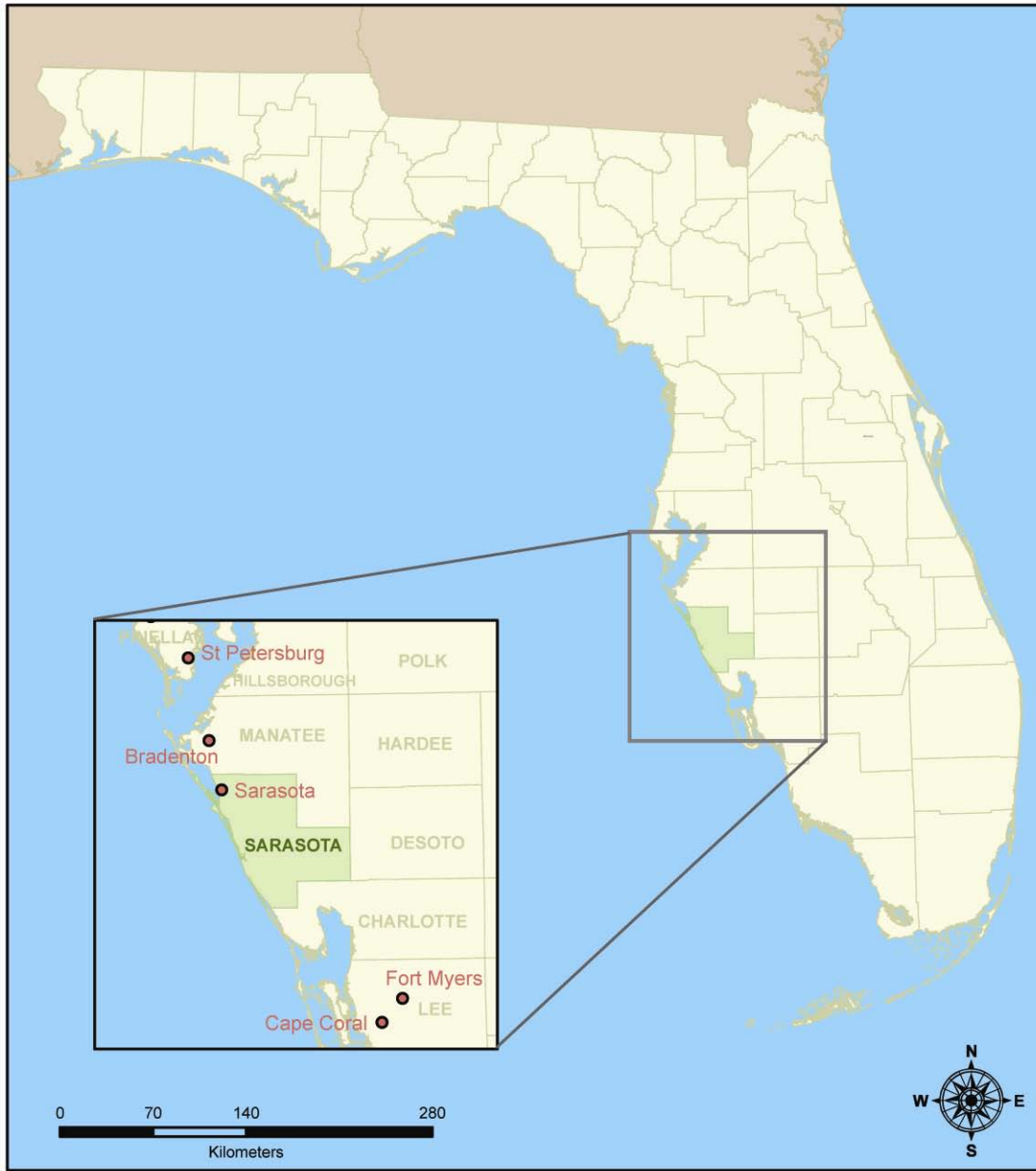
- Site selection process including Environmental Assessment (EA);
- Land acquisition;
- Master planning and design development;
- Construction documents preparation; and
- Construction award/completion.

The purpose of the proposed action is to fulfill a need for a national veterans cemetery in the southwest Florida area. This report is the EA, part of the site selection process for siting a new cemetery in southwest Florida.

The NCA has recognized for some time that there was a need for additional cemetery facilities. The death rate of veterans has been increasing each year as World War II and Korean War-era veterans advance in age. Current estimates indicate that veteran deaths would peak at 14,127 in the year 2006 (VA NCA, 2005). The annual rate of veteran deaths in southwest Florida is expected to increase throughout this time period. The death rate is projected to remain high for two decades. This progressive increase in veteran deaths results in a corresponding increase in the demand for burial services in national cemeteries.

Public Law 99-576, the Veteran's Benefits Improvement and Health Care Authorization Act of 1986, required the NCA to identify the geographic areas in the United States (U.S.) with the most urgent need for veteran burials, a 1987 report indicated ten locations where new national cemeteries would be required. In 1999 Public Law 106-117, the Veterans Millennium Health Care and Benefits Act, required the NCA to again identify the geographic areas of the country most in need of a new national cemetery. On November 11, 2003, the President of the United States signed Public Law 108-109, authorizing the creation of several new National Cemeteries, including one to serve southwest Florida.

Sarasota County, in southwest Florida (see Figure 1-1) was identified as an area of great need for a national cemetery in a demographic study of the nation's veteran population. The NCA estimates indicated there is a veteran population of 405,500 in the Sarasota County area, an area with limited national cemetery services. The optimal focal point including a large veteran population within a 25 mile radius is shown in Figure 1-2.

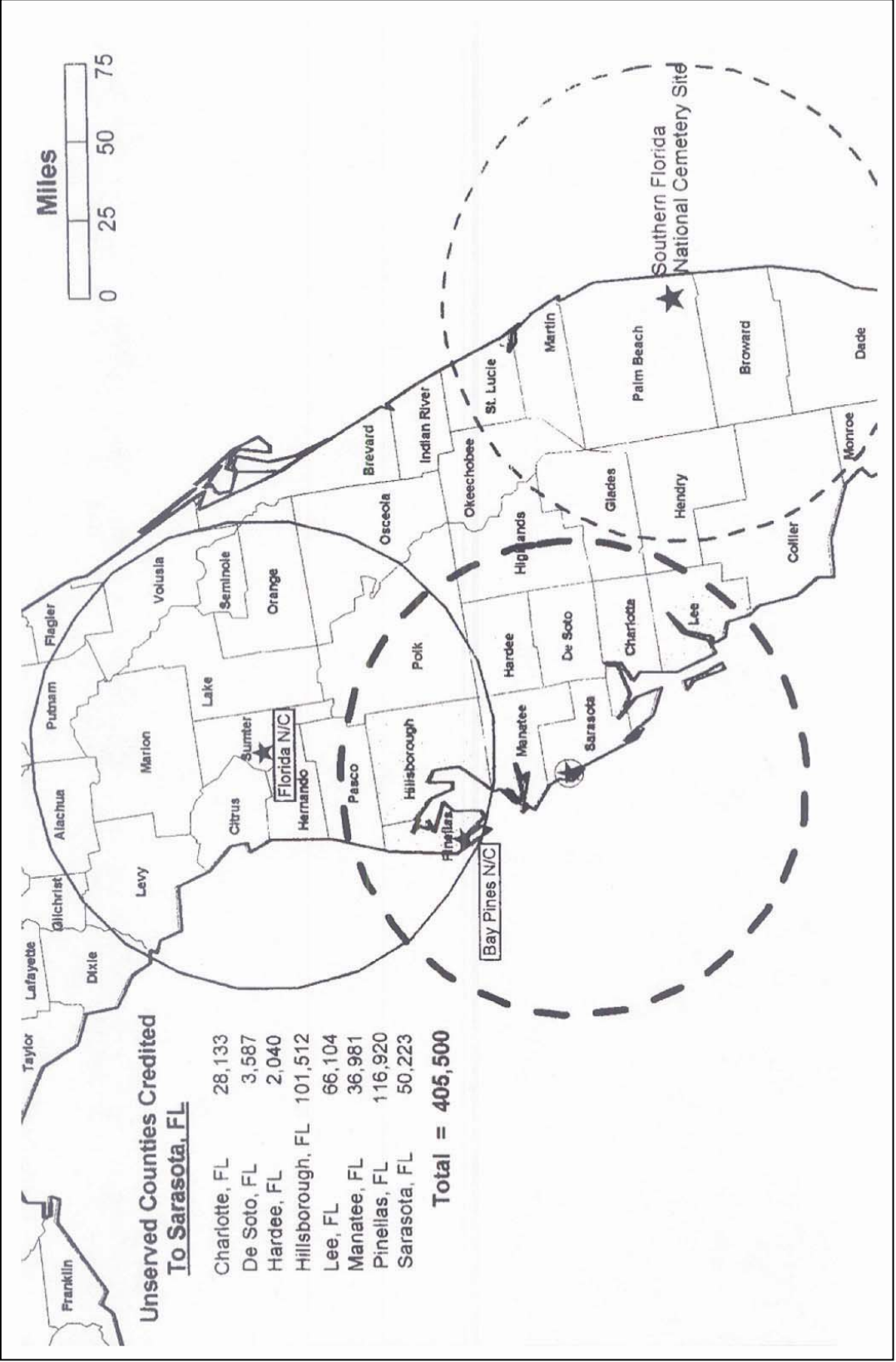


Source: Unknown.

National Cemetery
Sarasota, Florida
MACTEC Project No. 6671-05-0315



Sarasota County Location Map
6671-05-0315
Figure 1-1



Source: NCA Policy & Planning Service, 2003.

National Cemetery
Sarasota, Florida
MACTEC Project No. 6671-05-0315



Optimum Focal point for Veterans Population with 75-mile Radius
6671-05-0315
Figure 1-2

The NCA has found that 75 miles is an optimum distance for planning purposes. The NCA has also shown through experience that few people will elect burial at a national cemetery that is farther than 100 miles from their place of residence, and that there is a reluctance for burial to take place across a state line from the place of residence. The three closest national cemetery sites in Florida are all located at a considerable distance from the focal point for the proposed Southwest Florida National Cemetery. The Bay Pines National Cemetery, located in Bay Pines, is only open for cremain burials. The Florida National Cemetery, located in Bushnell, is open for both casket and cremain burials, and is over 100 miles from the focal point. Considering the distances to other national cemeteries and the number of veterans in southwest Florida, the NCA has identified the need to construct a new national cemetery to serve the southwest Florida area.

The NCA estimates the total number of interments within the 75-mile focal point, including both caskets and cremains, would be 2,307 in 2008, the proposed opening year for the Southwest Florida National Cemetery. The number of interments is expected to increase each year to an estimated maximum of 4,079 in 2012. After this peak year, the number of annual interments would begin to slowly decline. The number of internments projected for 2030 is 3,172. The cumulative interments through 2030 would be approximately 82,000. The NCA anticipates that approximately 350-400 acres at the new cemetery in Sarasota County would be necessary to meet the needs for burials through 2030. Based on these projections, the NCA has determined that there is a need for an additional national cemetery to serve veterans in the southwest Florida area.

This report summarizes the findings of the EA completed as required by the National Environmental Policy Act (NEPA). The procedure used to complete this EA is consistent with the guidance detailed in the VA's "Environmental Compliance Manual" (VA, Office of Facilities Management, Landscape Architect Professional Group, 1998). It is important to note that the project will only move forward if a "Finding of No Significant Impact" (FONSI) determination is made for one of the sites.

This EA was prepared in accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [C §1 1500- 1508), and VA Regulations, Title 8 of the CFR, Section 26.4 (a). The VA policy includes provisions to protect, restore, and enhance the quality of the human environment; and to minimize adverse environmental consequences, consistent with other national policy considerations.

2.0 Description of Project Alternatives

2.1 Steps for Establishing a New National Cemetery

2.1.1 General Process and Management

The sequence of steps for siting and constructing a new National Cemetery are outlined in Table 2-1.

Table 2-1. Steps for Establishing a New National Cemetery

1.	Identify veteran population to be served
2.	Calculate acreage requirement
3.	Define area of consideration (counties) to search for potential sites
4.	Site selection process
	- Review and assess competing sites
	- Environmental compliance
	- Identify site
	- Site survey/appraisal
	- Land acquisition
5.	Architectural and Engineering Firm Selection
	- Master planning and design
	- Construction documents
6.	Construction
	- Solicitation of bids, award, oversight
7.	Open Fast-Track-early burial area development (6 months after construction starts)
8.	Completion of Construction – Dedication
9.	Minimum Timeframe = 5.5 years

Source: NCA, 2005.

Site selection occurs prior to master planning and design, so detailed plans for the cemetery footprint are not yet available. However, the NCA has guidelines for the design and operation of national cemeteries.

The following summary (VA NCA 2004 and 2005), describes the NCA's general approach to siting, design, construction and management of national cemeteries, and is presented here to facilitate evaluation of potential impacts based upon design and management considerations for a national cemetery.

Each national cemetery is managed by National Cemetery Administration (NCA) personnel in conformance with national and memorial service network office policies, priorities, goals and objectives. Most cemeteries are supervised by a cemetery director and a staff of administrative and maintenance personnel. National cemeteries are commonly open from 8 a.m. to 5 p.m. daily and on Memorial Day from 8 a.m. to 7 p.m.

Generally, funeral corteges are received from 9 a.m. to 3 p.m., Monday through Friday. Burials at national cemeteries do not normally occur on weekends or federal holidays.

The users of cemetery facilities are typically:

- *Funeral attendees, including family members, funeral directors, etc.*
- *Public visitors*
- *Cemetery staff, including administrative, maintenance and other visiting VA staff*
- *Volunteers, who provide honors at interment services and assist cemetery staff in administration and maintenance activities*
- *Contractors (maintenance and construction), sales representatives and vendors*

Structures expected to be built include:

- *Public Information Center*
- *Administration / Maintenance Complex*
- *Committal Service Shelter*

A Public Information Center with Cortege Assembly Area may be situated near the main cemetery entrance to provide a central point for vehicles in a funeral procession to wait while the entire cortege assembles and representatives receive final instructions before proceeding to the Committal Service Shelter. The Public Information Center would normally be occupied by cemetery personnel. In the absence of staff, visitors can contact administrative personnel by telephone provided there. Cemetery visitors would obtain gravesite locator information there and Public Rest Rooms would be located there.

The sequence beginning at the cemetery entrance should place the entrance to the Public Information Center and Rest Rooms adjacent to the Cortege Assembly Area, and at a distance from the Committal Service Shelters and Administration/Maintenance Complex, which should be centrally located on the site.

Retain the site in as natural a state as possible. Keep grading to a minimum, while meeting the functional requirements of the cemetery. To the extent feasible, balance on-site cut and fill. Leave undisturbed such features as natural drainage ways, valuable trees or tree groups, shrubs, ground covers, rock out-croppings and streams. The design should use construction practices that minimize adverse effects on the natural habitat.

The planting design should articulate and strengthen the site layout. In general, the development should use regionally native plants and employ landscaping practices and technologies that conserve water and prevent pollution.

Prepare interment areas for seeding, sprigging and/or sodding with topsoil and proper nutrients. In non-burial areas, consider alternatives to standard turf that are suitable to drought conditions. The amount of annual rainfall as well as the type of irrigation system, if any, will determine the plant material selected. Irrigation is usually necessary to keep the landscape at an aesthetically pleasing level. Although sufficient rainfall may be received to sustain indigenous plants, situations involving introduced species or plants in stressful conditions may require irrigation. Evaluate the landscape environment, including turf grasses, and determine whether an irrigation system should be installed in the cemetery.

Interment areas are those portions of the cemetery acreage that are developed for burials of either full casket or cremated remains. Interment areas may be subdivided into burial sections of varying sizes and shapes. Burial sections are visually separate areas, broken by vegetated areas (woods), roads, walks and topography. Burial sections for full casket gravesites shall be no larger than three acres. Burial sections for cremated remains shall have no more than 999 sites (approximately .2 acres). In-ground interment areas for casketed or cremated remains shall generally conform to existing terrain.

The National Cemetery Administration is committed to providing burial benefits to as many veterans as possible and to achieving the maximum development of gravesites within national cemeteries. The standard gravesite size will be the smallest size practical to accommodate the type of marker being used, to ensure appropriate gravesite appearance and to provide for safety consideration of employees. Each gravesite is marked with one marker, consistent with the requirements of applicable law.

The standard gravesite sizes will be used when conditions warrant:

- The 4 feet x 8 feet gravesite will be used where double-depth interments in a 7 feet excavation are possible.*
- The 6 feet x 8 feet gravesite will be used for single depth side-by-side interments where excavation below 5 feet is impractical due to soil conditions.*
- The 3 feet x 8 feet gravesite may be used in those sections of national cemeteries which use lawn crypts. Lawn crypts are pre-placed concrete containers with removable concrete lids which are installed at the time of land development. Crypts are installed by excavating the burial area and preparing it to provide adequate drainage. Pre-cast crypts are then placed adjacent to one another and abutting on another.*

As with full casket gravesites, NCA is committed to achieving the maximum development of cremain sites within national cemeteries. NCA will strive to provide cremain sites in all cemeteries including those closed to the interment of casketed remains. The standard cremain site size will be the smallest size practical to accommodate the type of marker being used, to ensure that the cremain site appearance is appropriate and consistent with any adjacent gravesite section. Each gravesite will be marked with one marker, consistent with the requirements of applicable law and NCA policy.

The standard cremain site sizes will be used when conditions warrant:

- Designated Cremains Sections -- A burial site for the interment of cremated remains in a separate cremains section is 4 feet x 4 feet x + 2 feet deep, and is marked with a 12 inches x 18 inches flat marker of granite or bronze.*
- Garden Niche or Terrace -- A burial site for the interment of cremated remains in a distinct space using a system of paths, walls and/or terraces that creates a tranquil garden setting, is 4 feet x 4 feet x + 2 feet deep, and is marked with a 12 inches x 18 inches VA standard flat marker of granite or bronze, or a wall-mounted bronze plaque, 5-1/2 inches x 8-1/2 inches.*
- Columbarium -- A niche in an above-grade structure designed for the interment of cremated remains is 10-1/2 inches x 15 inches x 20 inches deep, measured at the*

face. Each niche is designed to accept an individual VA standard niche cover. Some columbaria developed earlier in national cemeteries utilized multiple-niche covers and various sizes of niches. Expansion of existing columbaria will follow the original design concept for that cemetery. The columbarium design must include the capability of expansion in future phases of cemetery development but must appear complete with the initial phase of development.

- *Cremains [Scattering] Garden -- A designated garden-type area where cremated remains are scattered in the landscape. A site used for the scattering of cremated remains is not individually marked, but the deceased is acknowledged on a communal bronze plaque in the garden area or by an individual bronze plaque mounted on a wall designated for that purpose. An individual whose ashes are scattered in the national cemetery may not have a memorial marker placed in the memorial section of the cemetery.*

The planning and design phase of the project will not commence until after land has been acquired. The land acquisition phase will follow this EA. Therefore, details about how any of the sites under consideration might be developed into a cemetery are not available. However, according to the NCA (VA NCA, 2004), cemetery development will likely occur in phases with the first phase likely to include construction of the first active burial section in addition to the infrastructure necessary to operate the cemetery. Subsequent phases would probably be limited to new burial sections and the infrastructure required for the section. NCA staff (Frank Kawulich, personal communication via email on May 3, 2005) indicated that depths of 4.5 and 7 feet are required for side-by-side and double-depth burials, respectively.

2.2 Alternatives Considered and Dismissed from Detailed Analysis

2.2.1 Site Selection Process

2.2.1.1 Location

The site should be located as closely as possible to the densest veteran population in the area under consideration. The focal point identification was presented in Section 1 (see Figure 1-2). In addition, the sites are evaluated according to size, shape, accessibility, utilities and water, and surrounding land use.

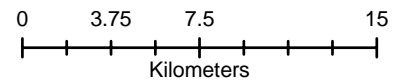
Sufficient acreage must be available to provide sufficient gravesites for several decades. Interment rates are projected based upon veteran population within a 75-mile radius of a proposed site. The number and mix of required full-casket gravesites, cremain sites, and columbarium niches are used to determine acreage requirements. Irregularly shaped sites are generally more difficult to access and less efficient to layout and develop. The selected site should be readily



Source: MapPoint 2004, MACTEC 2005

Legend

Site Boundary



PROJECT LOCATION MAP

DRAWN	DATE
ALF	06/03/2005
CHECKED	DATE
JLD	06/03/2005

MACTEC
Gainesville, Florida
6671-05-0315

NATIONAL CEMETERY
SARASOTA COUNTY
FLORIDA
DEPARTMENT OF VETERANS AFFAIRS
NATIONAL CEMETERY ADMINISTRATION

FIGURE:

2-1



accessible via highways and major public roadways. Close proximity to highway interchanges and public transportation is optimal. If public utilities (electricity, water, sewer) are immediately available to the site, that is ideal. However, on-site septic systems and on-site water wells may be acceptable. An adequate water supply, whatever the source, is also very important. Sites adjacent to visually objectionable, load noise, high traffic, or other nuisance elements are avoided to maintain the desired decorum for the ceremonies. The site needs to be free of public easements and rights-of-way.

2.2.1.2 Site Characteristics

The inherent qualities of the site, including soils, topography, and aesthetics, should be such that it is conducive to cemetery development. Soils should be of a quality which will provide adequate topsoil for growing turf, adequate stability for constructing roads and buildings. Shallow depth to groundwater may require additional site preparation. An ideal site would be free of subsurface obstructions and hazardous waste.

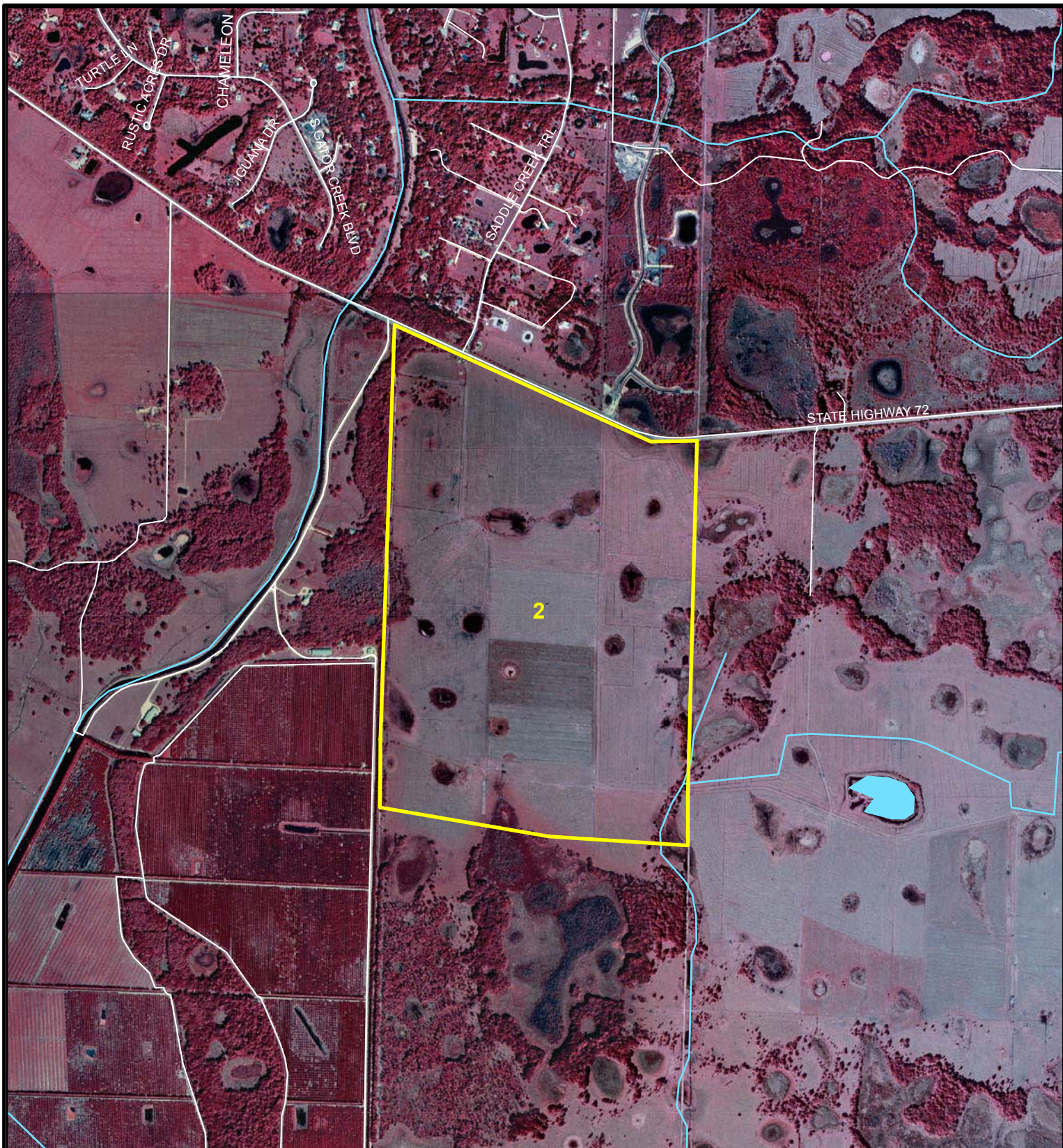
Comparatively level to rolling terrain is desirable for areas to be developed. The grade of burial areas should be in the 2 to 15 percent range. There should be sufficient slope to enable proper drainage of the site. Ravines, wetlands, and sinkholes are avoided wherever feasible. Existing site amenities such as pleasant views and quality vegetative cover are sought after. The presence of man-made elements such as cultural/historic/archaeological elements, utility easements, rights-of-way, or mineral rights can hamper or legally prevent development.

In April 2004, NCA staff completed preliminary site visits which were conducted at 18 parcels of land in four counties in order to identify appropriate candidate sites suitable for further consideration as national cemeteries. Three sites, all in Sarasota County (see Figure 2-1), were identified for further consideration: Hawkins Ranch, Myakka Ranch, and Hi Hat Ranch. A fourth site was also identified as being of interest initially, but it was removed from consideration prior to initiation of this investigation.

2.3 Alternatives Retained for Detailed Analysis

2.3.1 Alternative 1 -- Hawkins Ranch

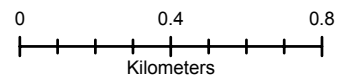
Under this alternative, the NCA would acquire and develop an approximately 466-acre site in Sarasota County, Florida. The site is owned by James Arlin Hawkins [10570 State Road (SR) 72, Sarasota, FL 34241), a willing landowner who has expressed an interest in selling the parcel to the VA (Figure 2-2, labeled as "Site 2"). The site comprises only a portion of the Hawkins Ranch. The site is located in Township 37S, Range 19E, Sections 23 and 26, and encompasses a portion of tax parcels 0296-00-3000 and 0301-00-1000. The site is located four miles east of Interstate 75 (Exit 205) and is bounded on the north by State Route 72 (SR72), a paved two-lane road.



Legend

- Roads
- Approximate Site Boundary
- Water

Source: FDEP, 1999; SWFWMD, 2002; MACTEC, 2005



AERIAL PHOTOGRAPH, SITE 2



DRAWN	DATE
ALF	06/03/2005
CHECKED	DATE
JLD	06/03/2005

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FIGURE:

2-2

Sarasota County maintains a dirt road along the west boundary which is locally known as the “North Road to the County Dump”. The site is bounded on the east and the south by additional lands in the Hawkins Ranch.

The surrounding land uses include the Saddle Creek sub-division to the north (across SR72). It is surrounded on two sides by ranch land. A county maintained dirt road partially borders the subject property on the west, with wetlands and/or agricultural lands between the boundary and the county road. The owner reports the county landfill is approximately 3 miles to the south of the property. Neither noise, odors, or dumptrucks from the landfill were detected during site visits conducted in April, 2005.

At the present time Site 2 is being used as rotational pasture for a cattle herd and is undeveloped. The site is open and relatively flat. The terrain is somewhat uneven due to natural depressions, ditching and bull wallows. The fence rows along SR72 and the County Road have woody vegetation that provide a visual barrier from traffic. The owner indicates his family has been living at this ranch since the 1870’s and that this parcel has not changed much during his lifetime. Mr. Hawkins believes the site used to be palmetto. The trees on site are volunteer. There has been some selective cutting of woody species in the pastures and fencerows over time (J.A. Hawkins, personal communication). Wetland areas are scattered throughout the site.

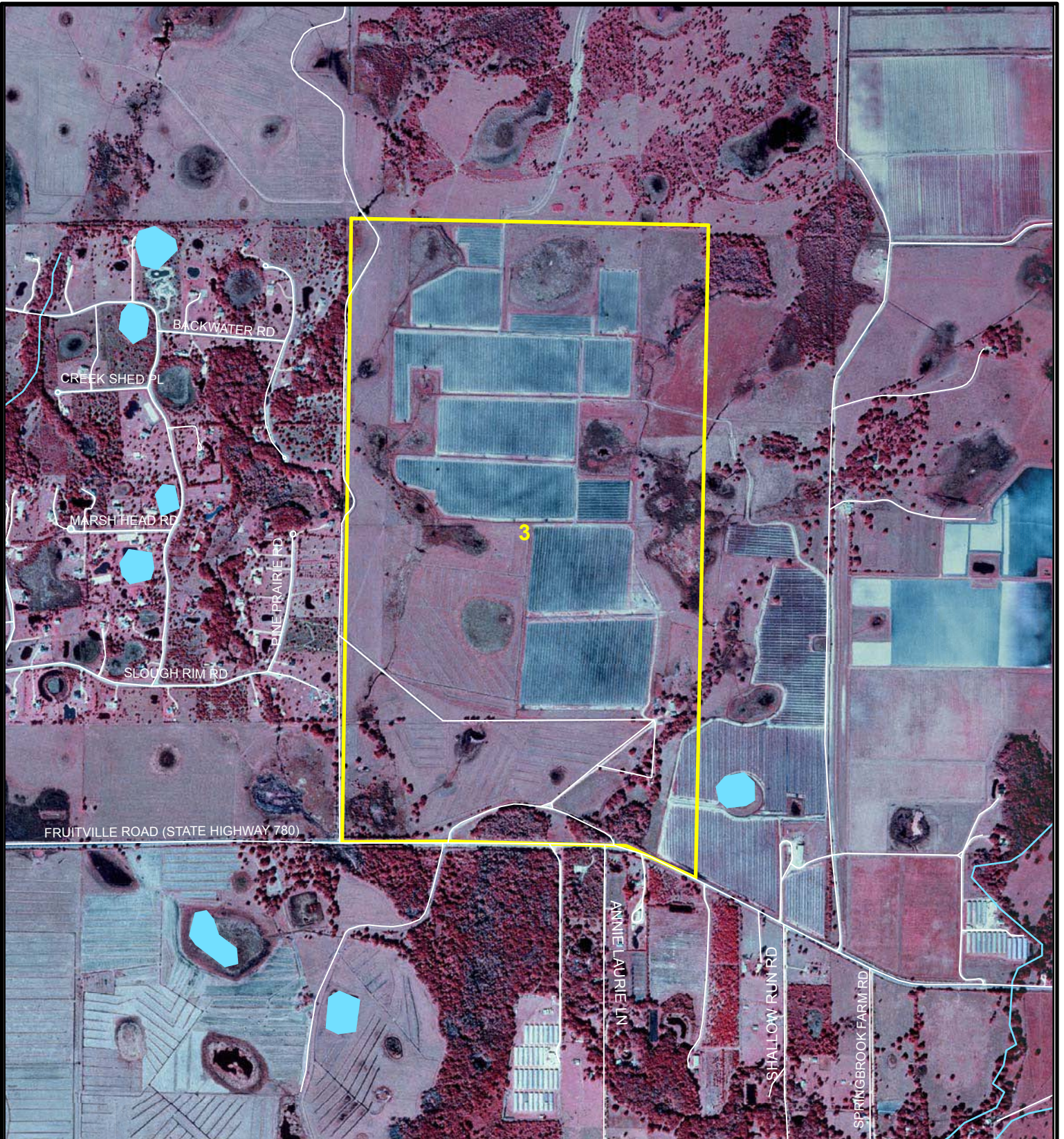
The built structures on-site are few: one small barn, feeding troughs (active and abandoned), wells, boundary and cross fences, transmission lines, and a cowpen/branding area. The only off-site buildings that are visible include the two houses, a barn and outbuildings at the Hawkins family’s compound and some rooftops at the Saddle Creek housing development which is located north of the subject site, across the highway (SR72).

Utilities and/or services on-site include ground-water wells, and telephone and electricity which are available at SR72. Sewer, stormwater and gas are not available in this area.

This site contains approximately 466 acres. The NCA has determined it needs 350-400 usable acres for internment purposes. The remaining acres would be used for built structures that accompany cemetery development, natural open spaces, and walkways.

2.3.2 Alternative 2 -- Myakka Ranch

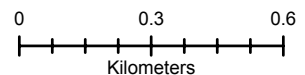
Under this alternative, the NCA would acquire and develop an approximately 574-acre site in Sarasota County, Florida. The site is owned by Myakka Ranch Holdings LLC (8210 Lakewood Ranch Blvd., Bradenton, FL 34202). One of the partners, Mr. Frank Casada, has expressed an interest in selling the parcel to the VA (Figure 2-3, labeled as “Site 3”). Mr. Charles Palmeri, a realtor representing Mr. Casada, was the primary contact for this investigation. The site comprises only



Source: FDEP, 1999; SWFWMD, 2002; MACTEC, 2005

Legend

- Roads
- Approximate Site Boundary
- Water



AERIAL PHOTOGRAPH, SITE 3



DRAWN	DATE
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FIGURE:

2-3

a portion of the Myakka Ranch. The site is located in Township 36S, Range 20E, Sections 17 and 20, and encompasses a portion of tax parcels 0537-01-0001 and 0543-01-0001. The site is located 6.5 miles east of Interstate 75 (Exit 210) on Fruitville Road (SR780), a 2-lane road. It is bounded on the north and east by agricultural land (which include lands owned by Myakka Ranch Holdings LLC), on the west by the Burnt Creek subdivision, and the south by State Route 780.

The surrounding land uses include agriculture; to the West, North, South, and East, both vegetable crops and cattle ranching, and a large-lot residential sub-division.

At the present time, a portion of Site 3 is being used as rotational pasture for a cattle herd and the remainder is used for vegetable crops (tomatoes in 2004 and 2005). The site is open and relatively flat. The terrain is somewhat uneven due to natural depressions and ditching. There are several copses with large trees on site, particularly in the SW portion of the site. The (seasonal) stream flowing through and connecting the wetlands throughout the eastern portion of the site has vegetated buffers with significant trees in several places. The majority of the wetlands on-site are filled with shrubs, such that there is limited open water at this site.

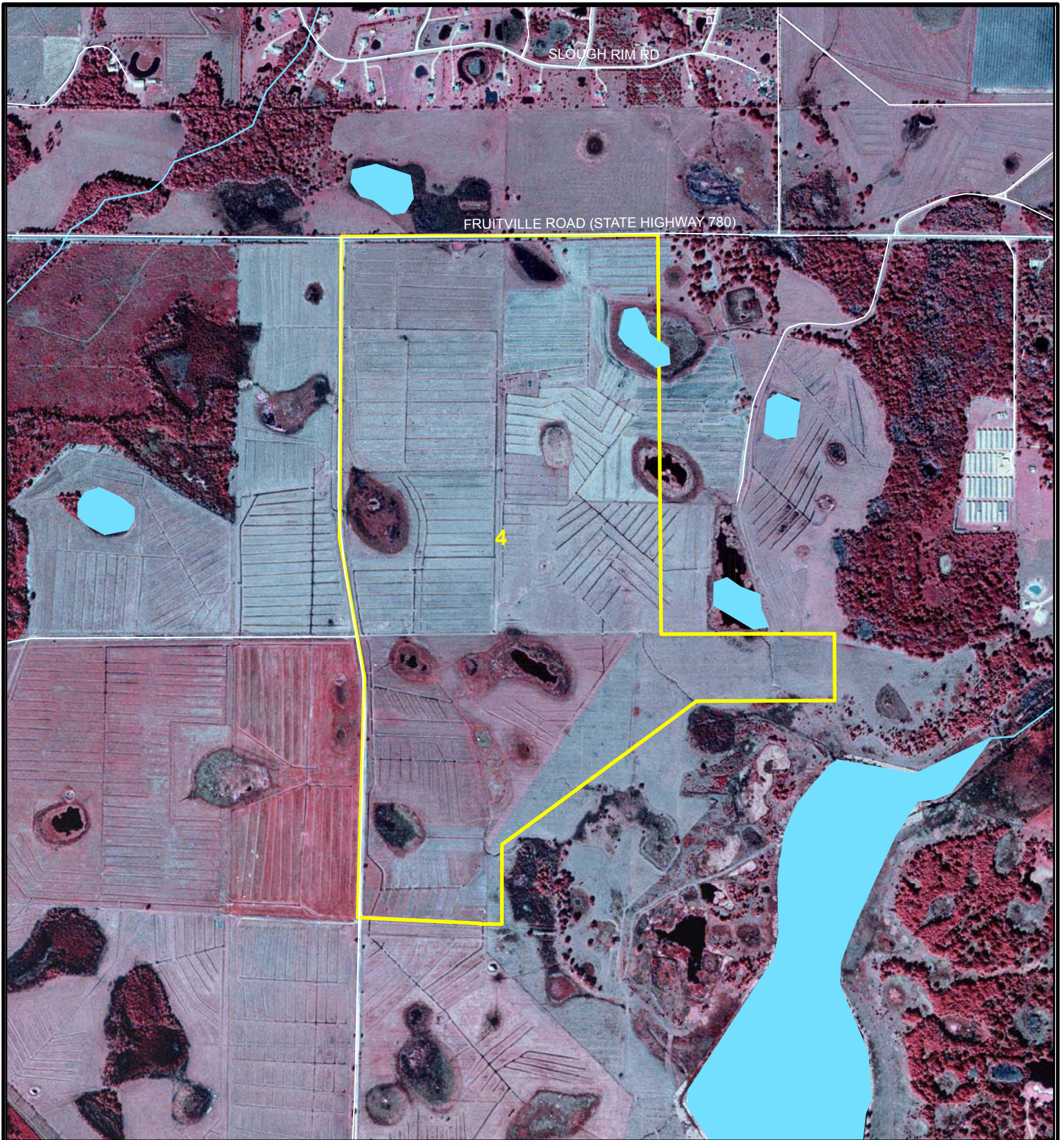
The built structures on site include: a large barn (currently used for equipment storage), a small horse barn, a cattle pen, a house (now used as the management office), the caretaker's residence, boundary and across fences, ditches, unpaved roads, and an irrigation pump station with a 1000-gallon storage tank for agrochemicals applied via in-line mixing. Off-site buildings that are visible include a couple of houses in the Burnt Creek subdivision to the West of the subject site.

Utilities and/or services on-site include ground-water wells, electricity and telephone. The residence and office are served by on-site septic system.

This site contains approximately 574 acres. The NCA has determined it needs 350-400 usable acres for internment purposes. The remaining acres would be used for built structures that accompany cemetery development, natural open spaces, and walkways.

2.3.3 Alternative 3 -- Hi Hat Ranch

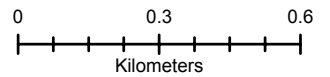
Under this alternative, the NCA would acquire and develop an approximately 460-acre site in Sarasota County, Florida. The site is owned by a family partnership (11708 Fruitville Rd., Sarasota, FL 34240). Mr. Rick Turner, one of the co-owners has expressed an interest in selling the parcel to the VA (Figure 2-4, labeled as "Site 4"). The site comprises only a portion of the Hi Hat Ranch. The site is located in Township 36S, Range 20E, Sections 19 and 30, and encompasses a portion of tax parcels 0563-00-1000, 0541-09-0001, 0541-09-0002. The site is located 6 miles east of Interstate 75 (Exit 210) and is bounded on the north by Fruitville Road (SR 780), on the west by the ranch's main access road (vegetable fields are located west of this road), to the east by Mote Marine aquaculture facility, and to the south by additional holdings of Hi Hat ranch.



Legend

- Roads
- Approximate Site Boundary
- Water

Source: FDEP, 1999; SWFWMD, 2002; MACTEC, 2005



AERIAL PHOTOGRAPH, SITE 4

DRAWN	DATE
ALF	06/03/2005
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 FLORIDA

**DEPARTMENT OF VETERANS AFFAIRS
 NATIONAL CEMETERY ADMINISTRATION**

FIGURE:

2-4



The surrounding land uses include crop farming, cattle ranching, large-lot residential sub-division (across the road) and research aquaculture facility.

At the present time, Site 4 is being used as rotational pasture for a cattle herd. The pastures are heavily irrigated with water from the City of Sarasota's advanced (wastewater) treatment pond. Mr. Turner indicated that in the past portions of the site were used to raise vegetables. Location and dates of past practice are unknown.

The site is open and relatively flat. The terrain is uneven due to extensive ditching for the irrigation. There are very few trees on site with those present confined to fencerows.

The built structures on site include: boundary and cross fences and ditches. Off-site buildings that are visible include the facilities at the Mote Marine Aquaculture Facility to the east of the subject site.

There are no utilities and/or services on-site. Electricity and telephone are available at the main road (SR 780).

This site of interest contains approximately 460 acres. The NCA has determined that it needs 350-400 usable acres for internment purposes. The remaining acres would be preserved or enhanced functional wetlands, other types of open space and built structures for cemetery operations.

2.3.4 Alternative 4 -- No Action

Under this alternative, the NCA would not develop a new national cemetery in southwest Florida. The estimated 405,500 veterans in the vicinity would have to use either one of the other national cemeteries or private cemeteries for burial services. The Bay Pines National Cemetery, located in Pinellas County, is close enough to meet the proximity needs of some of the veterans that may request burial services. However, the Bay Pines National Cemetery does not have the capacity to meet all of the projected needs for this area and it is only open for cremains which is not a preferred burial practice for all eligible veterans.

3.0 Affected Environments

The following sections describe the findings of a series of inquiries made to obtain background information on each of the three sites under consideration as a new National Cemetery. The work was conducted in accordance with the guidelines of the Department of Veterans Affairs' Environmental Compliance Manual (VA, 1998). Included below are results from: records searches (full results in Appendix A) which meet the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00; owner/site manager interviews; site visits / investigations; and consultations with regulatory and resource agency personnel. Site photos taken in April, 2005 are available as a separate section in this report (see Photolog).

3.1 Aesthetics and Noise

Site 2 (Hawkins Ranch) has a flat, open landscape which is uneven in places due to ditching and bull wallows. The fence rows along SR 72 and the county dump road have woody vegetation (trees and shrubs) that provide a limited visual barrier from traffic in addition to functioning as wildlife habitat. Several of the on-site depressional wetlands have open water that is both attractive and functioning as important wildlife habitat. Personnel that conducted the site visits in April, 2005 observed an abundance and diversity of wading birds. There are occasional trees in the pastures (visible on the aerial photos) which provide some shade and visual diversity. Non-native and invasive plants were observed quite frequently in the pastures and wetlands. Water hyacinth is detracting from both habitat quality and the aesthetics of several on-site wetlands.

There are several large, rusting, unused metal "feeding bunkers" distributed on Site 2, in addition to some derelict wooden troughs and feeding bunkers. The owner indicated that he plans to dispose of on-site.

Traffic noise from SR72 can be heard across much of the site. During site visits in April, 2005 vehicle frequency on SR72 was observed to be approximately 12 per minute. In the vicinity of the high-voltage electric transmission line that crosses the site from North to South, a distinct vibration noise was heard. None of these back-ground noises were so loud that observers had difficulty conversing or listening to bird calls if situated a reasonable distance from the noise sources.

Site 3 (Myakka Ranch) has a flat, open landscape which is currently used as rotational pasture and tilled cropland. There is a large-lot subdivision (Bern Creek) bordering to the west, with the houses mostly hidden from view behind a hedgerow. The on-site wetland complexes follow stream-like systems that meander along the east and west sides of the site. However, there is very little open water in the wetlands due in part to altered hydrology associated with agricultural practices, and dense colonies of the invasive shrub *Ludwigia peruviana* which is well established

in most of the on-site wetlands. Thus, the pastoral aura associated with open water is missing at this site. In the pastures, there are occasional large trees, mostly oaks, which provide shade and visual diversity.

Traffic noise from Fruitville Road can be heard on Site 3 in addition to on- and off-site agricultural machinery, cattle vocalizations, and bird song.

Site 4 (Hi Hat Ranch) is very flat with an open landscape. It is currently used as rotational pasture. There are no large trees on site other than in a few locations along the property boundaries. The large buildings at the Mote Marine Aquaculture Facility are a distinct visual feature to the east with no visual barriers. The ditching (irrigation canal system) is extensive and elaborate and will require extensive earth-moving to remove. A sign at the entrance gate indicates that this is a Turf Farm, however the site visit in April, 2005 confirmed that it is currently used exclusively as pasture.

Traffic noise from Fruitville Road can be heard on Site 4 in proximity to the road. The pumps from the wastewater lift stations (some of which are across the road from the site) and the off-site irrigation pumps were quite loud and disruptive for extended periods of time during the April, 2005 site visit.

3.2 Air Quality

Sarasota County is an air quality attainment area for all criteria pollutants regulated by the Clean Air Act of 1990 (Susan Cameron, Sarasota County, personal communication). The air quality at all three of the sites is good.

No unusual odors were detected at sites 2 and 3 during site visits in April, 2005. Diesel fumes were present in the western portion of Site 4 during an April, 2005 site visit due to continuous operation of diesel-run irrigation pumps for the fields across the road. Sludge and/or manure spreading has been practiced at all three sites in the past. However, that agricultural practice is no longer common. The odors that are normally associated with livestock are present at all three sites given their common uses as rotational pasture.

3.3 Community Services

All three sites lie within unincorporated Sarasota County and are therefore served by the County's programs. The local government is comprised of elected County Commissioners.

Emergency Management in Sarasota County is implemented through the Disaster Preparedness Program for Natural and Man-made Disasters, People with Special Needs Program, Public Education Program, and K-9 Search and Rescue Program (Sarasota County Government, June

2005). The Sarasota County Fire Department provides Emergency Medical Services (EMS) to the residents of the unincorporated areas of Sarasota County.

Hospital care is available at the following local facilities: Sarasota Memorial Hospital; Doctors Hospital of Sarasota; Manatee Memorial Hospital; Englewood Community Hospital; and Bon Secours Venice Hospital. Specialized care is available at larger hospitals in Tampa, St. Petersburg, etc.

The schools that would be affected by any decrease in property tax revenues should the cemetery be built are:

- Site 2: Ashton Elementary, Sarasota Middle School, Riverview High School
- Site 3: Fruitville Elementary, McIntosh Middle School, Booker High School
- Site 4: Fruitville Elementary, McIntosh Middle School, Booker High School

3.4 Cultural and Historical Resources

3.4.1 Affected Environment

The Florida Division of Historical Resources (FL DHR) defines cultural resources as an archaeological site or historical building, site, structure, object, or district (Department of Historical Resources, 2002). Cultural resources, as such, are protected by both state and Federal laws and regulations such as the National Historic Preservation Act of 1966, as amended, and the National Environmental Policy Act (NEPA). Under Section 106 of the NHPA, all federally involved projects must be reviewed by the State Historic Preservation Officer (SHPO). The Florida Division of Historic Resources serves as the SHPO for the state of Florida in accordance with Chapter 267.061 of the NHPA.

According to 36 CFR 800 of the NHPA, the Area of Potential Effect (APE) for a project is the geographic area or areas which may directly or indirectly cause alterations in the character or use of historic properties. The APE for sites 2, 3, and 4 are determined to be the sites and their immediately adjacent areas.

This assessment was undertaken to evaluate known cultural resources and to determine the likelihood of cultural resources to be found within the APE of each site. A search of the Florida Master Site File and the National Register of Historic Places database, initiation of the review process with the SHPO, FL DHR, and a site visit were conducted for this assessment. SHPO coordination is still ongoing for the project.

3.4.2 Archaeological Resources

Paleoindians

Paleoindians, the earliest human inhabitants of Florida, were living in the region by 12,000 years ago. Due to lowered sea levels, coast lines would have been much further out to sea than they are presently. The land was much drier than the present and many of today's rivers and springs were not flowing; instead they were strings of watering holes or small limestone catchment basins. Since the Paleoindians needed water for survival, many of their camps were located near these sinkholes. As water levels rose, these campsites were submerged; today, many researchers are combining SCUBA diving and archeology to recover important artifacts. Little Salt Springs in Sarasota County and the Aucilla River Prehistory Project are two of the sites involved in underwater archeological exploration. Scrapers, small adzes, spokeshaves, and knives are among the most common artifacts found at Paleoindian sites (Milanich, 1998).

Archaic

Changes in Florida's climate signaling the switch from Paleoindians to the Early Archaic period began in approximately 8,000 before the Common Era (B.C.E.). Early Archaic artifacts are often found at the same sites as Paleoindian artifacts, suggesting that the changes in environment between the Paleoindian time period and the Early Archaic period were gradual. As the climate became wetter, human inhabitants were able to spread across more of the area. Most Early Archaic sites are found on land rather than underwater; consequently, stone artifacts are all that is found at most sites. However, at a few sites, an advanced variety of cordage and fabric revealed that the Early Archaic peoples, and most likely their Paleoindian ancestors, were skilled fiber workers. Tools and animal remains found near these sites indicate that the Early Archaic people were hunter/gatherers.

From 5,000 to 3,000 B.C.E., the change towards a wetter climate continues. This Middle Archaic period was marked by human population growth and a trend towards longer-term settlements. The first true villages in Florida arose during this period; many of which proved to be popular living locations for thousands of years. Consequently, many of these villages are several acres large and contain thousands of stone artifacts. Camp sites are also common from this period. Village inhabitants would use a camp site as a base to hunt or collect food. These sites typically have tool artifacts.

Modern climatic conditions were in place by the beginning of the Late Archaic period in 3,000 B.C.E. in Florida. This time period is marked by thriving wetland species and a move of human inhabitants to wetland locations. Villages were the standard place to live by this time, which lead to regional adaptations and local culture. Fired clay pottery is one of the major developments of this time period and pottery shards are one of the most common artifacts found in Late Archaic sites. Styles within pottery assemblages are a major source of cultural identification.

Peninsular Gulf Coast

The Peninsular Gulf Coast period is marked by a great variety of cultures. The Gulf Coast, with its variable landscapes, made it possible for many different ways of life to thrive. Manasota is the name given to the inhabitants of the Sarasota area from 500 BCE to 750 of the Common Era (C.E.). This culture extended along the coast in a region including Pasco, Hillsborough, Pinellas, Manatee, and Sarasota counties. They are associated with shell middens. After 100 C.E., burial mounds are common. Most of the larger Manasota sites are located along the Gulf coast, though small settlements and camp sites are sometimes found in interior regions in pine woods on elevated ground near wetlands. These people lived predominantly from fishing and collecting shellfish.

From 750 B.C.E. until European contact, the culture through this area is known as the Safety Harbor culture. No evidence of agriculture is found in this area during this period. Abundance of food available from wetlands and coastal fishing allowed denser populations and more complex sociopolitical development. These sites are identified by shell middens and ceremonial and burial mound complexes (Milanich, 1998).

Historic Period

Spaniards, the earliest European explorers in Florida, first arrived on the eastern coast of Florida in 1513 with Juan Ponce de León followed by Narváez, de Soto, and Luna in 1527, 1539, and 1559 respectively. It is believed that both Narvaez and de Soto landed in the Tampa Bay area during this time and describe the Safety Harbor chiefdoms in their journals. Within 80 years of this first contact, the chiefdoms of this region had been totally destroyed, their people scattered. Both disease and armed conflicts with the Europeans contributed to their demise. The search for riches and notoriety was the driving force behind the earliest European explorers and all of their expeditions ended in failure. Unfriendly native peoples thwarted what attempts there were at Spanish settlements during this period. The first successful permanent settlement was founded by the French on the mouth of the St Johns River named Fort Caroline. Their success was partially due to having established good relations with the native peoples, the opposite of the early Spanish explorers. The French occupation of Florida was short lived however. The Spanish gained control of Fort Caroline in 1565, only two years after the fort's founding. The Spanish turned to establishing missions in an attempt to garner more control over the native peoples and to mobilize a native agricultural workforce to supplement the Spanish colonies. Because Florida held fewer incentives for economic development compared to Mexico and the South American colonies, few settlers moved to the province. Florida remained a frontier territory with only scattered fortifications mostly located on the Atlantic Coast (Milanich, 1998).

The British, who were colonizing Georgia and the Carolinas, instigated raids into Spanish Florida destroying the settlement at St. Augustine and most of the Spanish missions. In 1763 the British were finally able to wrest control over Florida from the Spanish. During British rule, many new settlers moved into the area, a feat that the Spanish were never able to accomplish. After the

defeat of the British during the American Revolution, Florida was returned once again to Spanish rule (Milanich, 1998).

During the early 1700's the first Creek peoples began to settle in northern Florida to escape conflicts with the white settlers in their native Georgia. They filled areas of Florida whose native populations had been decimated by conflicts with the European settlers and disease. During the third period of Spanish rule, more Creek began to pour into the area due to the Americans' expansionist policies which did not respect the native claims to lands. The Seminoles as they called themselves offered sanctuary to escaped slaves from the United States (Milanich, 1998).

Conflict between the United States and Spanish Florida escalated until 1821 when Spain finally ceded Spanish Florida to the Americans. Florida became a territory of the United States in 1819. Almost 30 years of war with the Seminoles and remaining native tribes followed before Florida attained statehood in 1845. At the time of the Civil War, Florida's economy was predominantly agricultural and ranching. As with all the Southern states, the war and following Reconstruction period meant extreme financial hardships for the people of Florida. This period of economic difficulty did not truly end until the close of World War II (Milanich, 1998).

Historic Structures

A search of the National Register of Historic Places database found no historic buildings located on the three sites under consideration (National Register of Historic Places, 2005). Eighty-five historic buildings and archaeological sites are listed in the National Registry for Sarasota County. The closest of these to the sites in question is the Miakka School House located on Miakka and Wilson Roads which is 4.1 miles from Site 3 by road. This historic structure is not within the viewshed of any of the three proposed sites.

3.4.3 Existing Conditions

3.4.3.1 Site 2

A cultural resources field reconnaissance was conducted during April, 2005, to evaluate Site 2 to determine the need of an intensive archaeological survey. Site 2, Hawkins Ranch, comprises approximately 467 acres. The land is presently in use as rotational cattle pasture with scattered wetlands. It is bounded on the north by SR 72 and on the west by a well-drained gravel-paved road. Approximately 330 yards to the west of Site 2 is Cow Pen Slough which runs parallel to the site for approximately 770 yards before veering to the southwest.

Site 2 is very level. The ground surface was found to be moderately-to-highly disturbed due to a number of factors. The site is drained by a system of excavated trenches ranging from 1 ½ feet to in excess of 2 feet in depth which can be seen in the aerial photographs of the site (Figure 2-2). The property is also pock-marked with 2 to 3 foot deep holes which are dug by the bulls for the purpose of keeping cool. During an April 2005 site visit the majority of these holes were located

in the western pastures where the bulls were housed but were found across the entire property presumably because the livestock are rotated through the pastures throughout the year.

The water table was observed at a depth of approximately 30 to 36 inches at the site during the week of April 18 through 22. The water table for the site prior to construction of the drainage ditches was likely higher than it is today. The natural water table level for Eau Gallie and Myakka fine sands, such as are found over most of the site, experience a seasonal high of 6-18 inches below the surface for 1 to 3 months and are within a depth of 40 inches for 2 to 6 months. During periods of drought, the water table may recede to a depth of more than 40 inches.

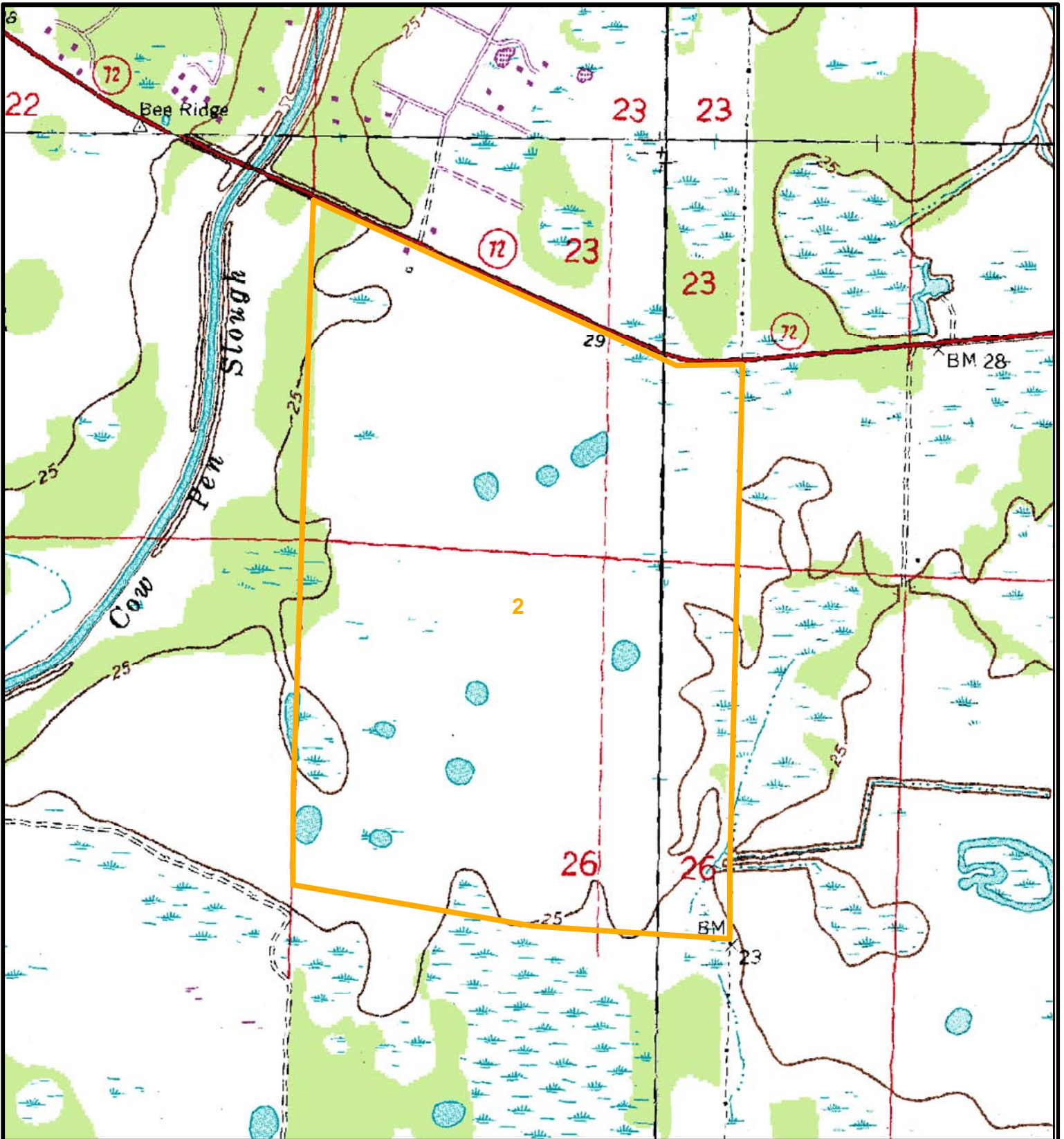
The only structure on the site, besides fences, feeding bunkers, well heads, and water troughs, is a barn that is currently used to house two horses (Appendix B). This barn appears on the USGS topographic map, 7.5 minute series, *Laurel, Florida* quadrangle, dated 1973. The exact age of the barn is unknown.

Limited sub-surface testing was performed because surface reconnaissance for artifacts was not possible due to thick, grassy ground cover. Sub-surface testing is not a required activity in archaeological field reconnaissance activities. Ten shovel test pits were placed in areas determined to be most likely to yield evidence of human habitation. These areas consisted of the periphery of one wetland which displayed open water and some slight amount of relief (Figure 3-1) and the area along the northwest border of the site closest to Cow Pen Slough. See Figure 3-2 for the locations of the shovel test pits. No evidence of cultural resources was found in either area.


Correspondence with the Florida Master Site File (see Appendix B) found no previously reported historic or pre-historic sites on Site 2 or the surrounding areas.

3.4.3.2 Site 3

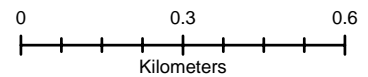
A cultural resources field reconnaissance was conducted during April, 2005, to assess Site 3 for the need of an intensive archaeological survey. Site 3, Myakka Ranch, comprises approximately 574 acres. This site consists of pastureland and cropland with scattered wetlands. The property is bordered on the south by Fruitville Road, also known as U.S. Highway 780. There are drainage systems on the southwestern portions of the Myakka Ranch site similar to those found on the Hawkins Ranch site (Site 2). They are observable in the 1999 aerial photographs (see Figure 2-3). This part of the property is presently used for cattle grazing. Much of the rest of the property is cultivated in vegetable crops for most of the year. At the time of the site visit (April 19, 2005) these fields were under a cover crop with the exception of several fields in the northeast on which tomatoes had been recently planted. Irrigation/drainage ditches surround each of these fields.



Legend

 Approximate Site Boundary

Source: USGS, 1973, Revised 1981; MACTEC, 2005



USGS TOPOGRAPHIC MAP, SITE 2



DRAWN	DATE
ALF	06/03/2005
CHECKED	DATE
JLD	06/03/2005

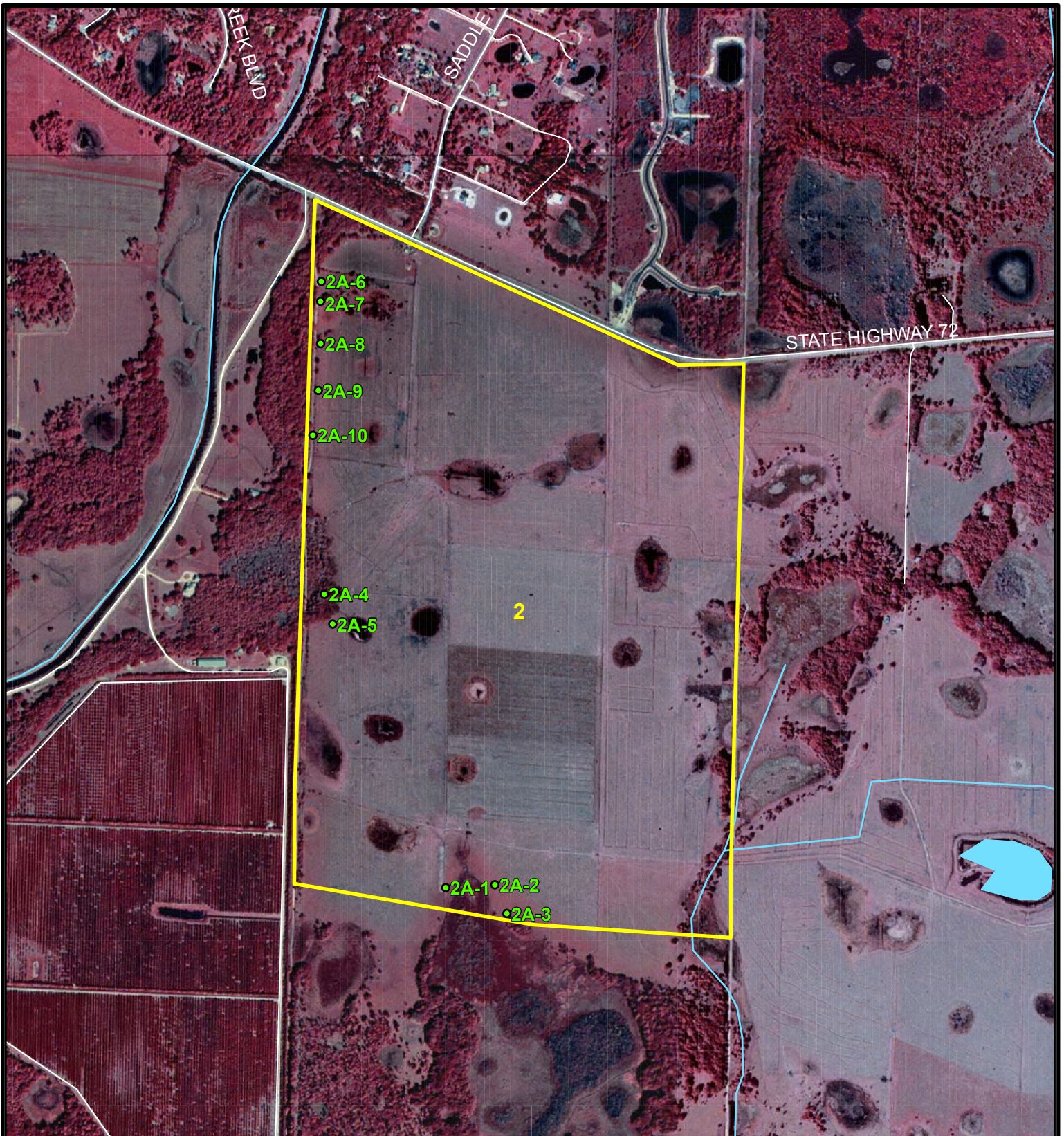
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FIGURE:

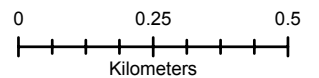
3-1



Legend

- Roads
- Approximate Site Boundary
- Water
- Shovel Tests

Source: FDEP, 1999; SWFWMD, 2002; MACTEC, 2005



CULTURAL RESOURCES INVENTORY SHOVEL TEST SITES, SITE 2



DRAWN	DATE
ALF	06/03/2005
CHECKED	DATE
JLD	06/03/2005

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FIGURE:

3-2

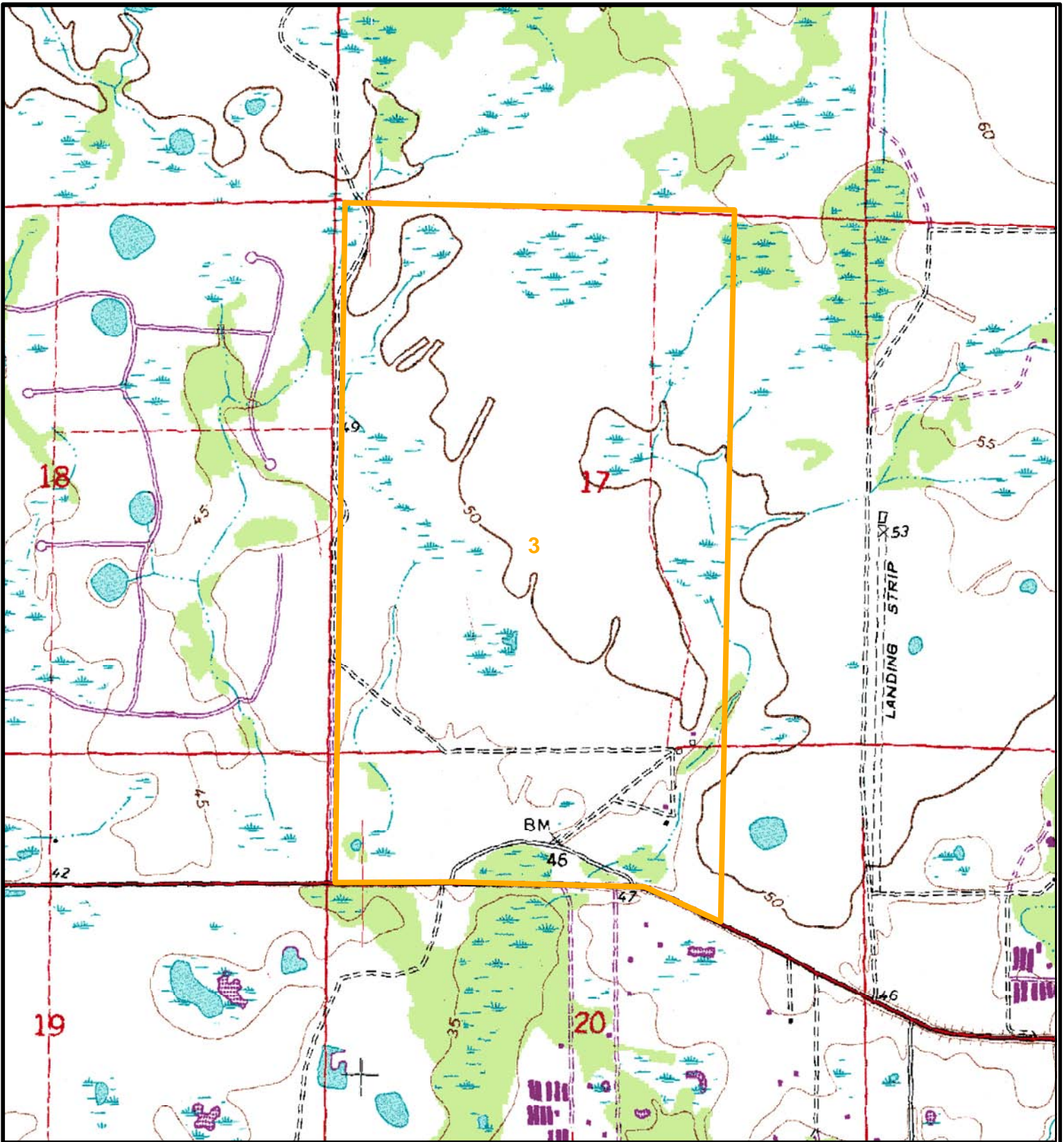
Much of the land at Site 3 has been tilled and drained. These activities may alter the soils from their natural state. The natural water table level for Eau Gallie and Myakka fines sands experiences a seasonal high of 6-18 inches below the surface for 1 to 3 months and is within a depth of 40 inches for 2 to 6 months. During periods of drought, the water table may recede to a depth of more than 40 inches. These depths may have been altered by the drainage systems on site. The water table was observed at a depth of approximately 30 to 36 inches at the site during the week of April 18 through 22. The water table was likely higher prior to the construction of the drainage structures, resulting in marshier conditions over larger areas of the site than exist today.

Several structures are located on the southeastern edge of the site (see photos in Appendix B). A large barn used for storing farm equipment, a smaller horse barn, a cattle pen, and former residence which now serves as the management office for the property are located in a small area near the stream on the southeastern corner of the property. Both the equipment barn and the building housing the management office have cement foundations. According to the Agricultural Manager Lester M. Neely, the equipment barn was constructed in the 1970's. Ages of the other structures are unknown. Some of these structures appear on the USGS topographic map, 7.5 minute series, *Lower Myakka Lake, Florida*, quadrangle, dated 1973. To the east of this complex, a derelict structure of unknown use extends out over the small stream.


Just south of these farm buildings is the residence of the caretaker (see photos in Appendix B) and an out-building used for storage. Much of the house is of cinderblock construction and of unknown age. The residents stated that there had formerly been a homestead on the site, and a portion of this residence may be from the homestead. Though this residence may meet the age requirements for a historical structure, it is unlikely that it would meet the requirements involving historical significance.

Site 3 shows little topographic relief (Figure 3-3). A drive-over of the site revealed small, grassy wetlands with little or no open water and very level topography. Three shovel tests were placed along the creek which cuts across the southwest corner of the site and displays the only relief near a fresh water source (see Figure 3-4). This area is also the location of the ranch's maintenance barn and office building. No pre-historic archaeological artifacts were found. Some historic remains, including rusty bits of metal and a plastic shotgun shell, were found in one shovel test pit (Appendix B). During surface reconnaissance of the creek, several glass soda bottles were discovered. One of these displays a trademark of the Owens-Illinois Company that dates its production between the years of 1941 and 1954 (University of Utah, Department of Anthropology, 1992). The ranch caretaker, a resident on the site, stated that they often uncovered old bottles in this area.

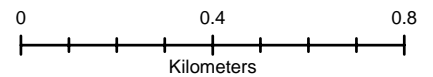
Correspondence with the Florida Master Site File (Appendix B) found no previously reported historic or pre-historic sites on Site 3 or the surrounding areas.



Legend

 Approximate Site Boundary

Source: USGS, 1973, Revised 1981; MACTEC, 2005



USGS TOPOGRAPHIC MAP, SITE 3



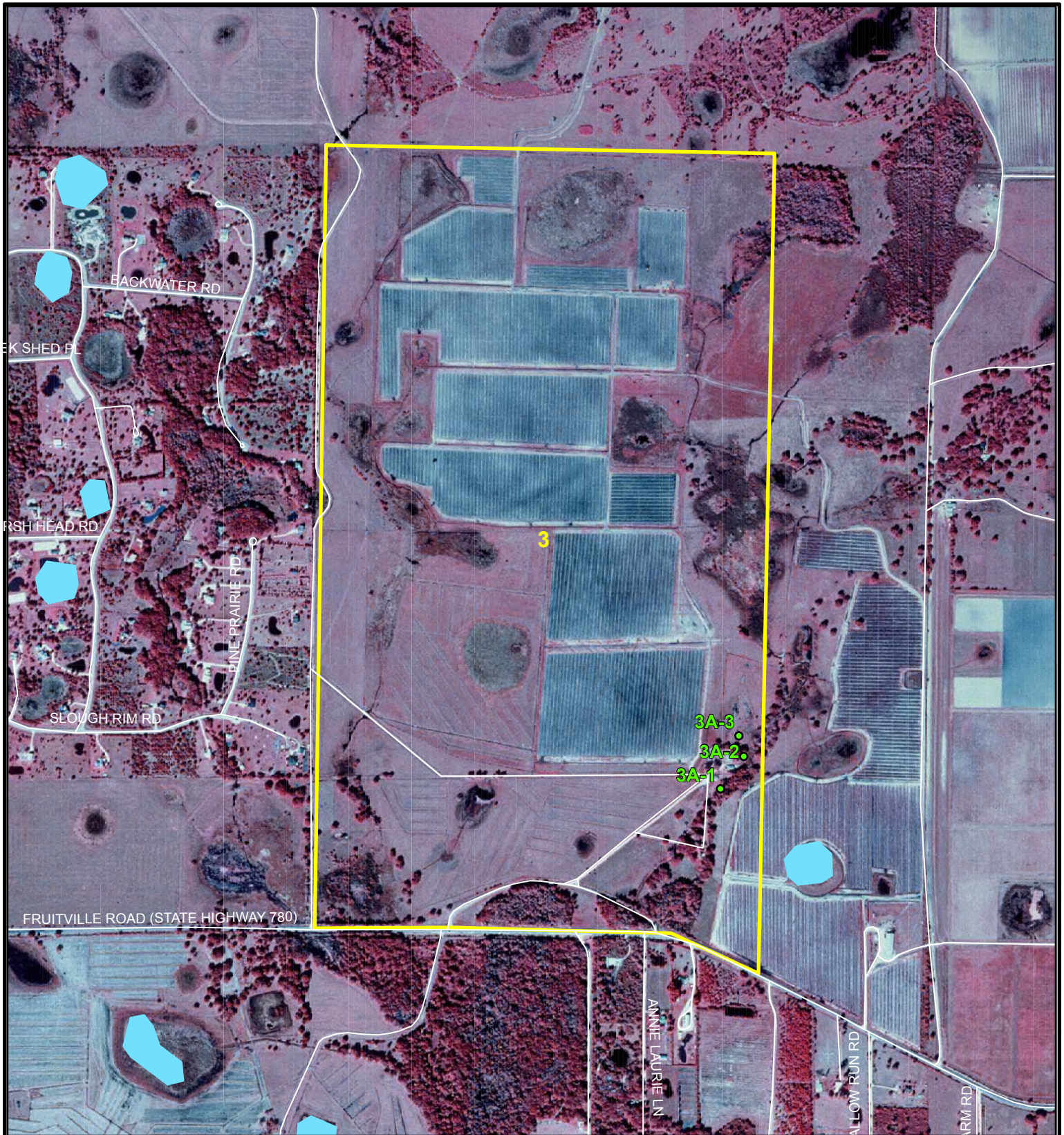
DRAWN	DATE
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FIGURE:

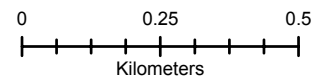
3-3



Legend

- Roads
- Approximate Site Boundary
- Water
- Shovel Tests

Source: FDEP, 1999; SWFWMD, 2002; MACTEC, 2005



CULTURAL RESOURCES INVENTORY SHOVEL TEST SITES, SITE 3

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FIGURE:
3-4



3.4.3.3 Site 4

A cultural resources field reconnaissance was conducted during April, 2005, to assess Site 4 for the need of an intensive archaeological survey. Site 4, Hi Hat Ranch, comprises approximately 460 acres. This site consists of pastureland with scattered wetlands. The property is bordered on the north by Fruitville Road, also known as U.S. Highway 780 and on the west by a well-drained gravel-paved road which serves as the main entrance road for the ranch. The site has an extensive system of ditches used for irrigation and drainage observable in the 1999 aerial photographs (see Figure 2-4). The ditches range from 2 feet to 3 feet in depth and are used to allow irrigation water from Sarasota County's reuse water pond (located to the south east of the property visible in the lower-right corner of Figure 2-4) to be distributed to the fields. Several pumping stations for this purpose are also located on the property.

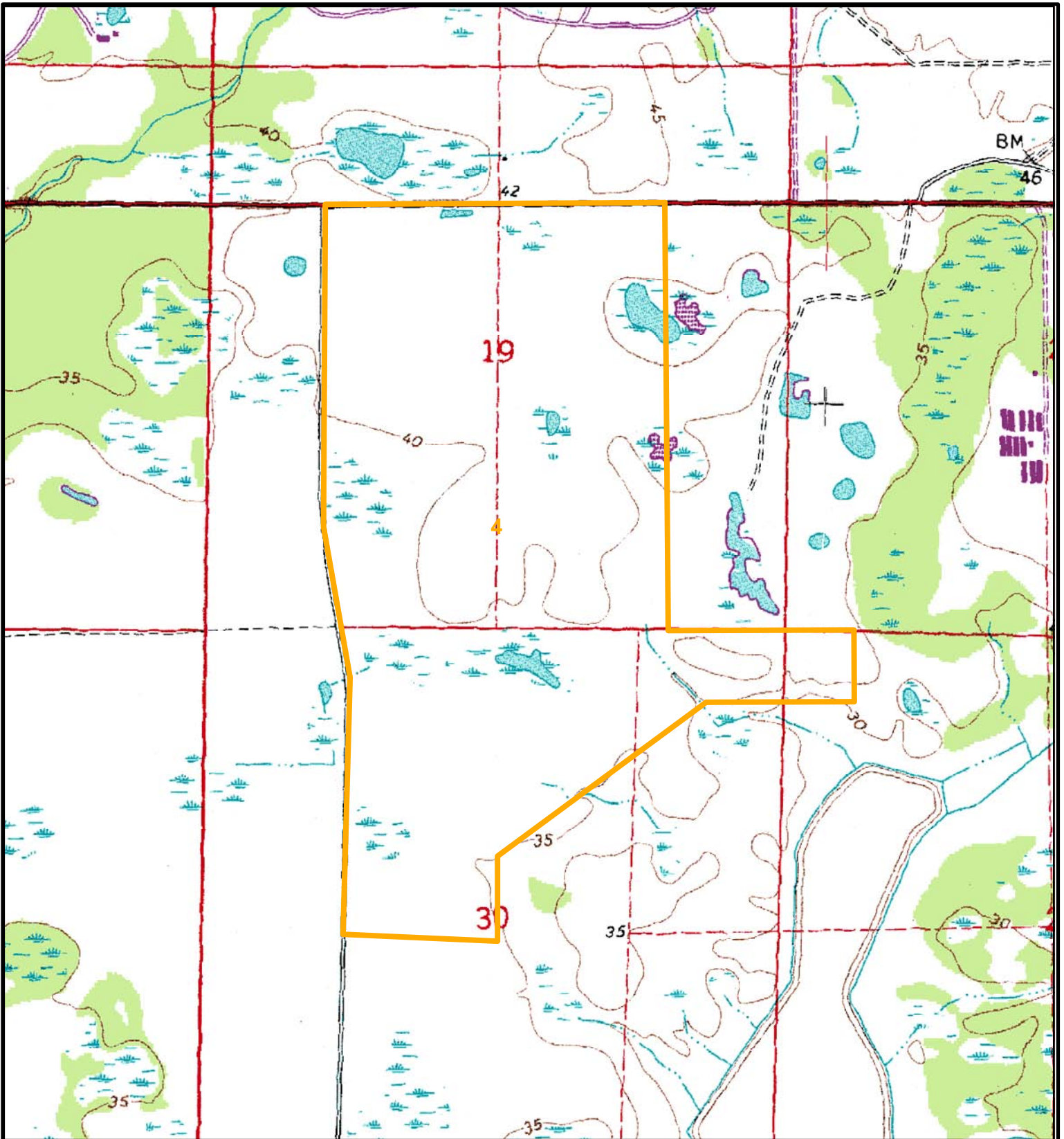
The site has been owned by the family since the 1940's and has been used for crops and pasture during their ownership. The owner indicated that he was not aware of archaeological or cultural resources on-site. David Hill, an employee of the City of Sarasota's "Reclaim Group" was interviewed on-site (April 20, 2005) as he was traveling the property maintaining the irrigation system. He indicated that he had never observed any artifacts during his frequent excavations of the site.

The natural water table level for Eau Gallie and Myakka fines sands, which dominate the site, experience a seasonal high of 6-18 inches below the surface for 1 to 3 months and is within a depth of 40 inches for 2 to 6 months. During periods of drought, the water table may recede to a depth of more than 40 inches. These depths may have been altered by the drainage systems on site. The water table was observed at a depth of approximately 30 to 36 inches at the site during the week of April 18 through 22. The water table was likely higher prior to the construction of the drainage structures, resulting in marshier conditions on the site than exist today.


There are no built structures located on this site other than fences and irrigation structures. No structures appear on the USGS topographic map, 7.5 minute series, *Lower Myakka Lake, Florida*, quadrangle, dated 1973.

A drive-over of the site in April 2005 revealed very even terrain similar to the other sites surveyed (Figure 3-5). Two shovel tests were placed in the area surrounding the intermittent stream that drains the eastern-central portion of the site into the wetlands that borders the Sarasota Reuse Pond offsite (see Figure 3-6). This area provided the only topographic relief bordering a fresh water source on the site. Both test pits uncovered lithic debitage (e.g. stone flakes, presumably from tool making activities) which are not diagnostic of site age.

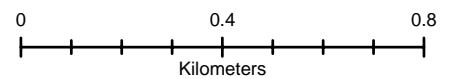
Correspondence with the Florida Master Site File (see Appendix B) found no previously reported historic or pre-historic sites on Site 4 or the surrounding areas.



Legend

 Approximate Site Boundary

Source: USGS, 1973, Revised 1981; MACTEC, 2005



USGS TOPOGRAPHIC MAP, SITE 4



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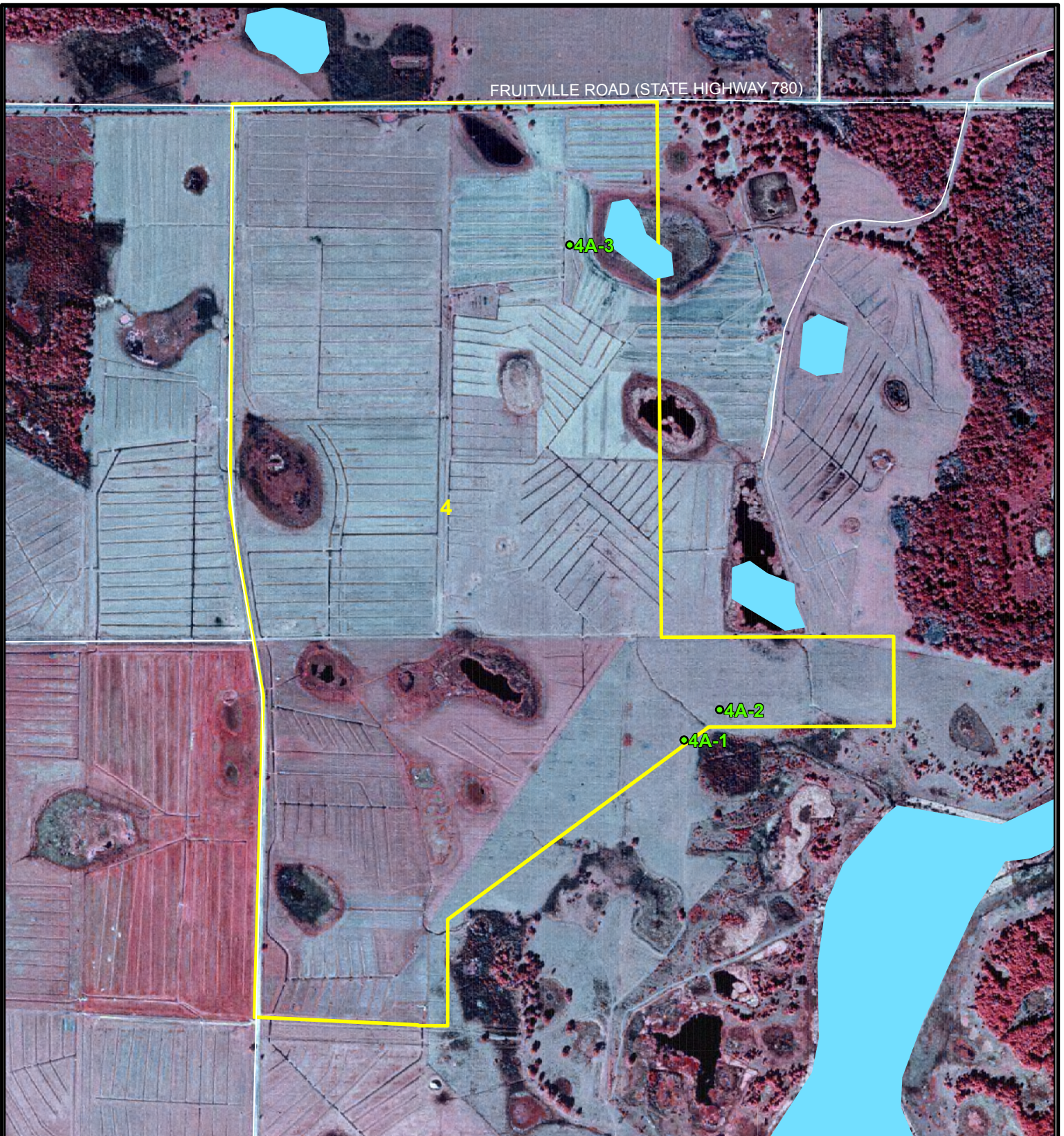
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FIGURE:

3-5

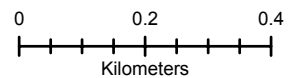
FRUITVILLE ROAD (STATE HIGHWAY 780)



Legend

- Roads
- Approximate Site Boundary
- Water
- Shovel Tests

Source: FDEP, 1999; SWFWMD, 2002; MACTEC, 2005



CULTURAL RESOURCES INVENTORY SHOVEL TEST SITES, SITE 4

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FIGURE:

3-6



3.5 Economic Activity

The population trends and projections for Sarasota County indicate that there may be as many as 450,000 residents by the year 2025, compared to 340,000 in 2002 (Bureau of Economic and Business Research, University of Florida, 2003). The county is adapted to a large transient population by way of the tourism industry.

Sarasota County has a historic reputation as a resort destination (Sarasota Chamber of Commerce, 2005). At present Sarasota County is viewed as a retirement venue (Sarasota County Economic Development Plan, 2005). At present > 30% of the current residents are ≥ 65 years old (Bureau of Economic and Business Research, University of Florida, 2003), and the average household size is estimated to be 2.2 people (US Census Bureau data and data from Sarasota Chamber of Commerce website). The County has a high average income, however it is based upon passive income while actual wages are lower than average.

A recent (2004) economic study commissioned by the county government (*Sarasota County Economic Development Strategic Plan*) reports that at present there are two major industry clusters in the county: 1) tourism and recreation; and 2) real estate and development (a cluster which includes health care and financial services). This analysis is supported by data from the Sarasota Chamber of Commerce's list of the biggest 20 employers in the county. On the Chamber's list of the top 20 employers, only three are manufacturing companies, two are school/government, four are hospitals/health care centers, and eight are service industries (stores, hotels, etc.). Employment in the agriculture sector does not rank among the top 20 in the County.

The primary economic activity at each of the three sites is agriculture, specifically cattle production. Conversion of the rotational pastures at any of these three proposed sites will decrease cattle sale revenues at each ranch, and may reduce the overall carrying capacity of the ranch. According to Dr. Robert Kluson of the Sarasota County Extension Office, current ranch prices for beef cows are: \$1300/each for a 2 – 3 year old female, and \$500 each for a 9 – 12 year old female. A conservative estimate of annual losses in cattle sales for each of the proposed sites follows (Table 3-1).

Table 3-1. Estimate of Revenues from Cattle Sales at Each Site

Site/Ranch	Number of Cows on Site *	Number Harvested Annually*	Average Price	Annual Gross Revenue**
2, Hawkins	200	100	\$1,300	\$130,000
3, Myakka	200	100	\$1,300	\$130,000
4, Hi Hat	300	150	\$1,300	\$195,000

* Estimate based on owner interview or best guess.

** Revenue does not account for the expenses associated with raising the cattle.

Prepared by: JLD Checked by: ABS

For this EA it is assumed that all of the cows grazed each site would come out of production permanently, although the owner of Site 2 indicated that he might be able to keep his current herd without any losses by increasing production in other pastures on his ranch. Thus, the annual revenues estimated for each site could become permanent losses under a worst-case scenario. Owner interviews indicated that loss of this pasture land would likely result in a workforce reduction of 0.5 to 2 full-time employees, depending upon the site and whether or not herd size is reduced or simply relocated.

Because the areas under consideration at each of the proposed sites does not comprise complete tax parcels, it is not possible to compute actual losses to the County tax base. However, Table 3-2 summarizes the taxable value of the total tax parcels portions of which are under consideration in the alternative scenarios being evaluated in this EA.

Table 3-2. Land Values for the Complete Tax Parcels Which Include Portions of the Proposed Sites

Site & Parcel #	Market value	Taxable value
Site 2, Hawkins Ranch		
0296-00-3000	\$1,206,392	\$38,690
0301-00-1000	\$3,006,084	\$98,515
Site 3, Myakka Ranch		
0537-01-0001	\$3,044,196	\$100,070
0543-01-0001	\$910,652	\$132,455
Site 4, Hi Hat Ranch		
0563-00-1000	\$1,485,653	\$62,250
0541-09-0001	\$1,618,212	\$64,551

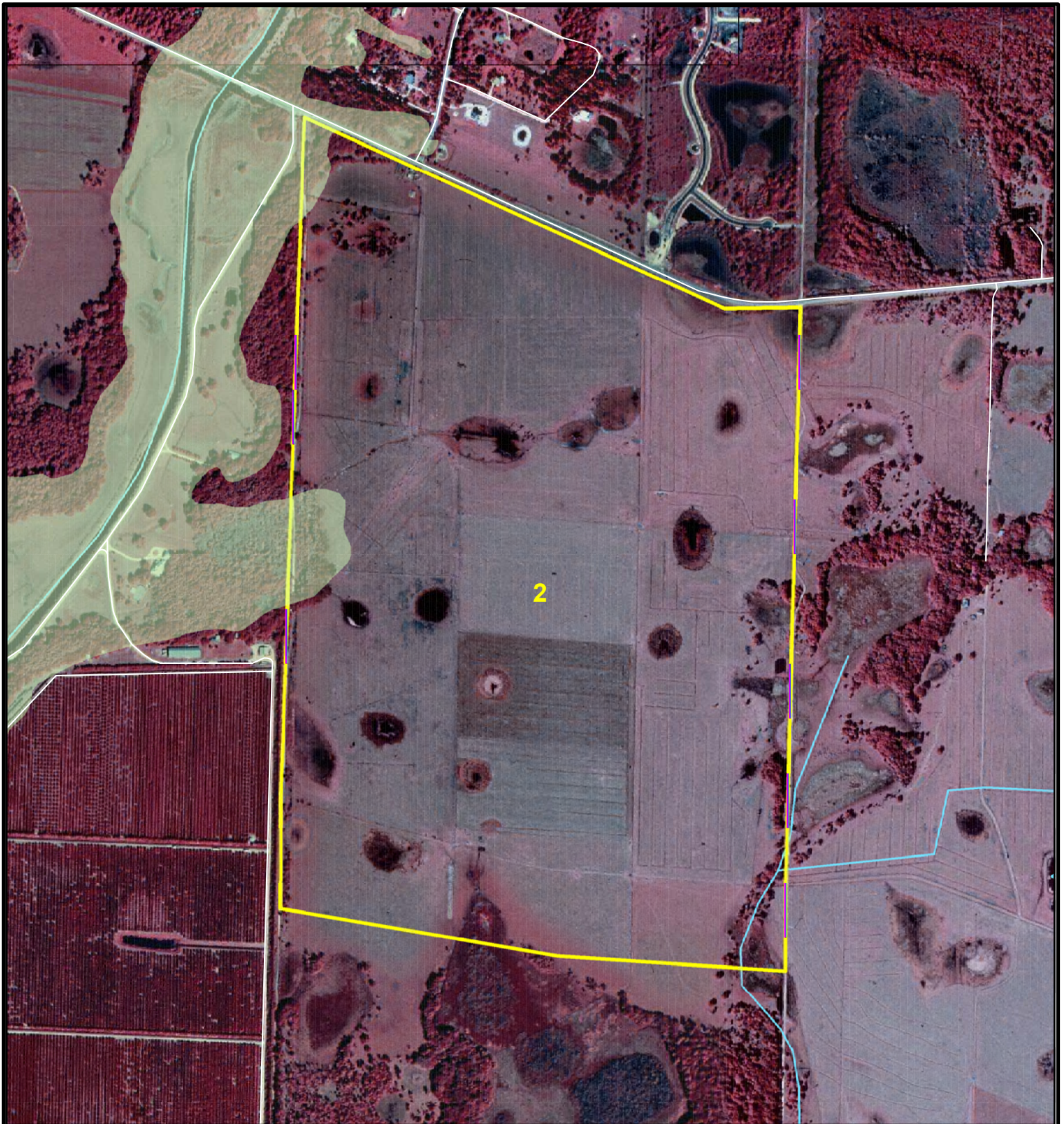
Source: Sarasota County Tax Records.

Prepared by: JDL Checked by: EMH

3.6 Floodplains, Wetlands, Coastal Zone

3.6.1 Floodplains

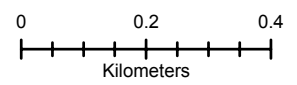
According to floodplain information provided by FEMA (1996), 10 acres of Site 2 (2% of the total acreage) lies in the 100-year flood plain (Figure 3-7). Six acres of Site 3 lies in the 100-year floodplain, or one percent of the entire site acreage of Site 3 (Figure 3-8). Forty-nine acres or six percent of the entire acreage of Site 4 is present in within the 100-year floodplain in portions of the south central and easternmost section of Site 4 (see Figures 3-9). The majority of the land at each site is above the 100-year floodplain (FEMA 1996).



Legend

- Roads
- 100 Year Flood Zone (FEMA 1996)
- Water
- Approximate Site Boundary

Source: FEMA, 1996; FDEP, 1999; SWFWMD, 2002; MACTEC, 2005



FEMA 100 YEAR FLOOD ZONE, SITE 2



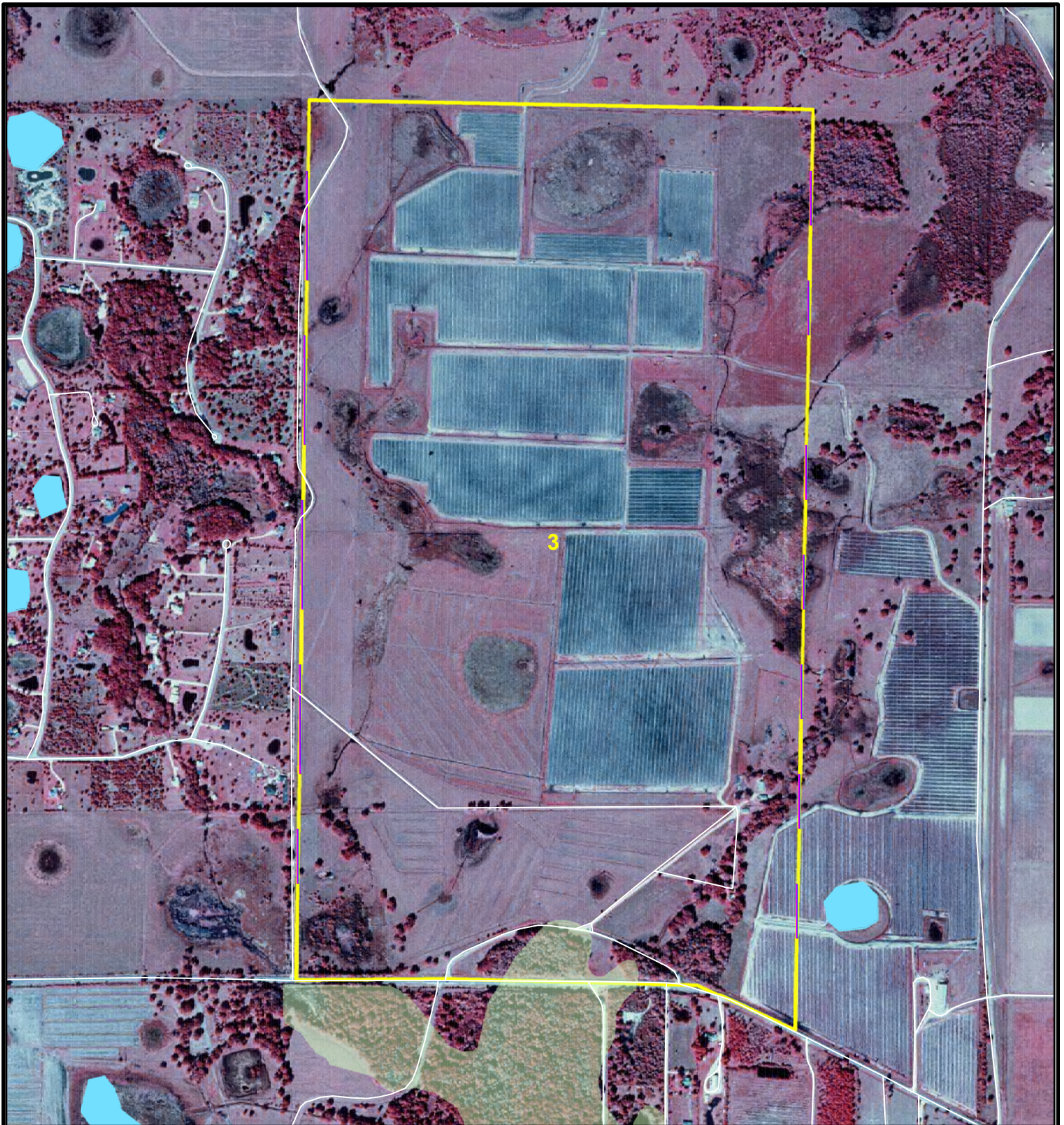
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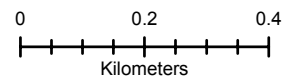
FIGURE:
3-7



Legend

- Roads
- 100 Year Flood Zone (FEMA 1996)
- Water
- Approximate Site Boundary

Source: FEMA, 1996; FDEP, 1999; SWFWMD, 2002; MACTEC, 2005



FEMA 100 YEAR FLOOD ZONE, SITE 3

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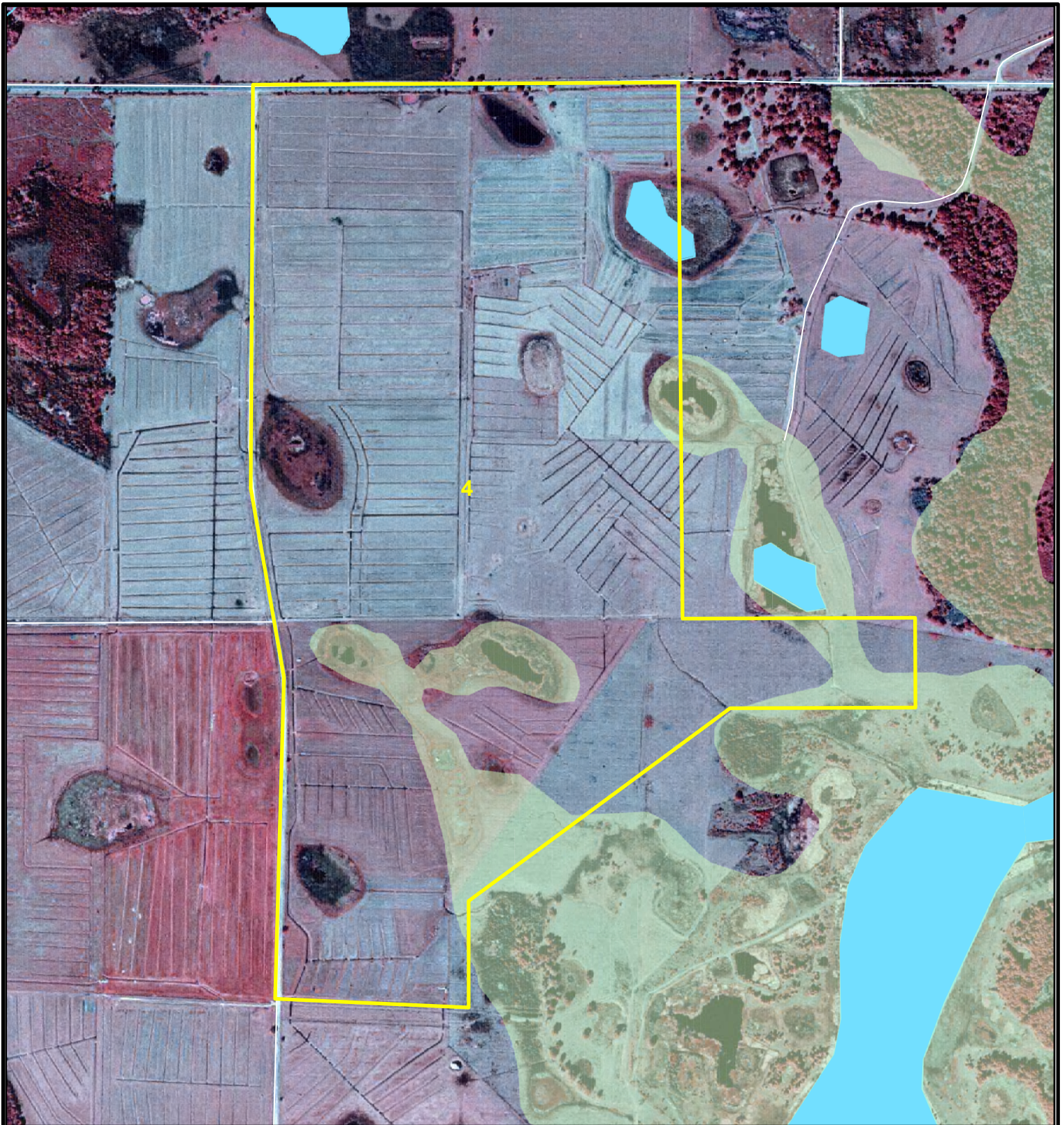
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FIGURE:

3-8

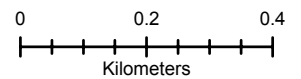




Legend

- Roads
- Approximate Site Boundary
- Water
- 100 Year Flood Zone (FEMA 1996)

Source: FEMA, 1996; FDEP, 1999; SWFWMD, 2002; MACTEC, 2005



FEMA 100 YEAR FLOOD ZONE, SITE 4

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FIGURE:

3-9



The extent of a floodplain is an important consideration because Executive Order (EO) 11988, and the floodplain management criteria contained in 44 CFR Part 60, *Criteria for Land Management and Use*, regulates the uses of these areas. The objective of this presidential order is to avoid, to the extent possible, the long- and short-term adverse impacts associated with occupancy and modification of floodplains. The order applies to all Federal agencies conducting activities and programs that may potentially affect floodplains. To comply with EO 11988, before taking any action, the National Cemetery Administration must evaluate the impacts of specific proposals in the floodplain. Describe sites' relationship to the 500-year floodplain.

In accordance with the requirements of EO 11988, the National Cemetery Administration must demonstrate that there is no practicable alternative to carrying out the Proposed Action within the 100-year floodplain (EO 11988 1977).

3.6.2 Wetlands

Data from the National Wetlands Inventory (USFWS, 2005), aerial photographs, soil surveys, and topographic maps were consulted prior to the site visits to determine locations and types of wetlands that were present on each site. Numerous field guides and other references (Bell and Taylor 1982, Little 1980, Stupka 1965, Tarver et.al. 1978, Tobe et.al. 1998) were also consulted to assist in the identification of wetland flora.

During site visits in April, 2005, a limited ecological survey, including reconnaissance of federal jurisdictional wetlands as defined in 33 CFR Part 328, was completed. The ecological survey included an inventory of upland and wetland communities, recording the presence of plants and wildlife observed, a limited survey for state and federal protected species and their habitats, and photographing conditions on each of the sites.

The term "wetland", as defined in Executive Order 11990, Protection of Wetlands, means "those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction." Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds. Executive Order 11990 requires federal agencies to avoid or minimize impacts to wetlands to the most reasonable extent possible (EO 11990 1977).

According to the National Wetlands Inventory (NWI), the wetlands present on all sites are palustrine. Palustrine wetlands, as defined by Cowardin *et al.* (1979), whose wetlands classification system the NWI adopted, include all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 parts per thousand (ppt). Wetlands lacking such vegetation are

also included if they are less than 20 acres, do not have an active wave-formed or bedrock shoreline feature, have at low water a depth less than 6.6 feet in the deepest part of the basin, and have a salinity due to ocean-derived salts of less than 0.5 ppt (Cowardin *et al.*, 1979).

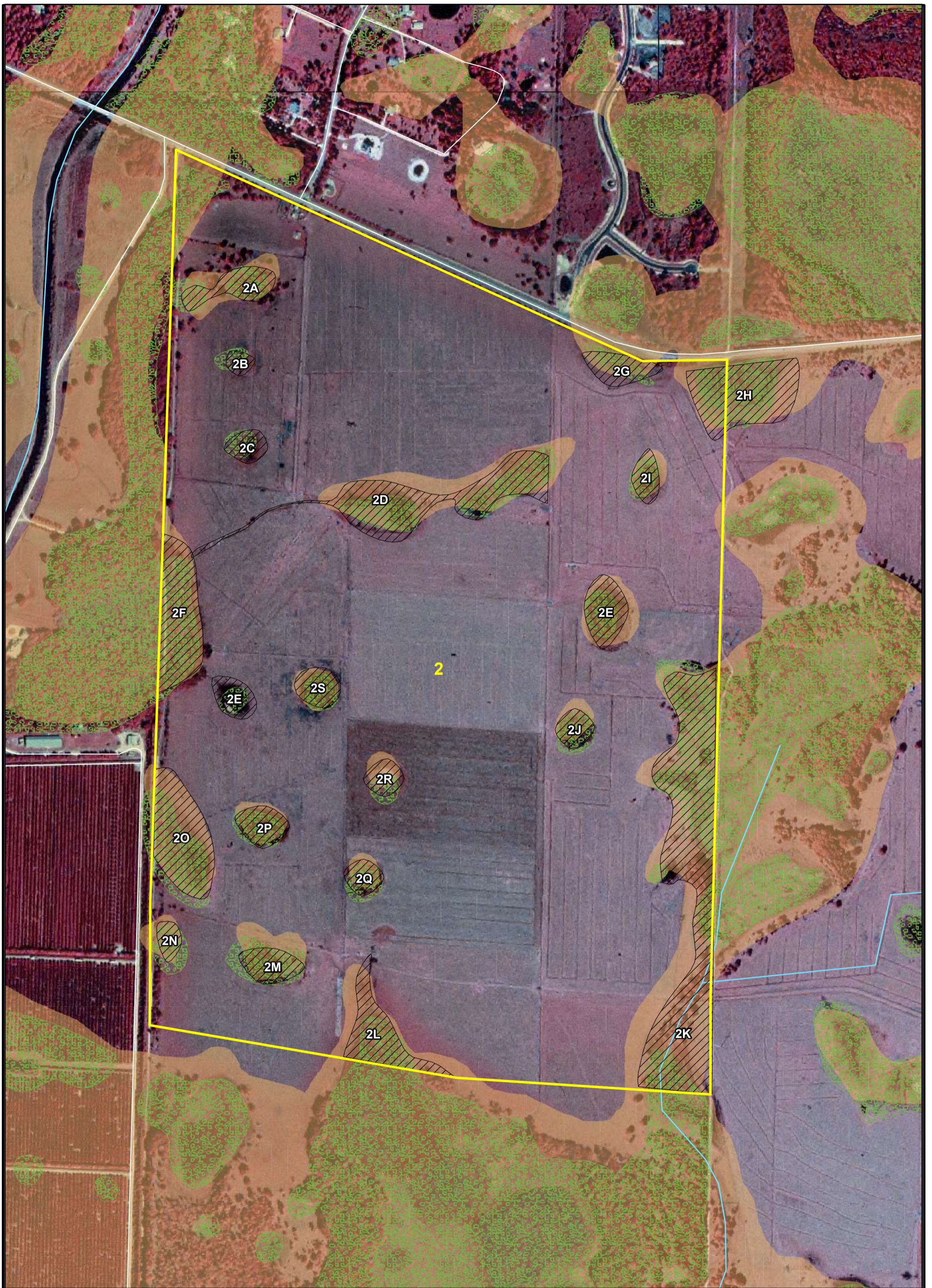
There were three different types of palustrine wetlands observed during the site visits: scrub-shrub, forested, and emergent. A scrub-shrub wetland, characterized by woody vegetation less than 20 feet tall, includes true shrubs, young trees, and shrubs or trees whose growth is stunted by environmental conditions. Forested wetlands, characterized by woody vegetation that is 20 feet tall or taller, may include either deciduous or evergreen vegetation. Forested wetlands normally possess an overstory of trees, an understory of young trees or shrubs, and an herbaceous layer. According to NWI, forested wetlands can be temporarily flooded (surface water is present for brief periods during the growing season, but the water table usually lies well below the soil surface) to semipermanently flooded (surface water persists throughout the growing season in most years, and when absent, the water table is at or very near the ground surface). Emergent wetlands are characterized by erect, rooted, herbaceous plants which are present throughout most of the growing season. Emergent wetlands are also known as marshes, fens, and sloughs (Cowardin *et al.*, 1979).

On Site 2, 19 district wetland areas were observed. One scrub-shrub wetland was present along the southern boundary of the site. Areas of forested wetlands were present near Cow Pen Slough at the west central boundary and along the eastern boundary of the site. Emergent wetlands were present throughout Site 2 (Figure 3-10).

On Site 3, 19 district wetland areas observed included scrub-shrub, forested and emergent palustrine wetlands present. Forested wetlands were present at the southwest corner, and along the southern and eastern boundaries of the site. Scrub-shrub and emergent wetlands were present throughout Site 3 (Figure 3-11).

On Site 4, nine palustrine emergent wetlands were present. These exist throughout the site (Figure 3-12).

Based upon available information from Southwest Florida Water Management District (SWFWMD) and USACE (USACE 2005), no jurisdictional wetland delineations have been performed on Site 2, 3, or 4. According to NWI data, there are approximately 48 acres of wetlands on Site 2 (Figure 3-11), 88 acres of wetlands on Site 3 (Figure 3-10), and 32 acres of wetlands on Site 4 (NWI 2005) (Figure 3-12). Additionally, the SWFWMD has hydric soil data which were used as an aid to determine areas of potential wetlands during the site visits (Figures 3-10, 3-11 and 3-12). According to these data, there are approximately 78 acres of potential wetlands on Site 2, 162 acres of potential wetlands on Site 3, and 44 acres of potential wetlands on Site 4 (SWFWMD 2005). During the April, 2005 site visits, wetland acreages at each site



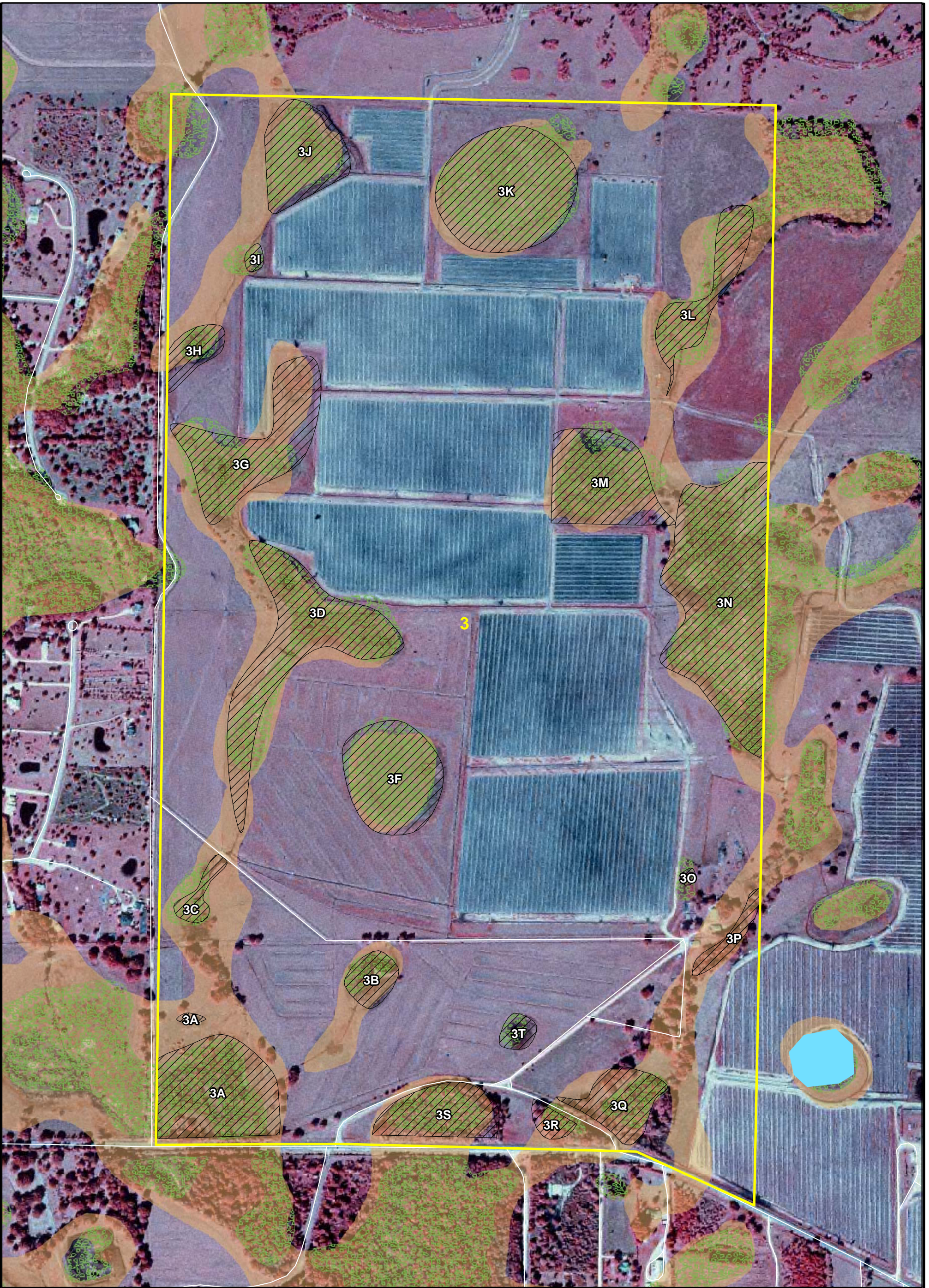
— Roads	Soils (SSURGO)	Legend	Source: FDEP, 1999; SWFWMD, 2002; MACTEC, 2005
— Water	Soils with Hydric Inclusions	Approximate Site Boundary	0 0.2 0.4 Kilometers
		Wetlands As Observed in Field	
		Wetlands (NWI)	

WETLANDS, SITE 2

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ALF	06/03/2005
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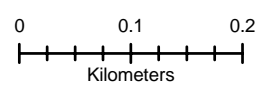
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NATIONAL CEMETERY SARASOTA COUNTY FLORIDA DEPARTMENT OF VETERANS AFFAIRS NATIONAL CEMETERY ADMINISTRATION	FIGURE:
	3-10



— Roads	Soils (SSURGO)	Approximate Site Boundary	Wetlands (NWI)
Water	Soils with Hydric Inclusions	Wetlands As Observed in Field	

Source: SWFWMD, 2002; FDEP, 1999; MACTEC, 2005

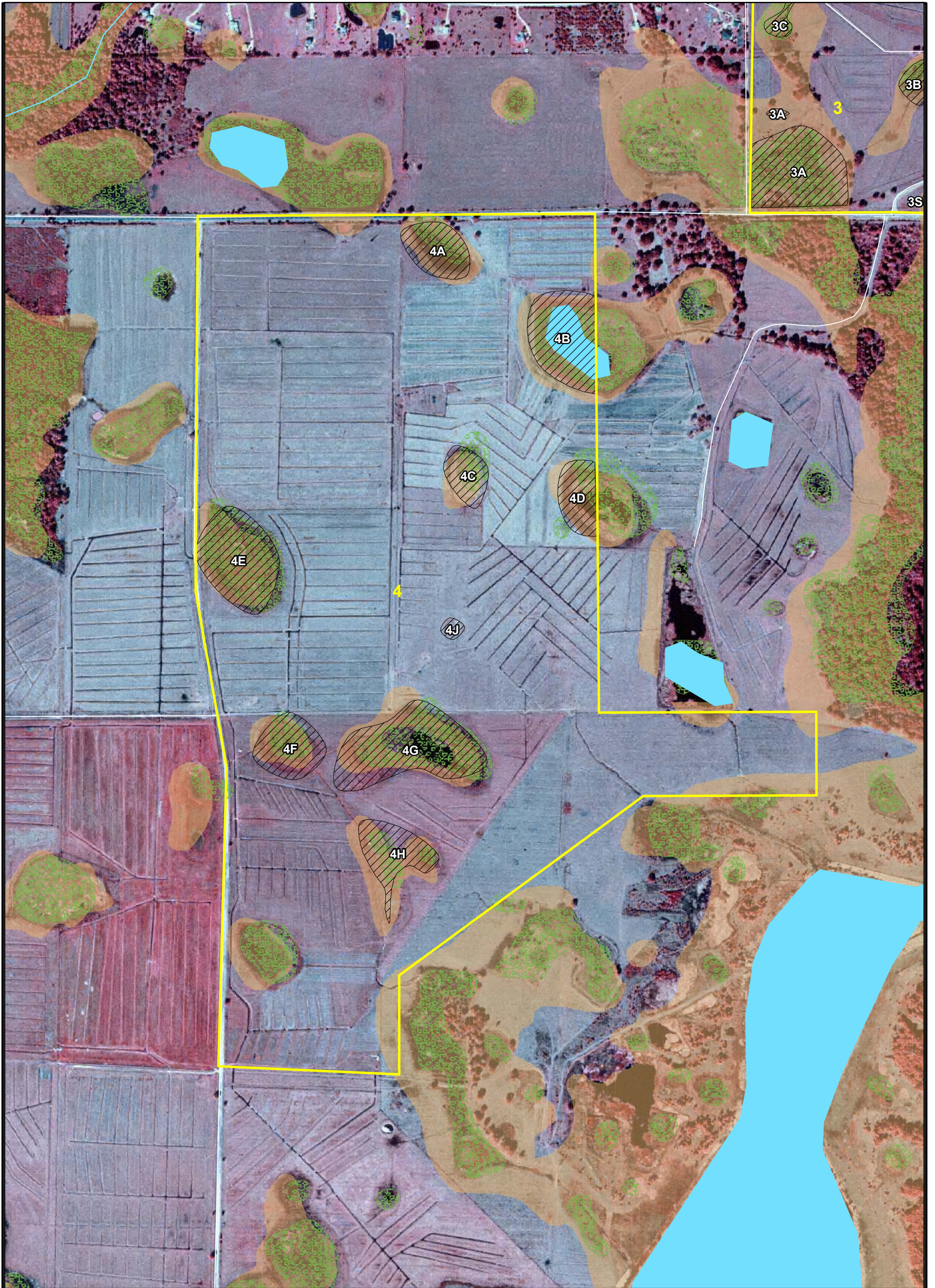


WETLANDS, SITE 3	
DRAWN	DATE
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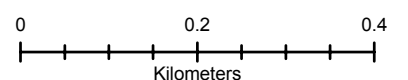
FIGURE:
3-11



Legend

- Roads
- Water
- Soils (SSURGO)**
- Soils with Hydric Inclusions
- Approximate Site Boundary
- Wetlands As Observed in Field
- Wetlands (NWI)

Source: FDEP, 1999; SWFWMD, 2002; MACTEC, 2005



WETLANDS, SITE 4

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FIGURE:

3-12



were observed to be approximately 78, 108, and 47 acres for Sites 2, 3, and 4, respectively. These acreages were obtained by visually determining the boundaries for each of the wetlands at each site based on vegetation and hydrology, creating waypoints of the boundaries with a Global Positioning System (GPS), and calculating acreages using methods in a Geographic Information System (GIS).

A visual assessment of the quality of the wetlands at each site was completed in April, 2005. The quality of the wetlands was determined by observing the presence of native and exotic vegetation, wildlife utilization, and cattle impact. At Site 2, all wetlands observed contained native vegetation; however, 70 percent of these wetlands contained invasive vegetation. Vegetation species diversity was high in 30 percent of the wetlands. For this assessment, high diversity was defined as a site where greater than five native species of wetland plants were established. At the time of monitoring, 80 percent of the wetlands were being used by wildlife, specifically birds, mammals, fish, and/or amphibians and about 40 percent of the wetlands were directly impacted by either cattle trampling or grazing.

At Site 3, all wetlands observed contained native vegetation, and 90 percent of the wetlands contained exotic vegetation. About half of the wetlands observed had high vegetation species diversity. About 70 percent of the wetlands were being utilized by wildlife at the time of monitoring, and 30 percent of the wetlands were impacted by either cattle trampling or grazing.

At Site 4, all wetlands observed contained native vegetation. About 90 percent contained exotic vegetation. Ninety percent of the wetlands were being used by wildlife at the time of the site visit, and 40 percent of the wetlands had high species diversity. About 40 percent of the wetlands were impacted by either cattle trampling or grazing.

A summary of wetlands information obtained during the site visits is included as Table 3-3. Detailed information for each wetland visited in the three sites is included in Appendix D.

Table 3-3. Wetland Summary Table

Site	Number of Wetlands	Acres of Wetlands (according to NWI)	Acres of Wetlands (according to SWFWMD hydric soil acres)	Acres of Wetlands (according to MACTEC's observations)	Percent of Total Acreage. Using SWFWMD Acreage	Wetland Types	Percent Wetlands with Exotic/ Invasive Plant Species	Percent Wetlands with High Vegetation Species Diversity	Percent Wetlands Utilized by Wildlife (at time of site visit)	Percent Wetlands Impacted by Cattle Trampling or Grazing
2	19	48	78	78	17%	scrub-shrub, forested, emergent	70	30	80	40
3	19	88	162	108	35%	scrub-shrub, forested, emergent	90	50	70	30
4	9	32	44	47	8%	emergent	90	40	90	40

Source: FDEP, 1999; SWFWMD, 2002; MACTEC 2005.

Created by: SEB Checked by: EMH

3.6.3 Coastal Zone

The Federal Coastal Zone Management Act (CZMA) requires Federal agencies carrying out activities subject to the Act to request a federal consistency, the authority to review federal activities to determine their compliance with the state of Florida's approved management program (FDEP 2005). A draft version of this EA will be submitted to the Florida Department of Community Affairs. It is anticipated that the proposed project will be consistent with the Florida Coastal Zone Management Program.

3.7 Geology

The landform of southwest Florida, as with much of Florida, shows the dominant effect of marine forces in shaping the land surface. Whenever the sea covered the Florida Platform, shallow marine currents and the associated erosional and depositional forces shaped the shallow seabed, with subsequent erosional forces modifying exposed landforms (Randazzo and Jones, 1997). Ancient seas have left behind extensive flat plains that were once shallow sea floors, a dominant paleo-feature of this region.

This region of southwest Florida is underlain by three near-surface geologic units: the uppermost Plio-Pleistocene undifferentiated sands and clays, the Hawthorn Group deposits, and the deeper Suwannee Limestone.

The heterogeneous Plio-Pleistocene deposits include sands, silty sands, silts, clays, organic materials, and fossiliferous materials, ranging in thickness from 10 to 50 feet. Generally, the Miocene-age Hawthorn Group consists of two formations, the Peace River Formation and the Arcadia Formation. The quartz sands of the Peace River Formation are clayey, calcareous to dolomitic, phosphatic, and very fine grained. The clay layers are sandy, silty, calcareous to dolomitic, and phosphatic. The Peace River Formation is reported to underlie the study area and averages 30 to 60 feet in thickness. The Arcadia Formation includes the lower Hawthorn Group carbonates and limestones, containing varying amounts of sand, clay, and phosphate. Reportedly, the region containing all three sites is underlain by the Arcadia Formation, which can range to more than 400 feet in thickness. The Suwannee Limestone underlies the entire study area, and consists of porous limestone, with some crystalline limestone and dolomitic limestone.

3.8 Soils

3.8.1 General Area

According to the USDA Soil Conservation Service (SCS) Sarasota County Soil Survey (SCS, 1992), the majority of Sarasota County is in the Gulf Coastal Lowlands. In the northeastern part of the county, two small areas are within the boundaries of the De Soto Plain. The area of the county within the De Soto Plain is characterized by the relatively steeper slopes between the edge

of the plain and the inland edge of the lowlands. Elevations in the county range from mean sea level along the coastline to 100 feet above sea level in the extreme northeast. The topography is mainly flat. The county is mostly poorly drained with many streams, swamps, marshes, and ponds. The Myakka River and its tributaries are the major streams. Throughout the county, the water table is at or near the surface. Sediments at or near the surface of the county consist of quartz sand, consolidated and unconsolidated shell beds, clay, and limestone and range in age from Oligocene (38 to 22.5 million years ago) to Holocene (10,000 years ago to the present) (SCS, 1992 - see also Table 3-4).

Table 3-4. Soils Information by Site

Character	No Action Alternative	Site 2 (Hawkins Ranch)	Site 3 (Myakka Ranch)	Site 4 (Hi Hat Ranch)
Rock Stratigraphic Unit				
Era	N/A	Cenozoic	Cenozoic	Cenozoic
System	N/A	Tertiary	Tertiary	Tertiary
Series	N/A	Miocene	Miocene	Miocene
Geologic Age Identification				
Category	N/A	Stratified Sequence	Stratified Sequence	Stratified Sequence
Dominant Soil Composition in General Area				
Soil Component	N/A	Pomona	Pomona	Pomona
Surface Texture	N/A	Fine sand	Fine sand	Fine sand
Hydrologic Group	N/A	Class B/D	Class B/D	Class B/D
Drainage Class	N/A	Poorly	Poorly	Poorly
Hydric Status	N/A	Not hydric	Not hydric	Not hydric
Corrosion Potential	N/A	High	High	High
Depth to Bedrock (Min/Max)	N/A	> 60 / > 60	> 60 / > 60	> 60 / > 60
Other Soil Types in Area				
Surface Soil Textures	N/A	Mucky – fine sand	Mucky – fine sand	Mucky – fine sand
Surficial Soil Types	N/A	Mucky – fine sand	Mucky – fine sand	Mucky – fine sand
Shallow Soil Types	N/A	Fine sand	Fine sand	Fine sand
Deeper Soil Types	N/A	Sand, sandy loam, loamy fine sand	Sand, sandy loam, loamy fine sand	Sand, sandy loam, loamy fine sand

Prepared by: JLD Checked by: EMH
Sources: USGS DDS – 11 (1994); STATSGO (SCS, 1992), as cited in the EDR reports.

3.8.2 Site Soils

Soils on the three sites have been altered from their natural state. The soils may have been tilled, filled or drained. These activities can affect the depth to the water table. There are 11 primary soil units identified on the three sites (see Table 3-5).

Table 3-5. Soil Units by Site

Soil	Site 2	Site 3	Site 4	Hydric
Bradenton fine sand	✓			No
Delray fine sand/depressional	✓			Yes
Eau Gallie and Myakka fine sands	✓	✓	✓	No
Felda fine sand/depressional	✓	✓	✓	Yes
Floridana and gator soils/ depressional	✓	✓	✓	Yes
Gator muck	✓			Yes
Holopaw fine sand/depressional	✓	✓	✓	Yes
Malabar fine sand		✓		Yes
Manatee loamy fine sand/depressional		✓	✓	Yes
Pineda fine sand	✓		✓	No
Wabasso fine sand			✓	No

Source: SWFWMD, 2002.

Prepared by: SEB Checked by: EMH

3.8.3 Soil Descriptions for Soil Units on Subject Sites

Bradenton fine sand: This soil unit is nearly level and poorly drained and found on low ridges and hammocks adjacent to flood plains, sloughs, and depressions. The water table varies seasonally. A high water table within 12 inches of the surface occurs for 2-4 months and a lower water table at a depth of 12-40 inches occurs for 6 or more months. During dry periods, the water table recedes to depths of 40 inches or more. Permeability is rapid in the surface and subsurface layers, and moderate to moderately rapid below the surface and subsurface layer.

Delray fine sand/depressional: This nearly level soil unit is very poorly drained and found in depressions on flatwoods. Under natural conditions, this soil unit is ponded for 6 to 9 months of the year or more. For the remainder of the year, the water table is within 12 inches of the surface. Permeability is rapid in the surface and subsurface layers and moderately rapid below.

Eau Gallie and Myakka fine sands: These soils occur on broad flatwoods and are nearly level and poorly drained. Under natural conditions, there is a seasonal high water table depth of 6 to 18 inches for 1 to 3 months. The water table is within a depth of 40 inches for 2 to 6 months. During extended dry periods, the water table recedes to a depth of more than 40 inches. Permeability is rapid in the surface layer, subsurface layer, and substratum. Permeability is moderate or moderately rapid in the subsoil and slow or moderately slow in the loamy part of Eau Gallie soil.

Felda fine sand/depressional: This soil unit is nearly level, very poorly drained, and occurs in depressions. Slopes are less than 2 percent and concave. This soil is ponded for 6 to 9 months or more of the year. For 2 to 4 months of the year, the water table is within 12 inches and at a depth of 12 to 40 inches for the remainder of the year. Permeability is rapid in the surface layer, subsurface layer, and substratum and moderate or moderately rapid in the subsoil.

Floridana and gator soils/ depressional: Found in depressions, these soils are subject to ponding. They are very poorly drained and nearly level. These soils are ponded for 6 to 9 months of the year and the water table is within 12 inches of the surface for the remainder of the year. Permeability is rapid in surface and subsurface layers and slow or very slow below.

Gator muck: This soil is found in freshwater swamps and marshes. This soil type is nearly level and very poorly drained. Under natural conditions, Gator muck has a water table above the surface for most of the year. Permeability is rapid in the surface layer and slow or very slow below.

Holopaw fine sand/depressional: This soil type occurs in depressions and is nearly level and very poorly drained. Slopes are concave and less than 2 percent. This soil is ponded for 6 to 9 months or more each year. For 2 to 4 months, the water table is within 12 inches of the surface. Permeability is rapid in the surface and subsurface layers and moderately slow or moderate below.

Malabar fine sand: This soil type is found in narrow to broad sloughs, drainageways, and on flats. It is nearly level and poorly drained. Slopes are smooth or concave and range from 0 to 2 percent. For most of the year, the water table is within 12 to 40 inches of the surface. For 2 to 6 months of the year the water table is within 12 inches of the surface. Permeability is rapid in the surface, subsurface, and upper part of the subsoil. Permeability is slow or very slow in the lower subsoil.

Manatee loamy fine sand/depressional: Occurring in depressions, this soil is nearly level and very poorly drained. Slopes are concave and less than 1 percent. This soil is ponded for 6 to 9 months of the year or more. During most of the rest of the year, the water table is within 12 inches of the surface. Permeability is moderately rapid in the surface layer and moderate below.

Pineda fine sand: This soil type is found on low hammock and in broad sloughs. It is nearly level and poorly drained. After heavy rainfall, the water table is above the surface for short periods. For 1 to 6 months, the water table is within 12 inches of the surface. For more than 6 months, the water table is at a depth of 20 to 40 inches. Permeability is rapid in the surface and subsurface layers and the upper part of the subsoil, slow or very slow in the remainder of the subsoil, and moderately rapid in the substratum.

Wabasso fine sand: This soil is nearly level and poorly drained. It occurs on broad flatwoods. Slopes are smooth and range from 0 to 2 percent. The water table is usually 40 inches or more for more than 6 months of the year. For the remainder of the year, the water table is within 6 to 18 inches of the surface. Permeability is rapid in the surface and subsurface layers, moderate in the sandy part of the subsoil, and slow or very slow in the loamy part.

3.8.3.1 Soils at Site 2

Eau Gallie and Myakka fine sands cover most of this site. Throughout the site, there are pockets of Holopaw fine sands/depressional. The pockets of Holopaw fine sand/depressional are often associated with wetlands on this site. According to SWFWMD, there are 78 acres of hydric soils on Site 2 (17% of the site). A small area of Delray fine sand/depressional is found in the eastern portion of the site. Felda fine sand/depressional occurs in the eastern and southern portions of the site. Small areas of Gator muck and Pineda fine sand are also found in the southern portion. Bradenton fine sand, Pineda fine sand, and Floridana and Gator soils/depressional are found along the western boundary of the site (Figure 3-13).

The typical natural water table level for Eau Gallie and Myakka fine sands experiences a seasonal high of 6-18 inches below the surface for 1 to 3 months and is within a depth of 40 inches for 2 to 6 months. During periods of drought, the water table may recede to a depth of more than 40 inches. Actual seasonal depths may have been altered by the drainage systems on site (see also Section 3.9).

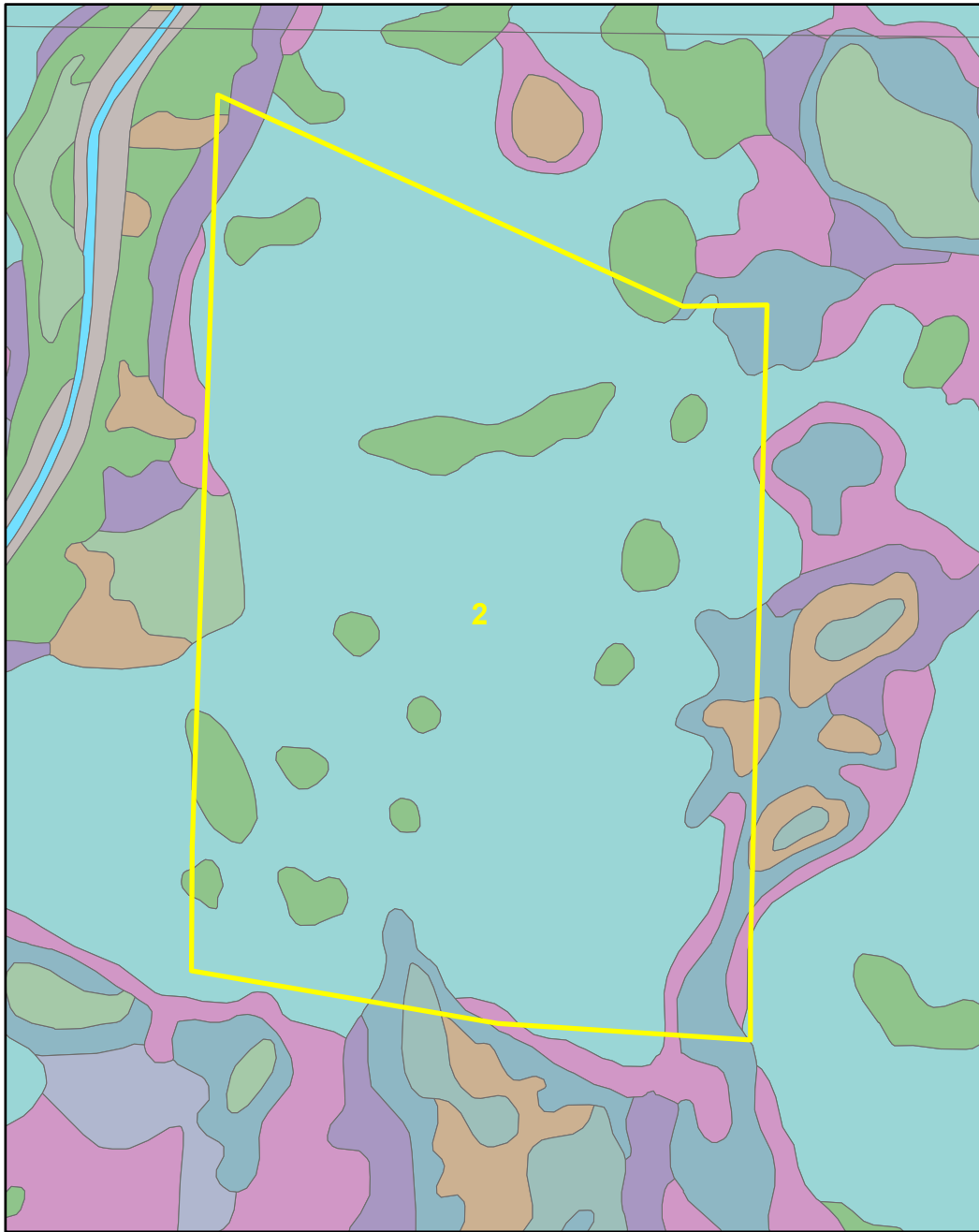
3.8.3.2 Soils at Site 3

The most extensive soils on Site 3 are the Eau Gallie and Myakka fine sands. Holopaw fine sand/depressional and Felda fine sand/depressional are also found throughout the site. These areas are often associated with wetlands on the site. According to SWFWMD, there are 162 acres of hydric soils on Site 3 (35% of the site). There are small pockets of Manatee loamy fine sand/depressional and Malabar fine sand in the southern portion of the site. There is a pocket of Floridana and Gator soils/depressional along the eastern boundary of the site (Figure 3-14).

This site is currently a truck farm. The land has been tilled and ditches installed to facilitate drainage. These activities may alter the soils from their natural state. The natural water table level for Eau Gallie and Myakka fine sands experiences a seasonal high of 6-18 inches below the surface for 1 to 3 months and is within a depth of 40 inches for 2 to 6 months. During periods of drought, the water table may recede to a depth of more than 40 inches. These seasonal depths may have been altered by the drainage systems on site.














3.8.3.3 Soils at Site 4

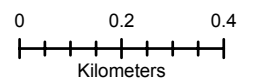
Eau Gallie and Myakka fine sands account for the major soil type of this site. Pockets of Holopaw fine sand/depressional occur throughout the site. The pockets of Holopaw fine sand/depressional are often associated with wetlands on this site. According to SWFWMD, there are 44 acres of hydric soils on Site 4 (8% of the site). There are small areas of Floridana and Gator soils/depressional and Felda fine sand/depressional along the northern boundary of the site. Small portions of Pineda fine sand, Wabasso fine sand, and Manatee loamy fine sand/depressional are located in the south eastern portion of the site (Figure 3-15).



Source: SWFWMD, 2002; FDEP, 1999; MACTEC, 2005

Legend

- | | | |
|--|--|--|
|  Approximate Site Boundary |  FELDA FINE SAND/DEPRESSIONAL |  PINEDA FINE SAND |
| Soils (NRCS) |  FLORIDANA AND GATOR SOILS/DEPRESSIONAL |  SMYRNA FINE SAND |
|  BRADENTON FINE SAND |  FT. GREEN FINE SAND |  WATER |
|  DELRAY FINE SAND/DEPRESSIONAL |  GATOR MUCK | |
|  EAUGALLIE AND MYAKKA FINE SANDS |  HOLOPAW FINE SAND/DEPRESSIONAL | |
| |  MATLACHA GRAVELLY SAND | |



NRCS SOIL SURVEY MAP, SITE 2

DRAWN	DATE
ALF	05/18/2005
CHECKED	DATE
JLD	05/23/2005

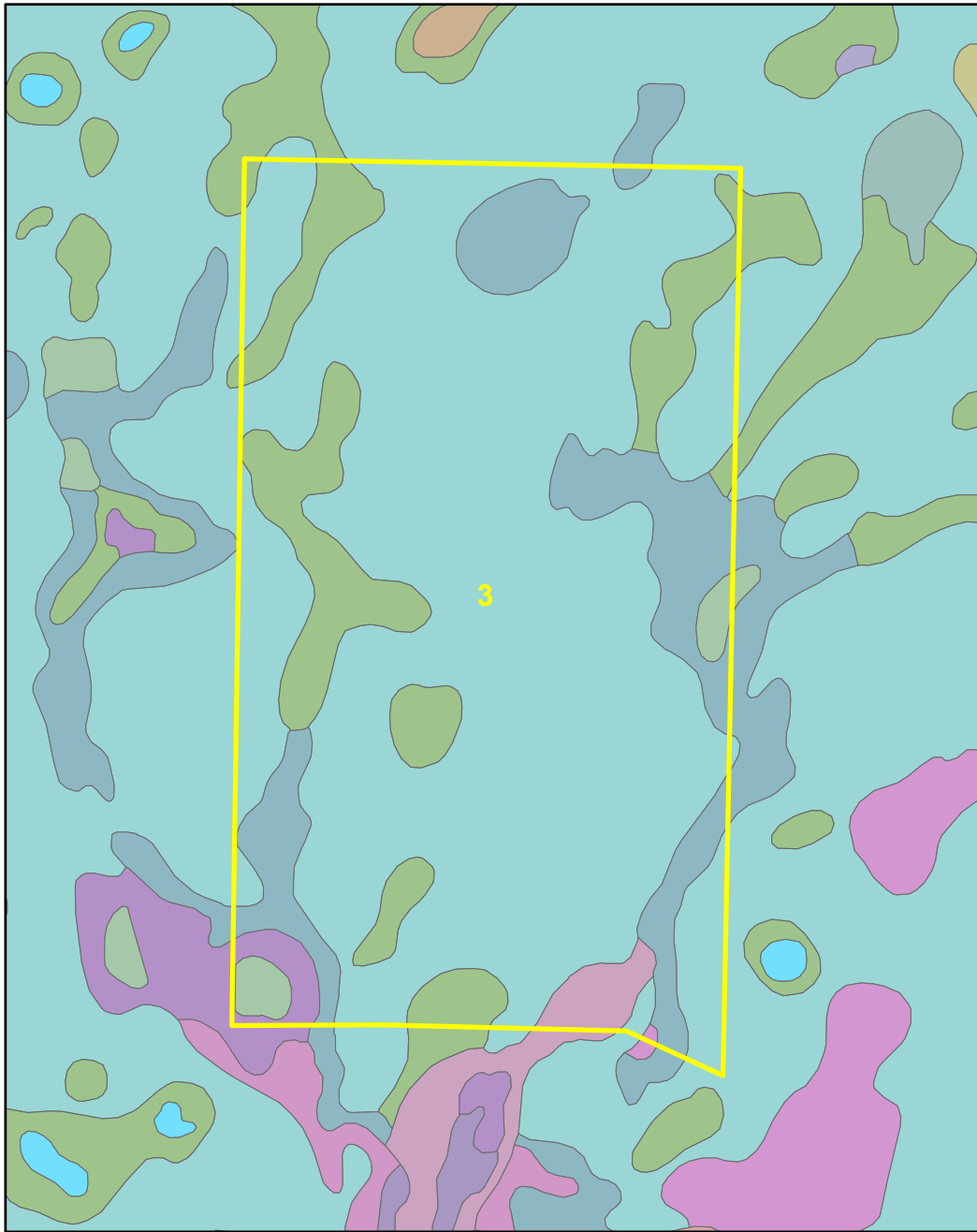
MACTEC
Gainesville, Florida
6671-05-0315

NATIONAL CEMETERY
SARASOTA COUNTY
FLORIDA
DEPARTMENT OF VETERANS AFFAIRS
NATIONAL CEMETERY ADMINISTRATION

FIGURE:

3-13

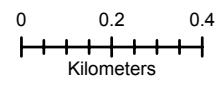




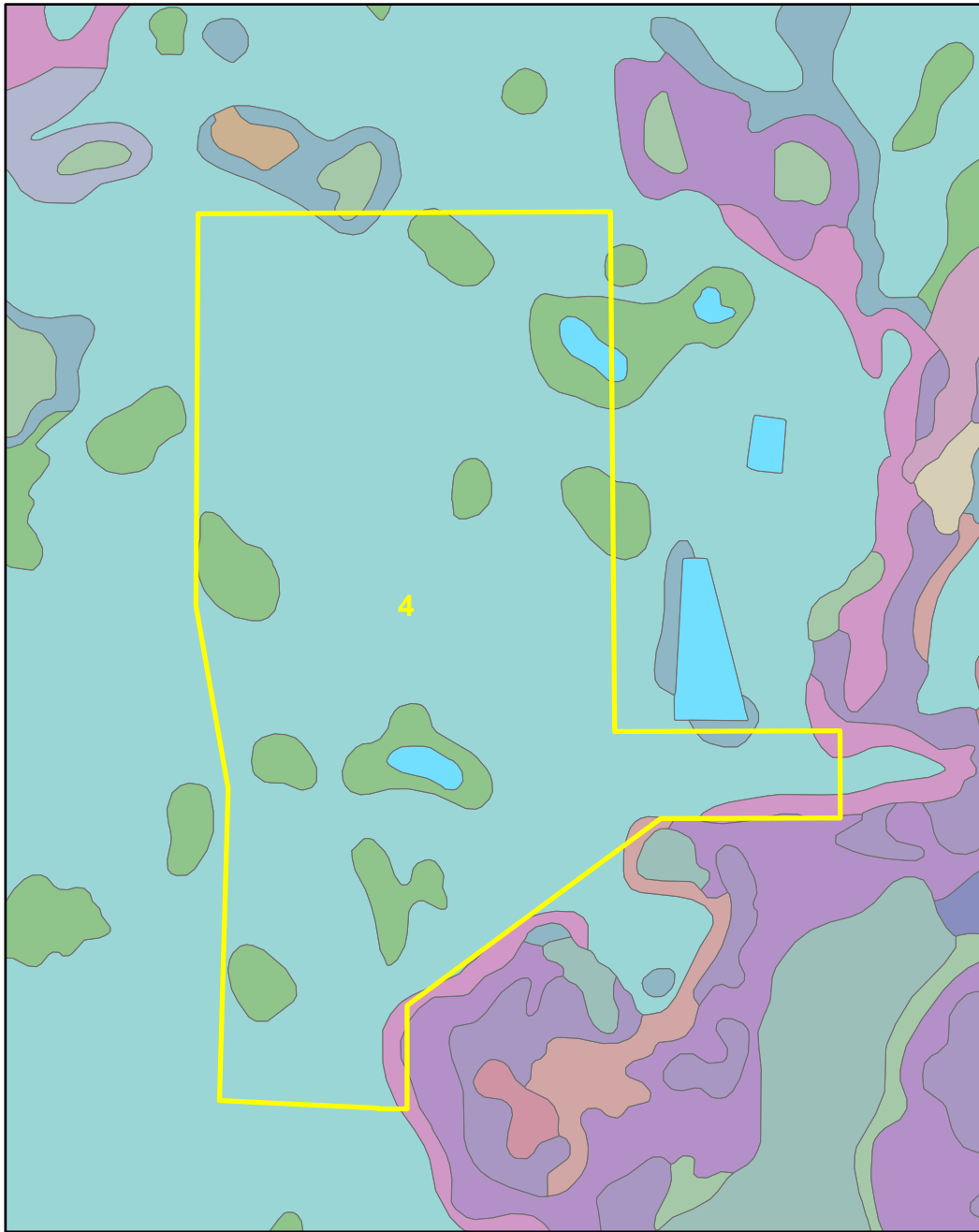
Source: SWFWMD, 2002; FDEP, 1999; MACTEC, 2005

Legend

- Approximate Site Boundary
- Soils (NRCS)**
- BRADENTON FINE SAND
- GATOR MUCK
- POMELLO FINE SAND
- CASSIA FINE SAND
- HOLOPAW FINE SAND/DEPRESSIONAL
- POPLA FINE SAND
- DELRAY FINE SAND/DEPRESSIONAL
- MALABAR FINE SAND
- WABASSO FINE SAND
- EAUGALLIE AND MYAKKA FINE SANDS
- MANATEE LOAMY FINE SAND/DEPRESSIONAL
- WATER
- FELDA FINE SAND/DEPRESSIONAL
- PINEDA FINE SAND
- PITS AND DUMPS



NRCS SOIL SURVEY MAP, SITE 3		 Gainesville, Florida 6671-05-0315	NATIONAL CEMETERY SARASOTA COUNTY FLORIDA	FIGURE: 3-14
DRAWN	DATE		DEPARTMENT OF VETERANS AFFAIRS NATIONAL CEMETERY ADMINISTRATION	
ALF	05/18/2005			
CHECKED	DATE			
JLD	05/23/2005			



Source: SWFWMD, 2002; FDEP, 1999; MACTEC, 2005

Legend

Approximate Site Boundary

Soils (NRCS)

BRADENTON FINE SAND

DELRAY FINE SAND/DEPRESSIONAL

EAUGALLIE AND MYAKKA FINE SANDS

FELDA FINE SAND/DEPRESSIONAL

FLORIDANA AND GATOR SOILS/DEPRESSIONAL

FT. GREEN FINE SAND

FELDA FINE SAND

GATOR MUCK

FLORIDANA MUCKY FINE SAND

HOLOPAW FINE SAND/DEPRESSIONAL

MALABAR FINE SAND

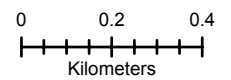
MANATEE LOAMY FINE SAND/DEPRESSIONAL

PINEDA FINE SAND

POPLA FINE SAND

WABASSO FINE SAND

WATER



NRCS SOIL SURVEY MAP, SITE 4

DRAWN	DATE
ALF	05/18/2005
CHECKED	DATE
JLD	05/23/2005

MACTEC
Gainesville, Florida
6671-05-0315

NATIONAL CEMETERY
SARASOTA COUNTY
FLORIDA
DEPARTMENT OF VETERANS AFFAIRS
NATIONAL CEMETERY ADMINISTRATION

FIGURE:

3-15

The typical natural water table level for Eau Gallie and Myakka fines sands experiences a seasonal high of 6-18 inches below the surface for 1 to 3 months and is within a depth of 40 inches for 2 to 6 month(s). During periods of drought, the water table may recede to a depth of more than 40 inches. Man-made ditches drain the site.

Actual seasonal depths may have been altered by the drainage systems on site (see also Section 3.9).

3.8.4 Other Considerations

3.8.4.1 Hydric Soils

According to the Natural Resources Conservation Service (NRCS), the definition of a hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA NRCS, 2005). The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. Also, soils in which the hydrology has been artificially modified are hydric if the soil in an unaltered state was hydric. Some series, designated as hydric, have phases that are not hydric depending on water table, flooding, and ponding characteristics. On the three sites under consideration, hydric soils are often associated with wetlands, though not limited to wetlands. Certain engineering and environmental constraints will need to be considered before cemetery development on hydric soils. See Figures 3-10 through 3-12 for the locations of hydric soils at each site. See Table 3-5 for possible hydric soil units at each site. However, according to the NRCS, caution must be used when comparing the list of hydric soil series to soil survey maps. Many of the soils on the list have ranges in water table depths that allow the soil to range from hydric to nonhydric depending on the location.

3.9 Hydrology and Hydrogeology

This area of Florida, on average receives approximately 52 inches of rainfall per year. Approximately 60 percent of that precipitation occurs during the rainy season of June through September (SWFWMD - *The Floodplain Facts*, undated). The unconfined surficial aquifer is recharged from this precipitation, and runoff from the region is ultimately discharged through increasingly larger streams into the greater Myakka River drainage basin.

Specifically, the predominant surface water feature near Site 2 is the channelized section of Cow Pen Slough located within several hundred feet of the site's northwest corner, trending to the southwest and ultimately discharging to the Gulf of Mexico near Venice, Florida. However, the majority of the land in Site 2 drains through an array of farm ditches, and ultimately to the unnamed surface water / wetland system to the south, which eventually connects to the Myakka River. Sites 3 and 4 are located within areas drained by the Indian Creek Swamp, with tributaries located within portions of and to the east and west of Site 3, and within the eastern bounds of

Site 4. Indian Creek Swamp connects to the Myakka River, which discharges to the Gulf at Charlotte Harbor. See Figure 3-16 for drainage patterns on each site. The rest of the site is in the cow pen slough drainage basin. Cow pen slough drains to Dona Bay in Venice, a city on the coast of southern Sarasota County (Sarasota County, 2002).

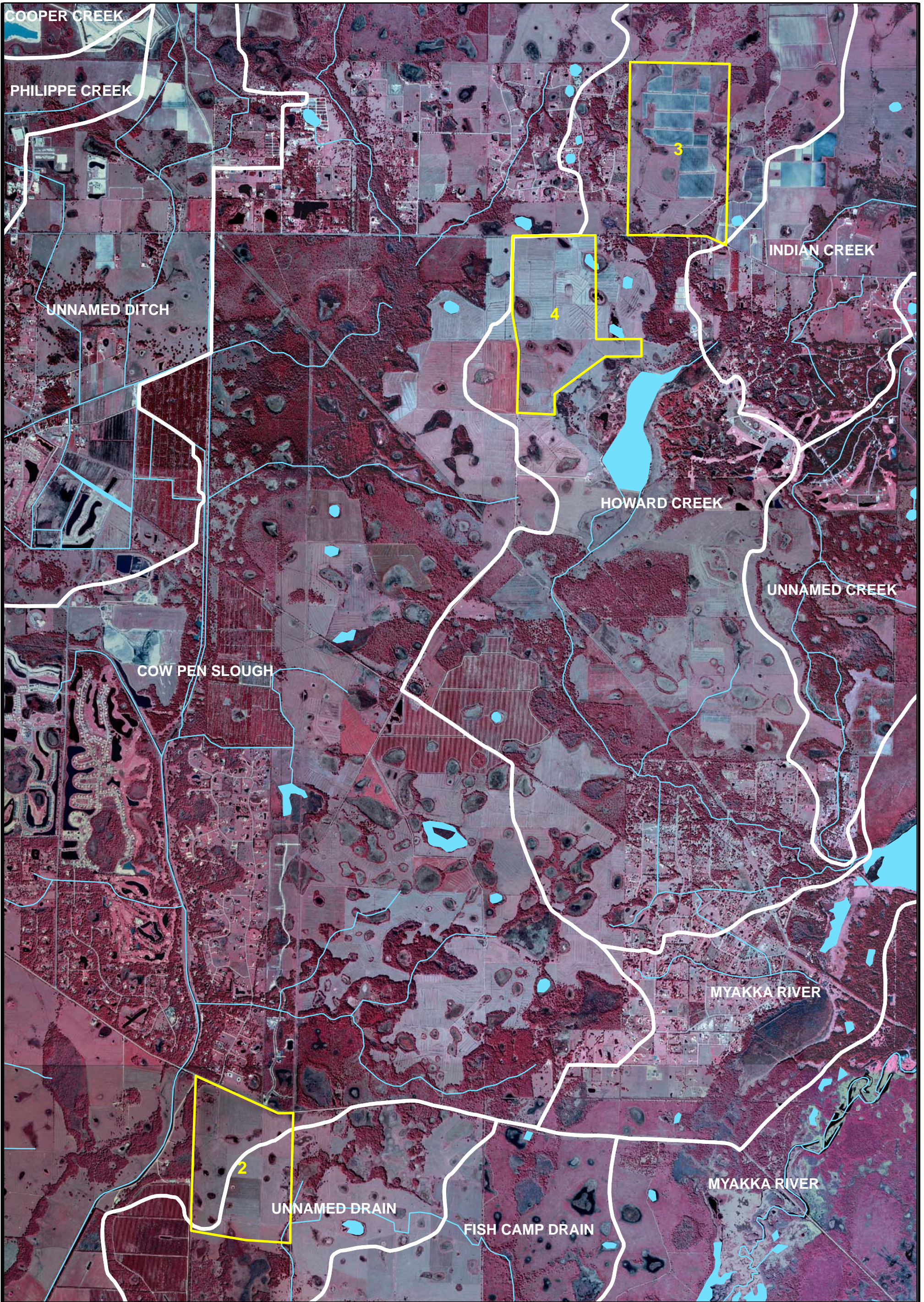
As noted in Appendix E, during a site investigation in April, 2005., the unconfined water table was observed at average depths of about 3 to 3 ½ feet bgs (excluding the wetland areas), with estimated seasonal high water tables of about 2 feet bls at each of the sites (Figure 3-17, 3-18 and 3-19). Currently, each of the proposed sites contains an array of shallow ditches constructed to help facilitate site drainage. Stormwater management at each of the sites appears to occur to varying degrees through a combination of both internal drainage via isolated wetlands, and off-site via interconnected wetlands and sloughs.

The sites and surrounding areas are underlain by three aquifer systems, the surficial, the intermediate, and the Floridan Aquifer. The surficial aquifer is an unconfined aquifer corresponding to the undifferentiated and generally unconsolidated deposits, and typically ranges from 10 to 60 feet in thickness. Groundwater flows under the influence of gravity within the surficial aquifer, and can be locally influenced by nearby features and/or pumping. The intermediate aquifer is present within those permeable sediments within the generally confining layers of the Hawthorn Group (discussed in Section 3.7). The intermediate aquifer is used widely in Sarasota County for domestic, irrigation, and public water supply. The Floridan Aquifer system underlies the entire county, and is the principal water-bearing unit in the region. Regionally, the Floridan Aquifer is usually confined, and, in southwest Florida, its piezometric surface occasionally intersects the ground surface, resulting in free-flowing (artesian) well conditions.

3.10 Water Resources

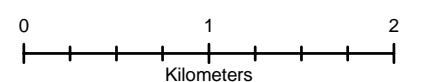
Cow Pen Slough

Cow Pen Slough was constructed by the Soil Conservation Service (currently called the Natural Resources Conservation Service) in the 1960's and 1970's as a flood control project. It diverts water from the Myakka River to Dona Bay. Cow Pen Slough is on the Southwest Florida Water Management District's (SWFWMD) priority list for adoption of minimum flows [pursuant to Section 373.401(2), Florida Statutes]. A variety of restoration projects are underway to restore flows. The USEPA has identified Cow Pen Slough on its 305(b) list of impaired waters for the year 2000 as having the status of "Threatened" in relation to its designated uses pertaining to "Fish, Shellfish, and Wildlife Protection and Propagation". No impairments or sources of impairments were identified. A small portion of the northwest corner of Site 2 drains to Cow Pen Slough.



Legend

- Approximate Site Boundary
- Drainage Basins
- Water



DRAWN		DATE		 MACTEC Gainesville, Florida 6671-05-0315	NATIONAL CEMETERY SARASOTA COUNTY FLORIDA	FIGURE:
ALF	06/03/2005				DEPARTMENT OF VETERANS AFFAIRS NATIONAL CEMETERY ADMINISTRATION	3-16
CHECKED	DATE					
JLD	06/03/2005					

Source: FDEP, 1999; SWFWMD, 2002; MACTEC, 2005

Figure 3-17. Water Table Comparison, Site 2

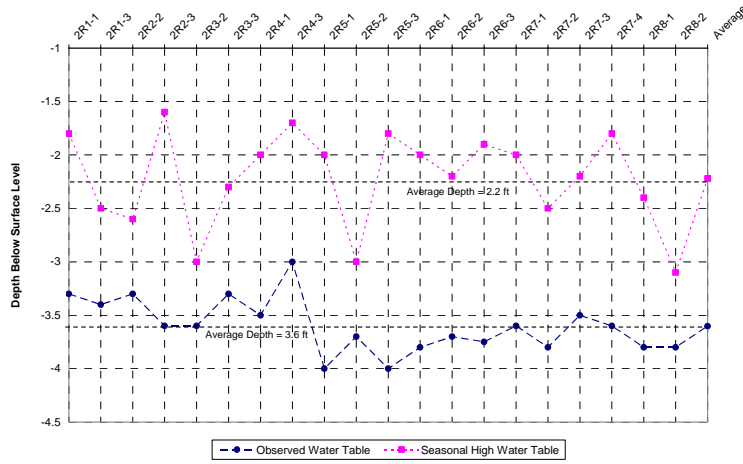


Figure 3-18. Water Table Comparison, Site 3

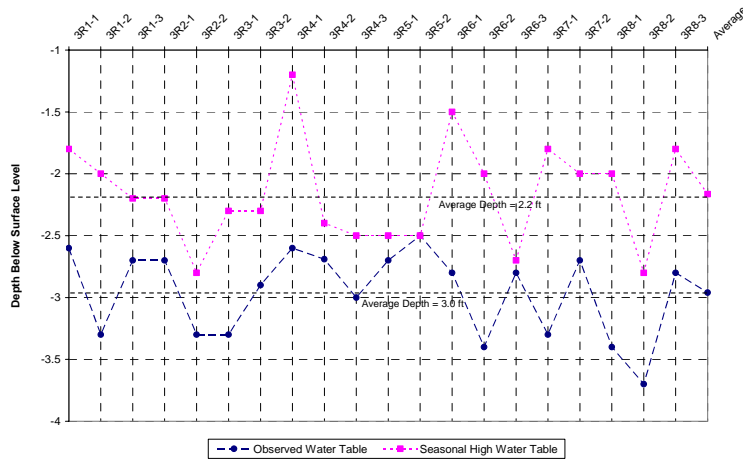
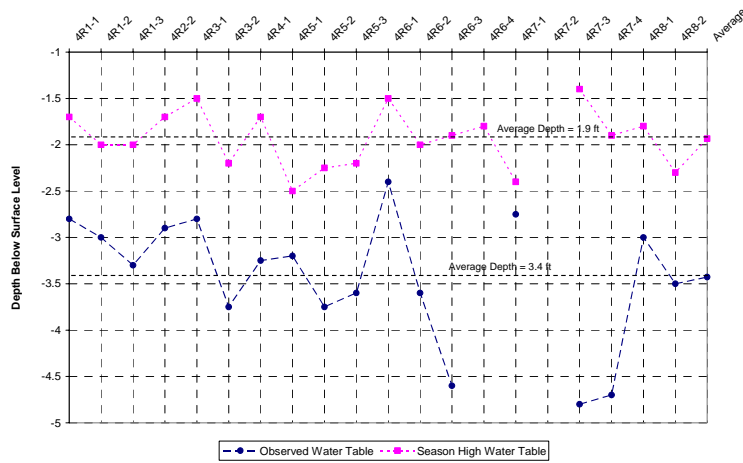


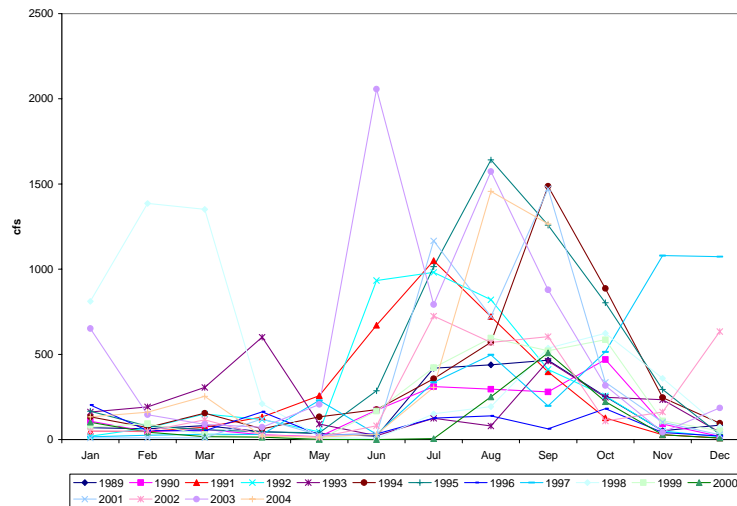
Figure 3-19. Water Table Comparison, Site #4



Myakka River

The Myakka River and the Myakka lakes are prominent water features in Sarasota County. They drain to Charlotte Harbor. The USGS maintains a gauge on the Myakka River near Sarasota (gauge # 02298830) and another gauge on the river at Myakka City (gauge #02298608). Data collected at these gauges indicate that over the past 15 years (as an example) there has been tremendous within- and between-year variability in discharge (Figure 3-20). This variation is caused by inter- and intra-annual variability in precipitation in the watershed, and the subsequent flush. But recent increases in Myakka flows have also been attributed, in part, to an increase in intense agriculture land use conversions and associated deep aquifer pumping associated with irrigation demands (Stephen Suau, Southwest Florida Regional Planning Council). The Lower Myakka River is a SWFWMD priority site for development of minimum flows in 2006 (pursuant to Section 373.401(2), Florida Statutes).

Figure 3-20. Myakka River Flow, Monthly Average



All three of the proposed cemetery sites lie within the Myakka River watershed. Sites 3 and 4 lie to the northwest of the Myakka lakes and the river, while Site 2 lies to the W/SW of Upper Myakka Lake and W/NW of Lower Myakka Lake (Figure 2-1).

The Myakka River has been designated a Florida Wild and Scenic River by the state legislature (*Specific Authority 258.501 FS. Law Implemented 258.501 FS. History-New 7-22-91, Formerly 16D-15.003*). According to an organization called Friends of the Myakka River (Friends of the Myakka River, Inc., 2005), the wild and scenic river designation provides for preservation and management of the 34-mile portion of the river within Sarasota County. Most of the watershed lies to the north in Manatee County, but the Myakka does not become well-defined as a river until its numerous tributaries coalesce near the Sarasota County boundary where the river enters Myakka River State Park. Prominent features in the park are the two lakes and the extensive marshes between them. These lakes and marshes form an elongated basin through which the Myakka River flows.

Another local conservation organization, The Myakka Conservancy, describes the watershed and threats to the Myakka River as follows (Myakka Conservancy, 2004):

Decidedly rural in its upper two-thirds, the 600 square mile basin lies just east of the sprawling urban strip stretching from Bradenton and Sarasota to Englewood. In the upper basin, pine flatwoods blanket the landscape, dotted with seasonal ponds, bayheads, scrub islands, pastures, groves, and vegetable fields. Small farms and large ranches produce calves, citrus, vegetables, ornamental plants, and sod. The middle basin includes Myakka River State Park, the Carlton Reserve and large cattle ranches. This part of the basin is so flat that much rain never reaches the river, captured instead in countless seasonal ponds where frogs and fish thrive and wading birds find food to feed their young. Below Warm Mineral Springs, the communities of North Port and Port Charlotte extend eastward from the Myakka nearly to the Peace River. Pressure is mounting for residential development along the river waterfront, especially downstream of the Interstate 75 corridor. The bulging coastal communities of Sarasota, Venice and Port Charlotte are pushing urban uses into the basin. Wastewater disposal, a landfill, and water reservoirs have been proposed for the basin. Phosphate mining and industrial development pose air and water pollution threats. Rural subdivisions and intensified agricultural uses threaten wildlife habitat as well as water quality.

Water quality in the Myakka River is generally adequate to support at least some of its designated uses. The river does appear on the USEPA 303(d) list for impaired waters for nutrients, DO, TSS and coliform bacteria (Table 3-6), but at levels which cause the river to receive a low priority ranking.

Table 3-6. Myakka River Impairments, 2002 Cycle

State Impairment	Parent Impairment	Priority	Rank	Targeted Flag	Anticipated TMDL Submittal
Nutrients		Low		N	DEC-31-2009
Coliforms	Pathogens	Low		N	DEC-31-2009
Dissolved oxygen	Organic Enrichment/ Low DO	Low		N	DEC-31-2009
Total Suspended Solids	Suspended Solids	Low		N	DEC-31-2009

Source: USEPA, 2002.

Water quality data collected in the 1990's by the USGS indicates that nutrient enrichment, high TSS, low DO and excess coliform bacteria existed as water quality impairments at that time (Table 3-7; USGS, 2005, 33CFR328, 2004).

The Florida DEP has identified the freshwater portion of the Myakka River as having a "medium priority" for TMDL development. FDEP anticipates developing TMDL's for this portion of the river in 2009 for dissolved oxygen, iron and nutrients (FDEP, 2004).

Water Use

The Southwest Florida Water Management District (SWFWMD, 2005) regulates water use and supplies in the region which includes Sarasota County. The District's authority to issue permits is contained in Chapter 373 of the Florida Statutes. As the primary agency in west central Florida for protecting the public's water resources, it is the District's responsibility to balance the competing needs of all water users, while protecting the environment.

According to information provided by SWFWMD, the District issues permits to a) quantify the amount of surface and underground water used; and b) protect associated environmental resources. The District issues three major types of permits - water use permits, environmental resource or surface water permits, and well construction permits. Within those main categories are two tiers: general and individual permits. General permits are issued for water quantities below a specified amount and are approved by District staff. Individual permits are for larger quantities and require approval of the District's Governing Board.

A water use permit allows a user to withdraw a specified amount of water, either from the ground or from a lake or river. The water can be used to irrigate crops, nursery plants or golf courses, in the manufacturing process of various products such as citrus processing, to operate industrial plants and to provide drinking water for domestic consumption.

An Environmental Resource Permit (ERP) must be obtained before beginning any construction activity that would affect wetlands, alter surface water flows, or contribute to water pollution. An ERP is needed to regulate activities such as dredging and filling in wetlands, construction of drainage facilities, stormwater containment and treatment, construction of dams or reservoirs, and other activities affecting state waters. The ERP combines wetland resources permitting and management and storage of surface water permitting into a single permit in an effort to streamline the permitting process.

Well construction permits are required prior to installation of a well within the District. The permits ensure that wells are constructed by qualified contractors and meet rigid safety and durability standards.

Results from the EDR records search conducted for this project indicate that there are permitted wells at each of the proposed sites within a 1 mile radius (Table 3-8; Appendix C).

Table 3–8. Wells Reported from the Vicinity of the Sites

	0 – 1/8 mi	1/4 - 1/2 mi	1/2 - 1 mi
Site 2, Hawkins Ranch			
Agricultural wells	1	5	11
Test / Observation wells	1	0	4
Private Drinking Water wells	0	0	0
Site 3, Myakka Ranch			
Agricultural wells	0	5	1
Test / Observation wells	0	0	5
Private Drinking Water wells	0	0	1
Site 4, Hi Hat Ranch			
Agricultural wells	0	2	3
Test / Observation wells	0	1	3
Private Drinking Water wells	0	0	1

Source: EDR Reports.

Prepared by: JLD Checked by: EMH

Existing surface water features at each site are discussed more completely in the Wetlands Section of this document (Section 3.6). However, because many of the wetlands have hydrological connections with each other and/or with off-site waters, it is important to note that on-site surface waters features can be connected to nearby waters. This is important in trying to understand pollutant transport, the ways in which resident livestock respond to seasonal variation in water availability, distribution and migration of invasive / exotic aquatic plant species, etc.

At all three of the sites the on-site wetlands are actively used by livestock as watering holes. In some of the wetlands the livestock’s impact on water quality is severe. However, because most of these are depressional wetlands which do not connect to off-site surface waters during the dry season, there is a lower likelihood that fecal coliform bacteria, or other pollutants associated with the animal husbandry practices at these ranches, are exported off-site during the dry season. However, all of these sites have shallow water tables and soils that are poorly drained, and large portions of the pastures contain standing water during heavy rains. In those situations, dissolved pollutants from livestock feces is potentially transported off-site.

3.10.1 Site 2

The water resources at Site 2 are primarily isolated wetlands. Livestock graze and drink in the wetlands. The owner indicated that standing water does pond-up on this site after heavy continuous rain. He stated that during the last 100-year flood that the ponded water covering the site drained within 1 – 2 days.

3.10.2 Site 3

There is an intermittent stream running through the eastern side of the Myakka Ranch site. According to the caretaker Mr. Brad Webb, this creek floods in a 20-year storm. There has been floodwater in the caretaker's house twice in the past 8 years, both times during hurricanes. Farming practices influence the seasonal water level in this stream. Mr. Webb says that a variety of warmwater fish live in the stream when it has water, but that it is usually dry several months every year.

Availability of non-pumped drinking water for livestock during the dry months is a problem at Myakka ranch according to the manager Mr. Lester Neely. The on-site wetlands dry up completely during the dry season in years with below-average precipitation.

3.10.3 Site 4

On-site irrigation is accomplished with water from the City of Sarasota's wastewater treatment reservoir located adjacent to this property. Mr. Rick Turner, one of the co-owners, indicated in an interview that the water rights to the POTW advanced treatment water would not be sold with the property. He indicated that the owners would prefer to use the treatment water elsewhere on their ranch. There is one shallow groundwater well on-site for livestock watering. Mr. Turner indicated that potable water is probably available via well at approximately 250 feet below the surface.

The owner reported that the large reservoir to the SE of the proposed project site was formerly a diked pasture filled with muck. For a while it was used to grow celery and then later cattle were grazed on it for many years. Some years ago, the City of Sarasota acquired the reservoir site as a storage pond for advanced treatment wastewater. An irrigation system was constructed to distribute the wastewater across some of the lands on the Hi Hat Ranch. During wet seasons when the pastures at the ranch do not have the capacity to take all of the water from the Advanced Wastewater Treatment plant, the excess is released to waters of the U.S. via the City's stormwater system.

3.11 Land Use

Sarasota County's population has grown significantly in recent years. For example, the population was 277,776 in the 1990 census but had grown to 325,957 by the year 2000. In the four years from 2000 - 2004 the County population increased another 11% (Sarasota County Government, 2005).

Interstate 75 has historically been the limit of high density urban development in the County, with human settlements encouraged west of the Interstate, and lands to the east reserved for agriculture

and open space. However, population growth pressures have resulted in substantial low density residential sprawl into the areas east of I-75. The character of the County east of the Interstate has already started to change, a trend that will accelerate with time (B. Lichterman, Sarasota County Planning Staff, personal communication).

The County's recently adopted "2050 Plan" (locally known as the Apoxsee) has identified locations for three new villages east of I-75: Lakewood Ranch, North of Fruitville Road and west of the sites under discussion in this EA; Hi Hat Ranch, south of the parcels being considered in this EA; and Palmer Ranch, along I-75 south of Clark Road (Ord. No. 2001-076; and Figure RMA-3, Sarasota County Comprehensive Plan). In that plan, the sites being considered in this EA all have future land use designations of "Rural".

The County government would like to use transferable development rights (TDRs) to get urban densities to cluster into the three new villages. The development units available on the lands under consideration for the new developments (including the national cemetery) can be sold to projects contained within the three villages, and can serve to offset the costs of the new development (or cemetery).

The current zoning of the parcels at the alternative project sites is:

- Site 2, Hawkins Ranch: Open Use Estates – 1 house per 5 acres (OUE-1);
- Site 3, Myakka Ranch: OUE-1 and Open Use Rural 1 house per 10 acres (OUR); and
- Site 4, Hi Hat Ranch: OUE-1 and OUR.

In terms of TDRs, the lands in OUE-1 zoning have twice as many development rights as lands in OUR zoning.

In Sarasota County, a cemetery is not considered to be an allowable use in zoning types OUE-1 and OUR. Therefore, cemetery construction at any of the three proposed sites would require a "special exception". Alternatively, an application could be made to have one of the preferred sites rezoned to a "Government Use" (GU) zoning category which does have "cemetery" as an allowable use. Staff in the County planning department indicated that both options would require about the same amount of effort to complete. However, the GU rezone option was recommended because it could be completed as a county-initiated rezone.

3.12 Real Property

All three of the sites under consideration in this EA for cemetery development are portions of larger cattle ranches. Sites 2 and 4 are pastureland exclusively and there are no human inhabitants on the sites. Site 3 is a mixture of pasture and crop land, and there is a family living in a dwelling on the site. Data from the Sarasota County tax assessor's office indicates that the values of the properties are as follows:

Table 3-9. Parcel Values at each of Site

Site	Parcel #	Just (Market) Value	Taxable Value
Hawkins Ranch	0296-00-3000	\$1,206,392	\$38,690
	0301-00-1000	\$3,006,084	\$98,515
Myakka Ranch	0537-01-0001	\$3,044,196	\$100,070
	0543-01-0001	\$910,652	\$132,455
Hi Hat Ranch	0563-00-1000	\$1,485,653	\$62,250
	0541-09-0001	\$1,618,212	\$64,551

Source: Sarasota County Assessor, 2004.

Prepared by: JLD Checked by: EMH

Under the proposed action, all built structures currently on-site would likely be demolished, and the pasture / crop lands would be converted to cemetery use. Based on the VA's experience at other National Cemeteries, it is presumed that this change, and the resulting open space, would be considered an amenity by neighbors and that surrounding property values would be not affected or could even increase.

3.13 Resident Population

There are no residences on Sites 2 or 4. Site 3 has 2 residences, 1 of which is occupied by the caretaker and his wife and daughter. The other (former) residence at Site 3 is used as a business office by the livestock manager.

Table 3-10. Demographics at each Site

	Site 2	Site 3	Site 4
Resident People	0	3	0
Workforce (FTE)	~ 1	> 1	2
Reduction in Ranch Workforce if Converted to National Cemetery	0.5 FTE	2 part-time employees plus seasonal farm workers	1 – 2 FTE

Source: On-site interviews, April, 2005.

Prepared by: JLD Checked by: EMH

3.14 Solid / Hazardous Waste

At present, there are no solid wastes generated at Sites 2 and 4. It is assumed a modest amount of residential waste is generated by the three-person family in residence at Site 3, and some office waste is produced at the ranch office at Site 3. There are several derelict feeding bunkers present at Site 2 which would have to be removed. It is possible that bunkers and other obsolete agricultural equipment have been buried on-site as a common practice. This debris, if present, will need to be located and removed to allow cemetery development. Fences, cow-pens, unwanted buildings, barns, etc. (described previously) will need to be removed as part of the cemetery construction process. Site 3 will generate the most debris because it has more buildings. Site 4 would generate very little debris – just fences and gates.

Animal wastes, currently produced as a normal by-product of livestock production will no longer be generated at the selected site after the livestock are removed.

Garbage service is not currently required at any of the three proposed sites. However, the NCA will need to arrange with the County for regular garbage and recycling pick-up once the cemetery construction process begins. The county has a mature recycling program that is mandated for use (Sarasota County Government, 2005).

- Ordinance 2003-092 mandates recycling in unincorporated Sarasota County.
- Businesses that don't recycle may incur fines up to \$500.
- Compliance means keeping all program recyclables out of the garbage container.

The owner interview at Site 2 (April, 2005) indicated that he is not aware of any on-site dumps. There is one old barn on site, but he is not aware of any chemicals or fuels stored in the barn. One propane tank was observed at the cow pen, which the owner indicated is used for branding. Pasture management practices include occasional application of fertilizers, but the fertilizer mix does not include herbicides. Livestock management practices do not include any "dip vats". Pour-on insecticides have been applied to the livestock in the cowpen area, however that is no longer standard practice at this ranch because the owner feels it is ineffective. The owner indicated that the County Health Department conducts aerial spraying for mosquito control, but he was not sure of their schedule or the chemicals used.

Manager / caretaker interviews at Site 3 (April, 2005) indicated that they are not aware of any dumps, underground storage tanks, or historic cattle dip areas. They both indicated that the County Health Department sprays this area for mosquito control. The pastures at the ranch are currently fertilized annually with 60 units of a 16-4-8 fertilizer. There are no herbicides in the mix. They use topical insecticides (SABER and AVIMEC Pour-on) on the livestock. There is an above-ground tank near the groundwater well at the tomato fields on Site 3 which stores chemicals applied to the fields. However, neither interviewee could identify the chemicals.

Owner interview at Site 4 (April, 2005) indicated that Mr. Turner is not aware of any on-site solid waste dumps. Past practices which involved waste handling included spraying the fields with treated effluent, but that was suspended approximately 10 years ago. Applications of 2,4-D herbicide was suspended approximately 15 years ago. Current pasture management practices include: annual fertilizer application, sod removal, disking, and reseeding with Argentine bahia grass.

Table 3-11. Results of Hazardous Waste Records Searches*

	No Action Alternative	Site 2	Site 3	Site 4
Search Distance	N/A	0.5 – 1.5 miles	0.5 – 1.5 miles	0.5 – 1.5 miles
Database Searched				
National Priority List	N/A	0	0	0
Proposed National Priority List Sites	N/A	0	0	0
Comprehensive Environmental Response, Compensation, and Liability Information System	N/A	0	0	0
CERCLIS No further Remedial Action Planned	N/A	0	0	0
Corrective Action Report	N/A	0	0	0
Resource Conservation and Recovery Act Information- Treatment, Storage, and Disposal Facility	N/A	0	0	0
Resource Conservation and Recovery Act Information- Large Quantity Generator	N/A	0	0	0
Resource Conservation and Recovery Act Information- Small Quantity Generator	N/A	0	0	0
Emergency Response Notification System	N/A	0	0	0
Florida's State-Funded Action Sites	N/A	0	0	0
Solid Waste Facility Database	N/A	0	0	0
Leaking Underground Storage Tank	N/A	0	0	0
Underground Storage Tank	N/A	0	1 **	0
Underground Storage Tanks on Indian Land	N/A	0	0	0
Voluntary Cleanup Sites	N/A	0	0	0
Leaking Underground Storage Tanks on Indian Land	N/A	0	0	0
Superfund (Comprehensive Environmental Response, Compensation, and Liability Act) Consent Decrees	N/A	0	0	0
Records of Decision	N/A	0	0	0
National Priority List Deletions	N/A	0	0	0
Facility Index System/ Facility Identification Initiative Program Summary Report	N/A	0	0	0
Hazardous Materials Information Reporting System	N/A	0	0	0
Material Licensing Tracking System	N/A	0	0	0
Mines Master Index File	N/A	0	0	0
Federal Superfund Liens	N/A	0	0	0
Polychloryl bi phenyl Activity Database System	N/A	0	0	0
Indian Reservation	N/A	0	0	0
Uranium Mill Tailings Sites	N/A	0	0	0
Open Dump Inventory	N/A	0	0	0
Formerly Used Defense Sites	N/A	0	0	0
Department of Defense	N/A	0	0	0
Resource Conservation and Recovery Act Administrative Action Tracing System	N/A	0	0	0
Toxic Chemical Release Inventory System	N/A	0	0	0
Toxic Substances Control Act	N/A	0	0	0
Section Seven Tracking Systems	N/A	0	0	0
Federal Insecticide, Fungicide, and Rodenticide Act/ Toxic Substances Control Act Tracking System	N/A	0	0	0
Above ground Storage Tank	N/A	0	0	0
Florida Sites List	N/A	0	0	0
Florida Cattle Dipping Vats	N/A	0	0	0

Table 3-11. Results of Hazardous Waste Records Searches* (continued)

	No Action Alternative	Site 2	Site 3	Site 4
Search Distance	N/A	0.5 – 1.5 miles	0.5 – 1.5 miles	0.5 – 1.5 miles
Database Searched				
Oil and Hazardous Materials Incident	N/A	0	0	0
Priority Ranking Lists	N/A	0	0	0
Institutional Controls Registry	N/A	0	0	0
Ethylene Dibromide Database Results	N/A	0	0	0
Dry Cleaning Facilities	N/A	0	0	0
Wastewater Facility Regulation Database	N/A	0	0	0
Former Manufactured Gas (Coal Gas) Sites	N/A	0	0	0
A Listing of Brownfield Sites	N/A	0	0	0
Sites with Institutional Controls	N/A	0	0	0
Institutional Controls Registry	N/A	0	0	0
Brownfield Areas	N/A	0	0	0

* Searches were completed on April 12, 2005 for the proposed Sarasota NCA Project Sites (units are Total # Sites Plotted within project site Search Area)

** 4 aboveground fuel and waste oil tanks are reported for Hi Hat Cattle & Groves at a distance of 0.5 – 1 mile from the Myakka Ranch site (Site 3).

Source: EDR, 2005.

Prepared by: JLD Checked by: EMH

Site observations (April, 2005) included:

- 1 propane tank in the cowpen area at Hawkins Ranch (used during branding),
- 1 1000-gallon aboveground agri-chemical storage tank beside the irrigation pumps near the vegetable fields at Myakka Ranch.

The county “Mosquito Management” program coordinates aerial spraying for mosquitoes as needed over rural/suburban communities in Sarasota County (Sarasota County Government, 2005). Killing biting mosquitoes by spraying insecticide from a truck or aircraft is the program’s most visible mosquito control method. It chooses to use the safest pesticides available and spraying as a last line of defense (Sarasota County Government, 2005). The chemical Naled or Dibrom 15 is used in aerial spraying. Permethrin-piperonyl butoxide (Biomist4-4) is sprayed from trucks. Need is determined based upon a combination of citizen complaints and results from a network of mosquito traps distributed throughout the County.

Two of the three alternative sites are located in portions of the county which are sprayed aurally, when deemed necessary. Mosquito spray zones of the site alternatives.

- Site 2 (Hawkins Ranch): Spray Zone R5
- Site 3 (Myakka Ranch): Not Applicable
- Site 4 (Hi Hat Ranch): Spray Zone R7

At the application rate of six tenths of an ounce per acre, the pyrethroid spray is effective against flying mosquitoes, but is considered safe for people and pets by the U.S. Environmental

Protection Agency. According to the Sarasota County Health Department, it has no lasting presence (residual) in the environment. Aerial spraying takes place at night when mosquitoes are most active. Aerial treatments provide quick relief from mosquito bites and can reduce the threat of mosquito-transmitted diseases such as West Nile viral encephalitis and St. Louis encephalitis (Sarasota County Government, 2005).

3.15 Transportation and Parking

3.15.1 Site 2

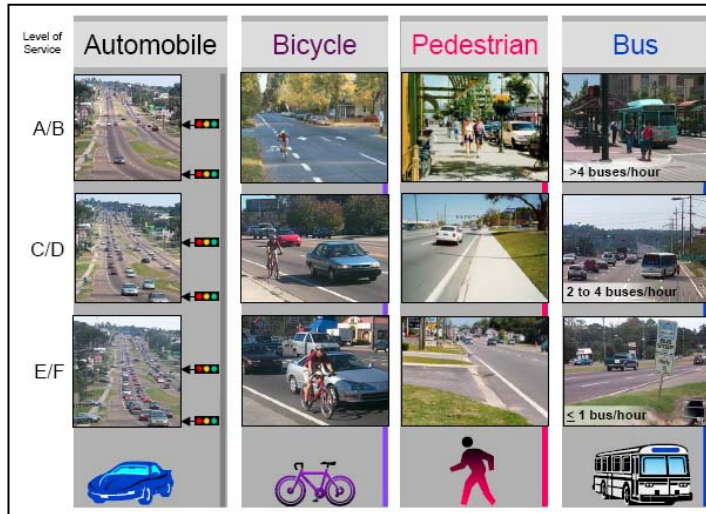
Current Conditions

Site 2 is located on the south side of SR 72 approximately 4.1 miles from I-75. SR 72 is under the jurisdiction of The Florida Department of Transportation (FDOT). This is the main road to this site and would serve as the primary access road to the proposed project. This is a two-lane road with no passing lanes from I-75 east to the site. The current use of Site 2 generates limited traffic. There is an unpaved road to access the county landfill along the western boundary of the site. Saddle Creek subdivision is located directly across SR 72 from the main entrance to Hawkins Ranch.

The FDOT rates traffic flows of a road as that road's "Level of Service" (LOS). According to Sarasota County's Comprehensive Plan, the FDOT LOS analysis is based on a theoretical 100th highest hour, i.e., the traffic conditions in the 100th hour if all hours of traffic in a year were ranked from highest to lowest. The first 29 hours are generally considered "event related" traffic. LOS is rated on a scale of A through F. Roads rated "A" have the best movement of traffic. Roads rated "F" have the worst flows. According to the FDOT, LOS is simply a quantitative breakdown from transportation users' perspectives of transportation quality of service. LOS reflects the quality of service as measured by a scale of user satisfaction and is applicable to each of the following modes that use roadways: automobiles, trucks, bicycles, pedestrians, and buses. According to Sarasota County's 2003 Generalized Level of Service Analysis, SR 72, from I-75 to Bee Ridge Extension, SR 72 is rated "A". From Bee Ridge Extension to County Line Road, SR 72 is rated "B". See Figure 3-21 for the location of these roads. See Figure 3-22 for examples of conditions on roads with these LOS ratings (FDOT, 2002). A more in depth description of LOS ratings is found in Table 3-12 (Sarasota County, 1997 and 2003).

The FDOT monitors traffic volumes on SR 72. Traffic volumes are reported as Annual Average Daily Traffic (AADT) in units of vehicles per day. These values are obtained by monitoring the traffic in front of a monitoring site for a specific stretch of road. The monitoring site is not placed within 150 feet of intersections. The FDOT monitors more intensely in the heavily developed portion of SR 72 west of I-75. The two portions of SR 72 east of I-75 monitored by the FDOT are described below in Table 3-13. Site 2 is located between the two FDOT monitoring sites. Between the two monitoring sites, the AADT reported on SR 72 drops from 9,500 to 2,400.

Figure 3-22. Level of Service Examples by Mode of Transportation



Source: FDOT, 2002.

Table 3-12. Level of Service Descriptions

Level of Service	Description
A	Motorists are unaffected by the presence of others in the stream of traffic. Freedom to select desired speeds and to maneuver within the stream of traffic is extremely high. The general level of comfort and convenience is excellent.
B	Freedom to select desired speeds is relatively unaffected, but there is a reduction in the freedom to maneuver within the stream of traffic. The level of comfort and convenience is less, because the presence of others in the stream of traffic begins to affect individual motorist behavior.
C	Motorists become significantly affected by the interactions with others within the stream of traffic. The selection of speed is affected, and maneuvering within the stream of traffic requires substantial effort on the part of the motorist. Comfort and convenience declines noticeably at this level.
D	Speed and freedom to maneuver are severely restricted, and a poor level of comfort and convenience is experienced by the motorist. Small increases in traffic will generally cause operational problems at this level.
E	Operating conditions are at or near capacity. All speeds are significantly reduced. Freedom to maneuver is difficult. Comfort and convenience is extremely poor, and motorist frustration is generally high.
F	Operating conditions at this level are forced or have broken down. This condition exists wherever the amount of traffic approaching a point exceeds the amount that can traverse the point. Queues typically form at such locations. Operations are characterized by stop-and-go waves; vehicles may proceed at reasonable speeds for short distances, and then be required to stop in a cyclical fashion. Comfort and convenience are extremely poor, and frustration is high.

Source: Transportation Research Board, 2000.

Table 3-13. 2004 Annual Average Daily Traffic Volume for SR 72

FDOT Monitoring Site ID	Area Monitored	Annual Average Daily Traffic (vehicles per day)
0024	SR 72 west of Proctor Road	9500
0050	SR 72 northwest of Myakka River State Park Road	2400

Source: FDOT 2005, Correspondence.

Prepared by: SEB Checked by: JLD

Current and Future Projects

According to the FDOT, east and west of Myakka State Park there is a current highway maintenance project on SR 72 where crews are adding sod to bridge slopes. Myakka State Park is approximately 3.5 miles east of the site. There are no future road improvement projects currently planned for SR 72.

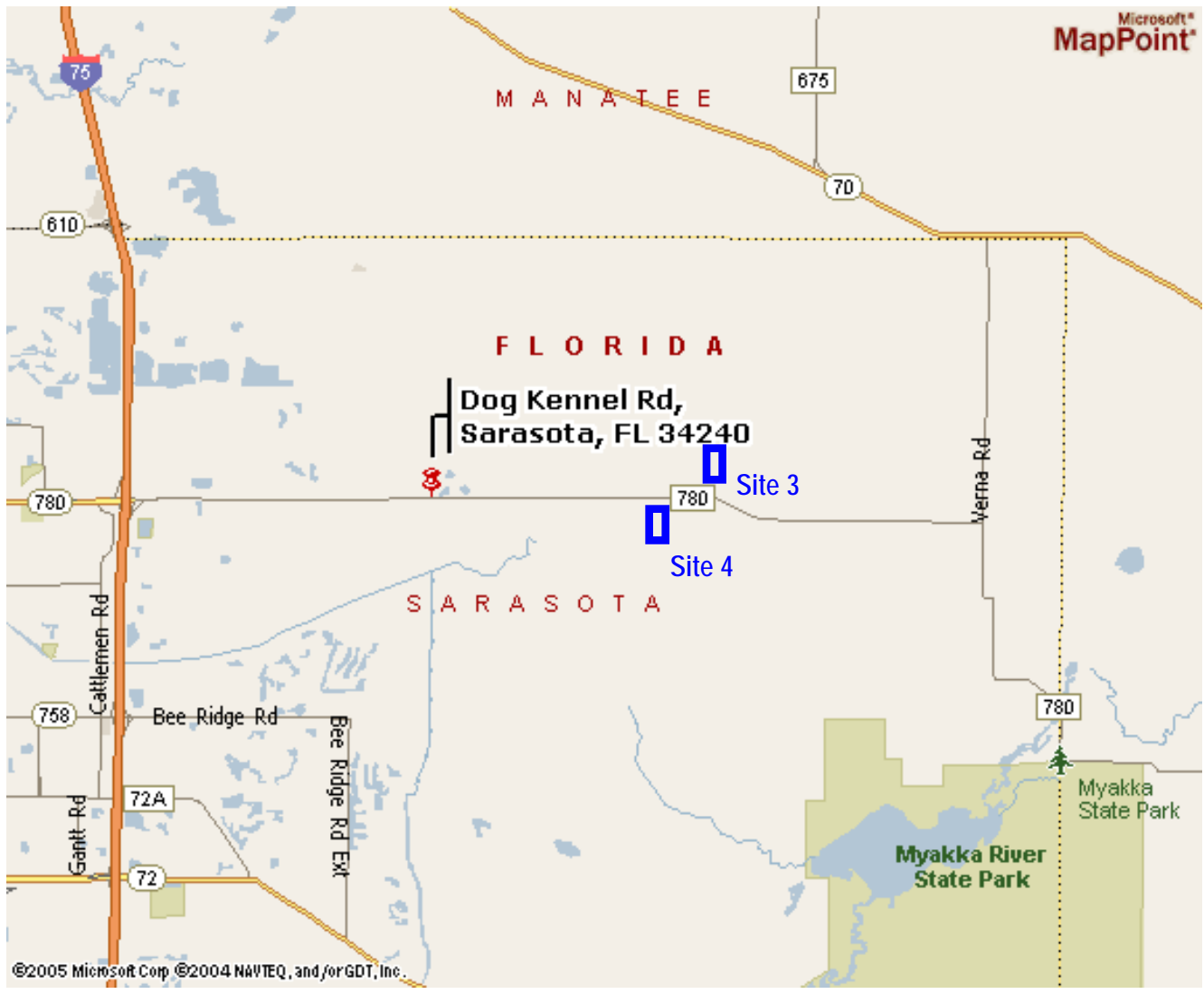
3.15.2 Sites 3 and 4

Current Conditions

Sites 3 and 4 are both located on Fruitville Road. The portion of Fruitville Road west of I-75, also known as SR 780, is under the jurisdiction of the FDOT. East of I-75, where Sites 3 and 4 are located, Fruitville Road is under the jurisdiction of Sarasota County. Site 3 is located on the north side of Fruitville Road approximately 6.5 miles from I-75. Site 4 is located on the south side of the road approximately six miles from I-75. This is the main access road to these sites. From I-75 east to both sites, Fruitville Road is two-lane with no passing lanes. The current uses of these sites generate very little traffic. Currently, there are no other viable access road to any of the sites.

According to the County’s Comprehensive plan, county roads are given an LOS rating in the same manner as the FDOT rates LOS on state roads. According to Sarasota County’s Comprehensive Plan, Fruitville Road from Dog Kennel Road to Verna Road has an LOS of “D”. (This is the portion of Fruitville Road east of I-75 including that portion in front of Sites 3 and 4). The County expects this rating to be maintained through the year 2010. Furthermore, portions of I-75 directly east of the Interstate but west of Sites 3 and 4 are currently rated “F” and will be rated E or F through the year 2010 (Sarasota County, 2003). See Figure 3-22 for examples of conditions on roads with these ratings (FDOT, 2002). See Figure 3-23 for the location of these roads.

According to Mr. Brian Lichterman of the Sarasota County Planning Department and a co-owner of Hi Hat Ranch, Fruitville Road is currently out of compliance with the county’s concurrency regulations. It will have to be improved (probably by widening) to be brought into compliance.



Approximate Site Boundary
 N

Scale: Unknown
 Source: MapPoint, 2005.

Prepared/Date: SEB 06/13/05
 Checked/Date: JLD 06/05/05

National Cemetery
 Sarasota, Florida
 MACTEC Project No. 6671-05-0315



Level Of Service Road Map - 3 and 4
 6671-05-0315
 Figure 3-23

Sarasota County has determined the average annual daily traffic volume of Fruitville in the same manner as the FDOT determines traffic volume. The AADT for Fruitville Road from I-75 past Sites 3 and 4 are described below in Table 3-14. Sites 3 and 4 are located on the portion of Fruitville Road from Dog Kennel Road to Verna Road. See Figure 3-23 for the location of the roads.

Table 3-14. 2003 Annual Average Daily Traffic for Fruitville Road

Sarasota County Monitoring Site ID	Portion of Fruitville Road Monitored	Annual Average Daily Traffic (vehicles per day)
107	I-75 to Coburn	20,400
107.1	Coburn to East Road	20,400
107.2	East Road to Sarasota Center Blvd	16,140
107.3	Sarasota Center Blvd to Dog Kennel Road	16,140
107.4	Dog Kennel Road to Verna Road	8,851

Source: Sarasota County, 2003.

Prepared by: SEB Checked by: EMH

Current and Future Projects

According to the FDOT, Fruitville Road is currently under construction at its intersection with Beneva Road, west of I-75. The construction consists of milling, resurfacing, widening, drainage improvements, and signing and pavement markings. The project start date was February of 2005. This project should be completed during the summer of 2005.

In the County's Comprehensive Plan (Comp. Plan), Sarasota County has designated a portion of Hi Hat Ranch as one of three new "urban villages." In response to the growing population of Sarasota, new residential areas are being planned for more rural areas. However, to better manage development, these areas are planned as relatively high density residential areas. The new urban village on Hi Hat Ranch could eventually house thousands of residents, which will add to the traffic volumes on Fruitville Road.

During an April 2005 site visit, a billboard announcing the availability of building lots for sale was present at the site. The impact of this potential development on traffic volumes is not known.

The portion of Fruitville Road east of I-75 to Sites 3 and 4 is not listed as a financially feasible transportation improvement project in the County's Comprehensive Plan; nor has it appropriated any funds for any significant portion of Fruitville Road in the Capital Improvement Program for fiscal years 2005 through 2009. Florida's new growth management regulations require that development be conducted in a "pay-as-you-go" manner. It is not clear what (if any) financial obligations a cemetery development project would have for contributing to road improvements on Fruitville Road should Sites 3 or 4 be selected.

3.16 Utilities

All three of the proposed sites have existing shallow groundwater wells used for livestock watering (see Appendix A). Sites 2 and 4 do not have any public utilities on the property, but electricity and telephone service are available at the road (owner interviews, April, 2005). Natural gas is not available at any of the sites. Site 3 has electricity and telephone on-site at both the caretaker's residence and the office building.

- **Site 2** – 5 shallow groundwater wells. The owner indicated that there is a public sewer line that ends at the Cow Pen Slough canal. He believes that there may be a moratorium on additional hook-ups. A high voltage transmission line runs overhead through the eastern side of the property.
- **Site 3** – 2 house wells and 1 deep irrigation well.
- **Site 4** – 1 groundwater well; Florida Power and Light has an easement for an electric line which runs along the road.

Sarasota County has restrictions that apply to all sources of water, whether pond, well, or public supply. The Sarasota Board of County Commissioners unanimously supported once-a-week watering restrictions (Section 10 of Sarasota County Ordinance No. 2000-015). Irrigation restrictions apply whether the source of water is a well, pond, or from a utility system. Sarasota County Ordinance No. 2000-15 requires all automatic lawn sprinkler systems to have an automatic rain sensor device or switch installed and in operating order. This device stops the system from operating when it is raining. Failure to have a functional automatic rain sensor device or switch can result in civil penalties.

The County has a water efficiency ordinance which focuses on irrigation system efficiency and limiting plants requiring the most supplemental irrigation. This applies to new construction and extensive remodeling. Grass and flowers are limited to 50 percent or less of the irrigated area. Separate irrigation zones are required for grass and tree/shrub/groundcover beds. Low volume micro-irrigation is required for plant beds. No plant root balls or spray irrigation is permitted under roof overhangs. No grass should be planted in strips narrower than four feet except next to contiguous properties.

3.17 Vegetation and Wildlife

3.17.1 Vegetation

A limited survey of natural communities present on each site was conducted in April 2005. Natural communities present on each site were determined using natural community definitions defined by the Florida Natural Areas Inventory (FNAI) and Florida Department of Natural Resources (now Florida Department of Environmental Protection) in their publication "*Guide to the Natural Communities of Florida*", (1990). According to the FNAI, a natural community is a

distinct assemblage of plant, animal, fungi, and microorganism populations naturally associated with each other and their physical environment (FNAI, 2001; FDNR, 1990).

At Site 2 (Hawkins Ranch), four communities were present at the site: hydric hammock, depression marsh, basin marsh, and improved pasture. Hydric hammocks (described in Section 3.6 and 4.5 as a forested wetland) were present along the western boundary of the site. Hydric hammock communities are characterized as a well developed hardwood and cabbage palm forest with a variable understory often dominated by palms and ferns (FNAI, 2001; FDNR, 1990). Typical plants of a hydric hammock include cabbage palm (*Sabal palmetto*), red maple (*Acer rubrum*), sweetbay (*Magnolia virginiana*), water oak (*Quercus nigra*), wax myrtle (*Myrica cerifera*), saw palmetto (*Serenoa repens*), poison ivy (*Toxicodendron radicans*), dahoon holly (*Ilex cassine*), hackberry (*Celtis occidentalis*), sweetgum (*Liquidambar styraciflua*), swamp chestnut oak (*Quercus michauxii*), American hornbeam (*Carpinus caroliniana*), royal fern (*Osmunda regalis*), and Virginia creeper (*Parthenocissus quinquefolia*) (FNAI, 2001; FDNR, 1990).

Depression marshes (described in Section 3.6 and 4.6 as an emergent wetland) were scattered throughout the site. Depression marshes are characterized as a shallow, usually rounded depression in sand substrate with herbaceous vegetation often present in concentric bands, and are similar to basin marshes, but are generally smaller. Typical plants include rushes (*Juncus spp.*), willows (*Salix spp.*), wax myrtle (*Myrica cerifera*), pickerelweed (*Pontederia cordata*), and arrowheads (*Sagittaria spp.*). Depression marshes are threatened by drainage, agriculture, pollution, fire suppression, and invasion of exotic species. Depression marshes are considered extremely important in providing breeding or foraging habitat for numerous species of amphibians. Depression marshes occurring as isolated wetlands within larger upland ecosystems are of critical importance to many additional wetland and upland animals (FNAI, 2001; FDNR, 1990).

Basin marshes are characterized as an herbaceous or shrubby wetland situated in a relatively large and irregular shaped basin. Typical plants include panicum (*Panicum spp.*), cutgrass (*Leersia spp.*), pennywort (*Hydrocotyle spp.*), Spanish needle (*Bidens pilosa*), soft rush (*Juncus effusus*), arrowhead, coastal plain willow (*Salix caroliniana*), spikerush (*Eleocharis spp.*), and dog fennel (*Eupatorium capillifolium*). Many basin marshes have been degraded by pollution or drained for agricultural uses (FNAI, FDNR 2005). Basin marshes (described as scrub-shrub wetlands in Section 3.6 and 4.5) were located along the southern boundary and southeastern portion of Site 2.

Improved pasture, a man-made vegetative community, composed the remaining portion of the site. Grasses and scattered native trees and shrubs composed the improved pasture.

At Site 3 (Myakka Ranch), six vegetative communities were present, including hydric hammock, depression marsh, basin marsh, blackwater stream, improved pasture, and cropland. Hydric

hammocks were located along the southern boundaries of the site, depression marshes were scattered throughout the site, and basin marshes were located at the southwest corner. Hydric hammock, depression marsh, and basin marsh communities were previously described.

A blackwater stream was present at the southeast corner of the site. Blackwater streams are characterized as perennial or intermittent seasonal watercourses originating in sandy lowlands where wetlands with organic soils function as reservoirs, collecting rainfall and discharging it slowly to the stream. The tea-colored waters of blackwater streams contain tannins, particulates, dissolved organic matter, and iron. The water is generally acidic, and water temperatures are generally correlated with seasonal fluctuations in air temperature. The tea-colored water inhibits the growth of submerged aquatic plants. The presence of emergent and floating aquatic vegetation is often reduced because of typically steep banks and considerable seasonal fluctuations in water level. Typical plants include smartweed, sedges, and grasses. Blackwater streams typically have high, steep banks which confine water movement except during major floods. Clear cutting of adjacent forested lands is one of the more devastating alterations for this community. Additionally, the limited buffering capacity of blackwater streams intensifies the detrimental impacts of agricultural and industrial effluents (FNAI, 2001; FDNR, 1990).

Improved pasture, composed of grasses, comprises approximately 50 percent of Site 3, while cropland (tomatoes) composes approximately 40 percent.

At Site 4 (Hi Hat Ranch), depression marsh and improved pasture was present. Depression marsh communities (emergent wetlands) were present throughout the site. Improved pasture composed approximately 90 percent of the site.

3.17.2 Wildlife

A limited wildlife survey was completed during site visiting, April 2005. Opportunistic wildlife observations were made, anecdotal wildlife sighting information was collected from owners/caretakers, and species names were recorded. The FNAI tracking list for Sarasota County was used as a guide to assist in identification of animals that are typically found in Sarasota County (FNAI, 2001).

Table 3-15 lists, by site, wildlife species observed by MACTEC personnel during the April 2005 site visit, and wildlife species observed by property owners. Overall, bird species appeared to be the most prominent at each site, most likely due to the presence of many depression and basin marshes.

Table 3-15. Wildlife Species Observed or Reported at Each Site

Site 2 (Hawkins Ranch)

Common Name	Scientific Name
Birds	
Swallow-tailed kite	<i>Elanoides forficatus</i>
Anhinga	<i>Anhinga anhinga</i>
Cattle egret	<i>Bubulcus ibis</i>
Common grackle	<i>Quiscalus quiscula</i>
Crested caracara	<i>Caracara cheriway</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>
Eastern meadowlark	<i>Sturnella magna</i>
Great blue heron	<i>Ardea herodias</i>
Great egret	<i>Casmerodius albus</i>
Lesser yellowlegs	<i>Tringa flavipes</i>
Little blue heron	<i>Egretta caerulea</i>
Long-billed dowitcher	<i>Limnodromus scolopaceus</i>
Mallard	<i>Anas platyrhynchos</i>
Common moorhen	<i>Gallinula chloropus</i>
Osprey	<i>Pandion haliaetus</i>
Red-shouldered hawk	<i>Buteo lineatus</i>
Roseate spoonbill	<i>Ajaia ajaja</i>
Sandhill crane	<i>Grus canadensis</i>
Snow goose	<i>Chen caerulescens</i>
Turkey vulture	<i>Cathartes aura</i>
White ibis	<i>Eudocimus albus</i>
Wild turkey	<i>Meleagris gallopavo</i>
Wood stork	<i>Mycteria americana</i>
Red-bellied woodpecker	<i>Melanerpes carolinus</i>

Common Name	Scientific Name
Reptiles	
American alligator	<i>Alligator mississippiensis</i>
Mammals	
Bobcat	<i>Lynx rufus</i>
Coyote	<i>Canis latrans</i>
Feral hog	<i>Sus scrofa</i>
Gray fox	<i>Urocyon cinereoargenteus</i>
Nine-banded armadillo	<i>Dasypus novemcinctus</i>
White-tailed deer	<i>Odocoileus virginianus</i>
Miscellaneous	
Fire ant	<i>Solenopsis spp.</i>
Unknown frog species	
Unknown fish species	

Site 3 (Myakka Ranch)

Common Name	Scientific Name
Birds	
American crow	<i>Corvus brachyrhynchos</i>
Swallow-tailed kite	<i>Elanoides forficatus</i>
Crested caracara	<i>Caracara cheriway</i>
Cardinal	<i>Cardinalis cardinalis</i>
Eastern meadowlark	<i>Sturnella magna</i>
Gray catbird	<i>Dumetella carolinensis</i>
Great egret	<i>Casmerodius albus</i>
Northern bobwhite	<i>Colinus virginianus</i>
Red-shouldered hawk	<i>Buteo lineatus</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Sandhill crane	<i>Grus canadensis</i>
Snowy egret	<i>Egretta thula</i>
Turkey vulture	<i>Cathartes aura</i>
White ibis	<i>Eudocimus albus</i>
Wild turkey	<i>Meleagris gallopavo</i>

Common Name	Scientific Name
Reptiles	
American alligator	<i>Alligator mississippiensis</i>
Black racer	<i>Coluber constrictor</i>
Dusky pygmy rattlesnake	<i>Sistrurus miliarius</i>
Mammals	
Bobcat	<i>Lynx rufus</i>
Cotton-tail rabbit	<i>Sylvilagus floridanus</i>
Coyote	<i>Canis latrans</i>
Gray fox	<i>Urocyon cinereoargenteus</i>
Gray squirrel	<i>Sciurus carolinensis</i>
Feral hog	<i>Sus scrofa</i>
Raccoon	<i>Procyon lotor</i>
White-tailed deer	<i>Odocoileus virginianus</i>
Miscellaneous	
Unknown frog species	
Unknown fish species	

**Table 3-15. Wildlife Species Observed or Reported at Each Site (continued)
Site 4 (Hi Hat Ranch)**

Common Name	Scientific Name
Birds	
Swallow-tailed kite	<i>Elanoides forficatus</i>
Anhinga	<i>Anhinga anhinga</i>
Black-necked stilt	<i>Himantopus mexicanus</i>
Blue-winged teal	<i>Anas discors</i>
Burrowing owl	<i>Athene cunicularia</i>
Crested caracara	<i>Caracara cheriway</i>
Cattle egret	<i>Bubulcus ibis</i>
Eastern meadowlark	<i>Sturnella magna</i>
Glossy ibis	<i>Plegadis falcinellus</i>
Great egret	<i>Casmerodius albus</i>
Little blue heron	<i>Egretta caerulea</i>
Moorhen	<i>Gallinula chloropus</i>
Red-shouldered hawk	<i>Buteo lineatus</i>
Red-wing blackbird	<i>Agelaius phoeniceus</i>
Sandhill crane	<i>Grus canadensis</i>
Snowy egret	<i>Egretta thula</i>
Turkey vulture	<i>Cathartes aura</i>
White ibis	<i>Eudocimus albus</i>
Wood stork	<i>Mycteria americana</i>

Common Name	Scientific Name
Reptiles	
American alligator	<i>Alligator mississippiensis</i>
Garter snake	<i>Thamnophis sirtalis</i>
Mammals	
Cotton-tail rabbit	<i>Sylvilagus floridanus</i>
Coyote	<i>Canis latrans</i>
Feral hog	<i>Sus scrofa</i>
Gray fox	<i>Urocyon cinereoargenteus</i>
Nine-banded armadillo	<i>Dasypus novemcinctus</i>
Raccoon	<i>Procyon lotor</i>
White-tailed deer	<i>Odocoileus virginianus</i>
Miscellaneous	
Unknown fish species	

Source: MACTEC, 2005.

Prepared by: SAR Checked by: EMH

Table 3-16 lists wildlife species that are reasonably expected to be found at each of the habitats described in the previous paragraphs. This list was created using various sources and may include wildlife species that were observed during the site visits. This list is not considered to be all inclusive.

Table 3-16. Wildlife Species Expected to Occur in the Habitats Found at each Site

Habitat	Common Name	Scientific Name
Hydric Hammock (Sites 2 and 3)	Birds	
	Acadian flycatcher *	<i>Empidonax virescens</i>
	American crow	<i>Corvus brachyrhynchos</i>
	American redstart *	<i>Setophaga ruticilla</i>
	American robin *	<i>Turdus migratorius</i>
	Swallow-tailed kite *	<i>Elanoides forficatus</i>
	American woodcock	<i>Scolopax minor</i>
	Antillean nighthawk *	<i>Chordeiles gundlachii</i>
	Bald eagle	<i>Haliaeetus leucocephalus</i>
	Barn owl	<i>Tyto alba</i>
	Barred owl	<i>Strix varia</i>
	Bay-breasted warbler *	<i>Dendroica castanea</i>
	Bewick's wren *	<i>Thryomanes bewickii</i>
Black vulture	<i>Coragyps atratus</i>	

Table 3-16. Wildlife Species Expected to Occur in the Habitats Found at each Site (continued)

Habitat	Common Name	Scientific Name
	Black-and-white warbler *	<i>Mniotilta varia</i>
	Blackburnian warbler *	<i>Dendroica fusca</i>
	Blackpoll warbler *	<i>Dendroica striata</i>
	Black-throated blue warbler *	<i>Dendroica caerulescens</i>
	Black-throated green warbler *	<i>Dendroica virens</i>
	Black-wiskered vireo *	<i>Vireo altiloquus</i>
	Blue grosbeak *	<i>Guiraca caerulea</i>
	Blue jay	<i>Cyanocitta cristata</i>
	Blue-gray gnatcatcher	<i>Polioptila carulea</i>
	Broad-winged hawk	<i>Buteo platypterus</i>
	Brown creeper *	<i>Certhiaamericana</i>
	Brown trasher	<i>Toxostoma rufum</i>
	Brown-headed cowbird	<i>Molothrus ater</i>
	Cape may warbler *	<i>Dendroica tigrina</i>
	Carolina chickadee	<i>Parus carolinensis</i>
	Carolina wren *	<i>Thryothorus ludovicianus</i>
	Cedar waxwing *	<i>Bombycilla cedrorum</i>
	Chestnut-sided warbler *	<i>Dendroica pensylvanica</i>
	Chimney swift *	<i>Chaetura pelagica</i>
	Chuck-will's-widow *	<i>Caprimulgus carolinensis</i>
	Common grackle	<i>Quiscalus quiscula</i>
	Common nighthawk *	<i>Chordeiles minor</i>
	Common yellowthroat	<i>Geothypis trichas</i>
	Cooper's hawk	<i>Accipiter cooperii</i>
	Downy woodpecker	<i>Picoides pubescens</i>
	Eastern phoebe *	<i>Sayornis phoebe</i>
	Eastern screech-owl	<i>Otus asio</i>
	Eastern wood-pewee *	<i>Contopus virens</i>
	Fish crow	<i>Corvus ossifragus</i>
	Golden-crowned kinglet *	<i>Regulus satrapa</i>
	Gray catbird	<i>Dumetella carolinensis</i>
	Gray kingbird *	<i>Tyrannus dominicensis</i>
	Gray-cheeked thrush *	<i>Catharus minimus</i>
	Great Crested flycatcher	<i>Myiarchus crinitus</i>
	Great horned owl	<i>Bubo virginianus</i>
	Hairy woodpecker	<i>Picoides villosus</i>
	Hermit thrush *	<i>Catharus guttatus</i>
	House wren *	<i>Troglodytes aedon</i>
	Least flycatcher *	<i>Empidonax minimus</i>
	Louisiana waterthrush *	<i>Seiurus motacilla</i>
	Magnolia warbler *	<i>Dendroica magnolia</i>
	Mangrove cuckoo	<i>Coccyzus minor</i>
	Mississippi kite	<i>Ictinia mississiooiensis</i>
	Mourning dove	<i>Zenaida macroura</i>
	Northern bobwhite	<i>Colinus virginianus</i>
	Northern cardinal	<i>Cardinalis cardinalis</i>
	Northern flicker	<i>Colaptes auratus</i>
	Northern mockingbird	<i>Mimus polyglottos</i>
	Northern oriole *	<i>Icterus galbula</i>
	Northern parula *	<i>Parula americana</i>
	Northern waterthrush *	<i>Seiurus noveboracensis</i>
	Orange-crowned warbler *	<i>Vermivora celata</i>
	Orchard oriole *	<i>Icterus spurius</i>
	Ovenbird *	<i>Seiurus aurocapillus</i>

Table 3-16. Wildlife Species Expected to Occur in the Habitats Found at each Site (continued)

Habitat	Common Name	Scientific Name	
	Painted bunting *	<i>Passerina ciris</i>	
	Palm warbler *	<i>Dendroicapalmarum</i>	
	Pileated woodpecker	<i>Dryocopus pileatus</i>	
	Red-bellied woodpecker	<i>Melanerpes carolinus</i>	
	Red-eyed vireo *	<i>Vireo olivaceus</i>	
	Red-shouldered hawk	<i>Buteo lineatus</i>	
	Red-tailed hawk	<i>Buteo jamaicensis</i>	
	Rose-breasted grosbeak *	<i>Pheucticus ludovivians</i>	
	Ruby-crowned kinglet *	<i>Regulus calendula</i>	
	Ruby-throated hummingbird	<i>Archilochus colubris</i>	
	Rufous-sided towhee	<i>Pipilo erythrophthalmus</i>	
	Scarlet tanager *	<i>Piranga olivacea</i>	
	Sharp-shinned hawk	<i>Accipiter straiatus</i>	
	Short-tailed hawk	<i>Buteo brachyurus</i>	
	Solitary vireo *	<i>Vireo solitarius</i>	
	Summer tanager *	<i>Pianga rubra</i>	
	Swainson's thrush *	<i>Catharus ustulatus</i>	
	Swainson's warbler *	<i>Limnothlypis swainsonii</i>	
	Tennessee warbler *	<i>Vermivora peregrina</i>	
	Tufted titmouse	<i>Parus bicolor</i>	
	Turkey vulture	<i>Cathartees aura</i>	
	Veery *	<i>Catharus fuscescens</i>	
	Vermillion flycatcher *	<i>Pyrocephalus rubinus</i>	
	Whip-poor-will *	<i>Caprimulgus vociferus</i>	
	White-breasted nuthatch	<i>Sitta carolinensis</i>	
	White-crowned pidgeon	<i>Columba leucocephala</i>	
	White-eyed vireo	<i>Vireo griseus</i>	
	White-throated sparrow *	<i>Zonotrichia albicollis</i>	
	Wild turkey	<i>Meleagris gallopavo</i>	
	Wilson's warbler *	<i>Wilsonia pusilla</i>	
	Winter wren *	<i>Troglodytes troglodytes</i>	
	Wood thrush *	<i>Hylocichla mustelina</i>	
	Worm-eating warbler *	<i>Helmitheros vermivorous</i>	
	Yellow-bellied sapsucker *	<i>Sphyrapicus varius</i>	
	Yellow-billed cuckoo *	<i>Coccyzus americanus</i>	
	Yellow-rumped warbler *	<i>Dendroica coronata</i>	
	Yellow-throated vireo	<i>Vireo flavifrons</i>	
	Yellow-throated warbler	<i>Dendroica dominica</i>	
	Reptiles		
		Eastern coral snake	<i>Micrurus fulvius</i>
		Eastern glass lizard	<i>Ophisaurus ventralis</i>
		Eastern indigo snake	<i>Drymarchon corais couperi</i>
		Green anole	<i>Anolis carolinensis</i>
		Ground skink	<i>Scincella lateralis</i>
		Pine woods snake	<i>Rhadinaea flavilata</i>
		Southern hognose snake	<i>Heterodon simus</i>
		Yellow rat snake	<i>Elaphe obsoleta quadrivittata</i>
Mammals			
	Gray squirrel	<i>Sciurus carolinensis</i>	
Depression Marsh (Sites 2, 3 and 4)	Birds		
	American avocet *	<i>Recurvirostra americana</i>	
	American bittern	<i>Botaurus lentiginosus</i>	
	American black duck *	<i>Anas rubripes</i>	
	American coot	<i>Fulica americana</i>	

Table 3-16. Wildlife Species Expected to Occur in the Habitats Found at each Site (continued)

Habitat	Common Name	Scientific Name
	American pipet *	<i>Anthus rubescens</i>
	American swallow-tailed kite *	<i>Elanoides forficatus</i>
	American white pelican *	<i>Pelecanus erythrorhynchos</i>
	American widgeon *	<i>Anas americana</i>
	American woodcock	<i>Scolopax minor</i>
	Anhinga	<i>Anhinga anhinga</i>
	Bald eagle	<i>Haliaeetus leucocephalus</i>
	Bank swallow *	<i>Riparia riparia</i>
	Barn owl	<i>Tyto alba</i>
	Barn swallow *	<i>Hirundo rustica</i>
	Barred owl	<i>Strix varia</i>
	Belted kingfisher	<i>Ceryle alcyon</i>
	Black rail	<i>Laterallus jamaicensis</i>
	Black tern *	<i>Chlidonias niger</i>
	Black vulture	<i>Coragyps atratus</i>
	Black-crowned night heron	<i>Nycticorax nycticora</i>
	Black-necked stilt	<i>Himantopus mexicanus</i>
	Blue-winged teal	<i>Anas discors</i>
	Boat-tailed grackle	<i>Quiscalus major</i>
	Bobolink *	<i>Dolichonyx oryzivorus</i>
	Bonaparte's gull *	<i>Larus philadelphia</i>
	Brown-headed cowbird	<i>Molothrus ater</i>
	Canada goose *	<i>Branta canadensis</i>
	Canvasback *	<i>Aythya valisineria</i>
	Cattle egret	<i>Bubulcus ibis</i>
	Chuck-will's-widow *	<i>Caprimulgus carolinensis</i>
	Common moorhen	<i>Gallinula chloropus</i>
	Common nighthawk *	<i>Chordeiles minor</i>
	Common snipe *	<i>Gallinago gallinago</i>
	Common yellowthroat	<i>Geothypis trichas</i>
	Eastern screech-owl	<i>Otus asio</i>
	Florida sandhill crane	<i>Grus canadensis</i>
	Forster's tern	<i>Sterna forsteri</i>
	Fulvous whistling-duck	<i>Dendrocygna bicolor</i>
	Gadwall *	<i>Anas strepera</i>
	Glossy ibis	<i>Plegadis falcinellus</i>
	Golden eagle *	<i>Aquila chrysaetos</i>
	Great blue heron	<i>Ardea herodias</i>
	Great egret	<i>Casmerodius albus</i>
	Great horned owl	<i>Bubo virginianus</i>
	Greater flamingo *	<i>Poenicopterus ruber</i>
	Greater yellowlegs *	<i>Tringa melanoleuca</i>
	Green-backed heron	<i>Butorides striatus</i>
	Green-winged teal *	<i>Anas crecca</i>
	Gull-billed tern *	<i>Sterna nilotica</i>
	Hooded merganser	<i>Lophodytes cucullatus</i>
	King rail	<i>Rallus elegans</i>
	Least bittern	<i>Ixobrychus exilis</i>
	Least sandpiper *	<i>Calidris minutilla</i>
	Least tern *	<i>Sterna antillarum</i>
	Lesser scaup *	<i>Aythya affinis</i>
	Lesser yellowlegs *	<i>Tringa flavipes</i>
	Limpkin	<i>Aramus guarauna</i>
	Little blue heron	<i>Egretta caerulea</i>

Table 3-16. Wildlife Species Expected to Occur in the Habitats Found at each Site (continued)

Habitat	Common Name	Scientific Name
	Mallard*	<i>Anas platyrhynchos</i>
	Marsh wren *	<i>Cistothorus palustris</i>
	Merlin *	<i>Falco columbarius</i>
	Mottled duck	<i>Anas fulvigula</i>
	Northern harrier *	<i>Circus cyaneus</i>
	Northern pintail *	<i>Anas acuta</i>
	Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
	Northern shoveler *	<i>Anas clypeata</i>
	Osprey	<i>Pandion haliaetus</i>
	Palm warbler *	<i>Dendroica palmarum</i>
	Pectoral sandpiper *	<i>Calidris interpres</i>
	Peregrine falcon *	<i>Falco peregrinus</i>
	Pied-billed grebe	<i>Podilymbus podiceps</i>
	Purple gallinule	<i>Porphyryla martinica</i>
	Purple martin *	<i>Progne subis</i>
	Red-breasted merganser *	<i>Mergus serrator</i>
	Redhead	<i>Aythya americana</i>
	Red-shouldered hawk	<i>Buteo lineatus</i>
	Red-tailed hawk	<i>Buteo jamaicensis</i>
	Red-winged blackbird	<i>Agelaius phoeniceus</i>
	Ring-billed gull *	<i>Larus delawarensis</i>
	roseate spoonbill	<i>Ajaia ajaja</i>
	Ruddy duck *	<i>Oxyura jamaicensis</i>
	Sedge wren *	<i>Cistothorus platensis</i>
	Semipalmated sandpiper *	<i>Calidris pusilla</i>
	Short-billed dowitcher	<i>Limnodromus griseus</i>
	Short-tailed hawk	<i>Buteo brachyurus</i>
	Smooth-billed ani	<i>Crotophaga ani</i>
	Snail kite	<i>Rostrhamus sociabilis</i>
	Snow goose *	<i>Chen caerulescens</i>
	Snowy egret	<i>Egretta thula</i>
	Solitary sandpiper *	<i>Tringa solitaria</i>
	Sora *	<i>Porzana carolina</i>
	Spotted sandpiper *	<i>Actitis macularia</i>
	Swamp sparrow *	<i>Melospiza georgiana</i>
	Tree swallow *	<i>Tachycineta bicolor</i>
	Tricolored heron	<i>Egretta tricolor</i>
	Tundra swan *	<i>Cygnus columbianus</i>
	Turkey vulture	<i>Cathartes aura</i>
	Virginia rail *	<i>Rallus limicola</i>
	Western sandpiper *	<i>Calidris mauri</i>
	Whip-poor-will *	<i>Caprimulgus vociferus</i>
	White ibis	<i>Eudocimus albus</i>
	White-rumped sandpiper*	<i>Calidris fuscicollis</i>
	Wood duck	<i>Aix sponsa</i>
	Wood stork	<i>Mycteria americana</i>
	Amphibians	
	Barking treefrog	<i>Hyla gratiosa</i>
	Cricket frog	<i>Acris crepitans</i>
	Dwarf salamander	<i>Eurycea quadridigitata</i>
	Eastern spadefoot toad	<i>Scaphiopus holbrookii</i>
	Flatwoods salamander	<i>Ambystoma cingulatum</i>
	Gopher frog	<i>Rana capito</i>
	Greater siren	<i>Siren lacertina</i>

Table 3-16. Wildlife Species Expected to Occur in the Habitats Found at each Site (continued)

Habitat	Common Name	Scientific Name	
	Green treefrog	<i>Hyla cinerea</i>	
	Leopard frog	<i>Rana utricularia</i>	
	Little grass frog	<i>Pseudacris ocularis</i>	
	Mole salamander	<i>Ambystoma talpoideum</i>	
	Narrowmouth toad	<i>Gastrophryne carolinensis</i>	
	Narrow-striped dwarf siren	<i>Pseudobranchius striatus axanthus</i>	
	Oak toad	<i>Bufo quercicus</i>	
	Ornate chorus frog	<i>Pseudacris ornata</i>	
	Pig frog	<i>Rana grylio</i>	
	Pinewoods treefrog	<i>Hyla femoralis</i>	
	Southern chorus frog	<i>Pseudacris nigrita</i>	
	Squirrel treefrog	<i>Hyla squirella</i>	
	Striped newt	<i>Notophthalmus perstriatus</i>	
	Tiger salamander	<i>Ambystoma tigrinum</i>	
	Two-toed amphiuma	<i>Amphiuma means</i>	
	Reptiles		
	American alligator	<i>Alligator mississippiensis</i>	
	Black swamp snake	<i>Seminatrix pygaea cyclas</i>	
	Dusky pygmy rattlesnake	<i>Sistrurus miliarius barbouri</i>	
	Eastern garter snake	<i>Thamnophis sirtalis sirtalis</i>	
	Eastern indigo snake	<i>Drymarchon corais couperi</i>	
	Florida brown snake	<i>Storeria dekayi victa</i>	
	Florida chicken turtle	<i>Deiochelys reticulata chyseae</i>	
	Florida cottonmouth	<i>Agkistrodon piscivorus conanti</i>	
	Florida king snake	<i>Lampropeltis getulus niger</i>	
	Florida mud turtle	<i>Kinosternon subrubrum steindachneri</i>	
	Florida red-bellied turtle	<i>Chrysemys nelsoni</i>	
	Florida water snake	<i>Natrix fasciata pictiventris</i>	
	Green water snake	<i>Natrix cyclopion floridana</i>	
	Peninsula ribbon snake	<i>Thamnophis sauritus sackeni</i>	
	Rough green snake	<i>Opheodrys aestivus</i>	
	Southern ringneck snake	<i>Diadophis punctatus punctatus</i>	
	Striped mud turtle	<i>Kinosternon bauri</i>	
	Striped swamp snake	<i>Lidodytes alleni</i>	
Mammals			
Round-tailed muskrat	<i>Neofiber alleni</i>		
White-tailed deer	<i>Odocoileus virginianus</i>		
Basin Marsh (Site 2 and 3)	Birds		
	American avocet *	<i>Recurvirostra americana</i>	
	American bittern	<i>Botaurus lentiginosus</i>	
	American black duck *	<i>Anas rubripes</i>	
	American coot	<i>Fulica americana</i>	
	American pipet *	<i>Anthus rubescens</i>	
	American swallow-tailed kite *	<i>Elanoides forficatus</i>	
	American white pelican *	<i>Pelecanus erythrorhynchos</i>	
	American widgeon *	<i>Anas americana</i>	
	American woodcock	<i>Scolopax minor</i>	
	Anhinga	<i>Anhinga anhinga</i>	
	Bald eagle	<i>Haliaeetus leucocephalus</i>	
	Bank swallow *	<i>Riparia riparia</i>	
	Barn owl	<i>Tyto alba</i>	
	Barn swallow *	<i>Hirundo rustica</i>	
	Barred owl	<i>Strix varia</i>	
	Belted kingfisher	<i>Ceryle alcyon</i>	

Table 3-16. Wildlife Species Expected to Occur in the Habitats Found at each Site (continued)

Habitat	Common Name	Scientific Name
	Black rail	<i>Laterallus jamaicensis</i>
	Black tern *	<i>Chlidonias niger</i>
	Black vulture	<i>Coragyps atratus</i>
	Black-crowned night heron	<i>Nycticorax nycticora</i>
	Black-necked stilt	<i>Himantopus mexicanus</i>
	Blue-winged teal	<i>Anas discors</i>
	Boat-tailed grackle	<i>Quiscalus major</i>
	Bobolink *	<i>Dolichonyx oryzivorus</i>
	Bonaparte's gull *	<i>Larus philadelphia</i>
	Brown-headed cowbird	<i>Molothrus ater</i>
	Canada goose *	<i>Branta canadensis</i>
	Canvasback *	<i>Aythya valisineria</i>
	Cattle egret	<i>Bubulcus ibis</i>
	Chuck-will's-widow *	<i>Caprimulgus carolinensis</i>
	Common moorhen	<i>Gallinula chloropus</i>
	Common nighthawk *	<i>Chordeiles minor</i>
	Common snipe *	<i>Gallinago gallinago</i>
	Common yellowthroat	<i>Geothlypis trichas</i>
	Eastern screech-owl	<i>Otus asio</i>
	Florida sandhill crane	<i>Grus canadensis</i>
	Forster's tern	<i>Sterna forsteri</i>
	Fulvous whistling-duck	<i>Dendrocygna bicolor</i>
	Gadwall *	<i>Anas strepera</i>
	Glossy ibis	<i>Plegadis falcinellus</i>
	Golden eagle *	<i>Aquila chrysaetos</i>
	Great blue heron	<i>Ardea herodias</i>
	Great egret	<i>Casmerodius albus</i>
	Great horned owl	<i>Bubo virginianus</i>
	Greater flamingo *	<i>Poenicopterus ruber</i>
	Greater yellowlegs *	<i>Tringa melanoleuca</i>
	Green-backed heron	<i>Butorides striatus</i>
	Green-winged teal *	<i>Anas crecca</i>
	Gull-billed tern *	<i>Sterna nilotica</i>
	Hooded merganser	<i>Lophodytes cucullatus</i>
	King rail	<i>Rallus elegans</i>
	Least bittern	<i>Ixobrychus exilis</i>
	Least sandpiper *	<i>Calidris minutilla</i>
	Least tern *	<i>Sterna antillarum</i>
	Lesser scaup *	<i>Aythya affinis</i>
	Lesser yellowlegs *	<i>Tringa flavipes</i>
	Limpkin	<i>Aramus guarauna</i>
	Little blue heron	<i>Egretta caerulea</i>
	Mallard*	<i>Anas platyrhynchos</i>
	Marsh wren *	<i>Cistothorus palustris</i>
	Merlin *	<i>Falco columbarius</i>
	Mottled duck	<i>Anas fulvigula</i>
	northern harrier *	<i>Circus cyaneus</i>
	Northern pintail *	<i>Anas acuta</i>
	Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
	Northern shoveler *	<i>Anas clypeata</i>
	Osprey	<i>Pandion haliaetus</i>
	Palm warbler *	<i>Dendroica palmarum</i>
	Pectoral sandpiper *	<i>Calidris interpres</i>
	Peregrine falcon *	<i>Falco peregrinus</i>

Table 3-16. Wildlife Species Expected to Occur in the Habitats Found at each Site (continued)

Habitat	Common Name	Scientific Name
	Pied-billed grebe	<i>Podilymbus podiceps</i>
	Purple gallinule	<i>Porphyryla martinica</i>
	Purple martin *	<i>Progne subis</i>
	Red-breasted merganser *	<i>Mergus serrator</i>
	Redhead *	<i>Aythya americana</i>
	Red-shouldered hawk	<i>Buteo lineatus</i>
	Red-tailed hawk	<i>Buteo jamaicensis</i>
	Red-winged blackbird	<i>Agelaius phoeniceus</i>
	Ring-billed gull *	<i>Larus delawarensis</i>
	Roseate spoonbill	<i>Ajaia ajaja</i>
	Ruddy duck *	<i>Oxyura jamaicensis</i>
	Sedge wren *	<i>Cistothorus platensis</i>
	Semipalmated sandpiper *	<i>Calidris pusilla</i>
	Short-billed dowitcher	<i>Limnodromus griseus</i>
	Short-tailed hawk	<i>Buteo brachyurus</i>
	Snail kite	<i>Rostrhamus sociabilis</i>
	Snow goose *	<i>Chen caerulescens</i>
	Snowy egret	<i>Egretta thula</i>
	Solitary sandpiper *	<i>Tringa solitaria</i>
	Sora *	<i>Porzana carolina</i>
	Spotted sandpiper *	<i>Actitis macularia</i>
	Swamp sparrow *	<i>Melospiza georgiana</i>
	Tree swallow *	<i>Tachycineta bicolor</i>
	Tricolored heron	<i>Egretta tricolor</i>
	Tundra swan *	<i>Cygnus columbianus</i>
	Turkey vulture	<i>Cathartes aura</i>
	Virginia rail *	<i>Rallus limicola</i>
	Western sandpiper *	<i>Calidris mauri</i>
	Whip-poor-will *	<i>Caprimulgus vociferus</i>
	White ibis	<i>Eudocimus albus</i>
	White-rumped sandpiper*	<i>Calidris fuscicollis</i>
	Wood duck	<i>Aix sponsa</i>
	Wood stork	<i>Mycteria americana</i>
	Amphibians	
	Bull frog	<i>Rana catesbeiana</i>
	Cricket frog	<i>Acris spp.</i>
	Dwarf salamander	<i>Eurycea quadridigitata</i>
	Eastern narrow mouthed toad	<i>Gastrophryne carolinensis</i>
	Greater siren	<i>Siren lacertina</i>
	Green treefrog	<i>Hyla cinerea</i>
	Leopard frog	<i>Rana utricularia</i>
	Lesser siren	<i>Siren intermedia</i>
	Narrow-striped dwarf siren	<i>Pseudobranchius striatus axanthus</i>
	Peninsula newt	<i>Notophthalmus viridescens piaropicola</i>
	Pig frog	<i>Rana grylio</i>
	Two-toed amphiuma	<i>Amphiuma means</i>
	Reptiles	
	American alligator	<i>Alligator mississippiensis</i>
	Banded water snake	<i>Nerodia fasciata fasciata</i>
	Black swamp snake	<i>Seminatrix pygaea cyclas</i>
	Dusky pygmy rattlesnake	<i>Sistrurus miliarius barbouri</i>
	Eastern garter snake	<i>Thamnophis sirtalis sirtalis</i>
	Eastern indigo snake	<i>Drymarchon corais couperi</i>
	Eastern mud snake	<i>Farancia abacura abacura</i>

Table 3-16. Wildlife Species Expected to Occur in the Habitats Found at each Site (continued)

Habitat	Common Name	Scientific Name	
	Florida brown snake	<i>Storeria dekayi victa</i>	
	Florida chicken turtle	<i>Deiochelys reticulata chyseae</i>	
	Florida cottonmouth	<i>Agkistrodon piscivorus conanti</i>	
	Florida king snake	<i>Lampropeltis getulus niger</i>	
	Florida mud turtle	<i>Kinosternon subrubrum steindachneri</i>	
	Florida red-bellied turtle	<i>Chrysemys nelsoni</i>	
	Florida water snake	<i>Natrix fasciata pictiventris</i>	
	Green water snake	<i>Philothamnus natalensis natalensis</i>	
	Peninsula ribbon snake	<i>Thamnophis sauritus sackeni</i>	
	Rough green snake	<i>Opheodrys aestivus</i>	
	Southern ringneck snake	<i>Diadophis punctatus punctatus</i>	
	Striped mud turtle	<i>Kinosternon bauri</i>	
	Striped swamp snake	<i>Lidodytes alleni</i>	
	Mammals		
	Round-tailed muskrat	<i>Neofiber alleni</i>	
White-tailed deer	<i>Odocoileus virginianus</i>		
Blackwater Stream (Site 3)	Fish		
	Banded sunfish	<i>Enneacanthus obesus</i>	
	Banded topminnow	<i>Fundulus cingulatus</i>	
	Black crappie	<i>Pomoxis nigromaculatus</i>	
	Blacktail shiner	<i>Notropis venustus</i>	
	Chain pickerel	<i>Esox niger</i>	
	Channel catfish	<i>Ictalurus punctatus</i>	
	Chubsucker	<i>Erimyzon spp.</i>	
	Darters	<i>Ammocrypta spp.</i>	
	Dollar sunfish	<i>Lepomis marginatus</i>	
	Everglades pygmy sunfish	<i>Elassoma evergladei</i>	
	Flier	<i>Centrarchus macropterus</i>	
	Gizzard shad	<i>Dorosoma cepedianum</i>	
	Ironcolor shiner	<i>Notropis chalybaeus</i>	
	Mosquitofish	<i>Gambusia affinis</i>	
	Mud sunfish	<i>Acantharchus pomotis</i>	
	Ohooppee shiner	<i>Notropis leedsi</i>	
	Pygmy killifish	<i>Leptolucania ommata</i>	
	Redbreast sunfish	<i>Lepomis auritus</i>	
	Redfin pickerel	<i>Esox americanus americanus</i>	
	River longnose gar	<i>Lepisosteus osseus</i>	
	Spotted bass	<i>Micropterus punctulatus</i>	
	Stumpknocker	<i>Lepomis microlophus</i>	
	Threadfin shad	<i>Dorosoma petenense</i>	
	Weed shiner	<i>Notropis texanus</i>	
	Amphibians		
	Alabama waterdog	<i>Necturus alabamensis</i>	
	Cricket frog	<i>Acris spp.</i>	
	Eastern narrow mouthed toad	<i>Gastrophryne carolinensis</i>	
	Greater siren	<i>Siren lacertina</i>	
	Green treefrog	<i>Hyla cinerea</i>	
	Leopard frog	<i>Rana utricularia</i>	
Narrow-striped dwarf siren	<i>Pseudobranchius striatus axanthus</i>		

Table 3-16. Wildlife Species Expected to Occur in the Habitats Found at each Site (continued)

Habitat	Common Name	Scientific Name
	Pig frog	<i>Rana grylio</i>
	River frog	<i>Rana heckscheri</i>
	Two-toed amphiuma	<i>Amphiuma means</i>
Reptiles		
	Alligator snapping turtle	<i>Macrolemys temminckii</i>
	American alligator	<i>Alligator mississippiensis</i>
	Brown watersnake	<i>Nerodia taxispilota</i>
	Florida cooter	<i>Pseudemys floridana</i>
	Florida cottonmouth	<i>Agkistrodon piscivorus conanti</i>
	Florida king snake	<i>Lampropeltis getulus niger</i>
	Florida red-bellied turtle	<i>Chrysemys nelsoni</i>
	Florida water snake	<i>Natrix fasciata pictiventris</i>
	Peninsula cooter	<i>Pseudemys peninsularis</i>
	Red-belly watersnake	<i>Nerodia erythrogaster erythrogaster</i>
	River cooter	<i>Pseudemys concinna</i>
	Rough green snake	<i>Opheodrys aestivus</i>
	Snapping turtle	<i>Chelydra serpentina</i>
	Spiny softshell	<i>Apalone spinifera</i>
	Stinkpot	<i>Sternotherus odoratus</i>
Mammals		
	Beaver	<i>Castor canadensis</i>
	River otter	<i>Lutra canadensis</i>

Source: FNAI, 2001; FDNR, 1990; Conant, 1975; Kale and Maehr, 1990; and Peterson 1980.

Prepared by: EMH Checked by: SEB

Notes: * migratory

3.18 Threatened and Endangered Species

Public Law 93-205, or the Endangered Species Act (ESA) requires that all Federal agencies protect listed species and preserve their habitats. According to the U.S. Fish and Wildlife Service (USFWS), these agencies must utilize their authorities to conserve listed species and make sure their actions do not jeopardize the survival of listed species (USFWS, 2004).

The FNAI identified 1 amphibian, 8 reptiles, 24 birds, 5 mammals, and 9 plants as either threatened, endangered, or species of special concern for Sarasota County (Appendix F).

The USFWS and FFWCC were contacted regarding the presence of listed species on the sites. A response has not yet been received from FFWCC. When a response is received it will be forwarded to VA officials. In their response letter, the USFWS indicated that all three of the proposed sites lie within a core foraging area of at least one wood stork colony (James Slack, personal communication; Appendix C).

During the April, 2005 site visits (which included owner interviews) confirmed that the following federally-listed species use the sites:

- Site 2: Created caracara, wood stork, American alligator, bald eagle.

- Site 3: American alligator, crested caracara.
- Site 4: Crested caracara, wood stork, American alligator

The Sarasota County Natural Resources Department maintains a database of habitat for the federally listed scrub jay in the county. It was updated in February 2005 (Sarasota County Government, 2005). A search of the database by tax parcel number for the three sites evaluated in this EA indicated that there is no scrub jay habitat or habitat buffer on any of the 3 properties under consideration in this EA. There is scrub jay habitat "near" (< 0.5 mile) Site 4 (Hi Hat Ranch), although the site itself is outside the buffer area (FFWCC, 2005).

There are a number of state-listed species known from each of the proposed sites (Table 3-17). In addition, there is an SCHA at Site 2. According to the FFWCC, SHCA's identify privately owned lands needed to adequately protect 40 vertebrate species of wildlife, high quality rare habitats of Florida, roosting areas for bats, wetlands important to wading birds, and land important to the survival of 105 globally rare plant species. There is an SHCA wading bird habitat within and beyond the southern portion of Site 2 (Figure 3-24).

3.18.1 Site 2 (Hawkins Ranch)

Listed species observed at Site 2 during the April, 2005 site visit are listed in Table 3-17. Additionally, the landowner was interviewed and has seen Sandhill Cranes, Crested Caracara, American Alligators, Eagles, and Osprey.

3.18.2 Site 3 (Myakka Ranch)

Listed species observed at Site 3 during the April, 2005 site visit are listed in Table 3-17. Additionally, the caretaker and ranch manager were interviewed and have seen Crested Caracara, American Alligators, and Sandhill Cranes. MACTEC staff observed wood storks at this site in a February, 2005 site visit.

3.18.3 Site 4 (Hi Hat Ranch)

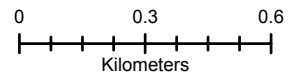
Listed species observed at Site 4 during the April, 2005 site visit are listed in Table 3-17. The landowner was interviewed and has seen Sandhill Cranes and various wading birds. During the site visit, pairs of Wood Storks were observed flying from an area directly offsite to the south. The City of Sarasota owns and operates a reservoir there. According to George Cancro, the City of Sarasota employee who supervises the area, wood storks feed in the reservoir, but they are not aware of nesting efforts / rookery.



Legend

- Approximate Site Boundary
- Strategic Habitat Conservation Area

Source: FFWCC, 2000; FDEP, 1999; MACTEC, 2005



**STRATEGIC HABITAT CONSERVATION AREA, SITE 2
WADING BIRD COLONY**

DRAWN	DATE
ALF	06/03/2005
CHECKED	DATE
JLD	06/03/2005

MACTEC
Gainesville, Florida
6671-05-0315

NATIONAL CEMETERY
SARASOTA COUNTY
FLORIDA
DEPARTMENT OF VETERANS AFFAIRS
NATIONAL CEMETERY ADMINISTRATION

FIGURE:

3-24

Table 3-17. Listed Species Observed, April 2005

Species	Federal Status*	State Status*	Site 2	Site 3	Site 4
Sandhill Crane	N	LT	✓	✓	✓
Little Blue Heron	N	LS	✓		✓
White Ibis	N	LS	✓	✓	✓
Snowy Egret	N	LS			✓
Osprey	N	LS	✓		
Burrowing Owl	N	LS			✓
Roseate Spoonbill	N	LS	✓		
American Alligator	SAT	LS		✓	✓
Crested Caracara	LT	LT			✓
Wood Stork	LE	LE	✓	✓	✓

Source: FNAI, 2005; MACTEC, 2005.

Prepared by: SEB Checked by: JLD

Note: * LE = Listed Endangered
 LS = Species of Special Concern
 LT = Listed Threatened
 N = Not Listed
 SAT = Similar in Appearance to a Listed Threatened Species

3.19 Exotic and Invasive Species

Executive Order 11987, Exotic Organisms, addresses requirements related to the control of exotic species. Exotic and invasive species are those plants or animals which are not native to Florida, but were introduced as a result of human-related activities. Exotic and invasive species have fewer natural enemies and may have a higher survival rate than native species. They may also harbor diseases or parasites that significantly impact non-resistant native species (FFWCC, 2005). Thus, control or removal of exotic and invasive species from native natural communities is desirable.

Like exotic/invasive plants, some exotic/invasive animals are more deleterious than others. Exotic animals having the greatest impact on natural communities receive the highest priority for removal. Generally, these are animals that have a high reproductive potential and few natural controls, such as feral pigs, armadillos, and fire ants. Also included in this group are animals whose abundance is directly related to human populations, such as free-ranging or feral cats and dogs. Although house pets do not typically propagate in the wild, their free-ranging activities can affect native species which normally would not have to contend with these additional pressures (Florida Fish and Wildlife Commission 2005). Feral pigs (*Sus scrofa*), coyotes (*Canis latrans*), and nine-banded armadillos (*Dasypus novemcinctus*) were either observed or reported at Sites 2 and 4, and feral pigs and coyotes were either observed or reported at Site 3.

An April 2005 site visit (which included owner interviews) confirmed that the following exotic invasive animals use the sites:

- Site 2: Feral pigs, coyotes, 9-banded armadillos, fire ants (*Solenopsis invicta*).
- Site 3: Feral pigs, coyotes

- Site 4: Feral pigs, coyotes, 9-banded armadillos

Most exotic/invasive species observed on each site were aquatic plants found in the depression and basin marshes. Aquatic exotic/invasive species observed on Site 2 that would need to be removed include:

- curly dock (*Rumex crispus*)
- Peruvian primrosewillow (*Ludwigia peruviana*)
- torpedo grass (*Panicum repens*)
- water hyacinth (*Eichhornia crassipes*)
- water lettuce (*Pistia stratiotes*), and
- wild taro (*Colocasia esculenta*).

These species were present in most wetlands on site. Additionally, the terrestrial exotic/invasive plants Brazilian pepper (*Schinus terebinthifolius*), camphor-tree (*Cinnamomum camphora*), Chinese tallow (*Sapium sebiferum*), and tropical soda apple (*Solanum viarum*) were either observed or reported for Site 2.

Aquatic exotic/invasive species observed on Site 3 that would require removal include common guava (*Psidium guajava*), Peruvian primrosewillow, torpedo grass, wandering jew (*Tradescantia zebrina*), water hyacinth, water lettuce, and wild taro. Terrestrial exotic/invasive species observed at Site 3 include Australian pine (*Casuarina equisetifolia*), Chinese tallow, and tropical soda apple.

Aquatic exotic/invasive species observed on Site 4 that would require removal include Peruvian primrosewillow, torpedo grass, and water hyacinth. Terrestrial exotic/invasive species observed at Site 4 include tropical soda apple.

A list of exotic and invasive plant and animal species found in Sarasota County (FFWCC, 2005; University of South Florida, 2005) is included in Table 3-18. A list of exotic and invasive plant and animal species observed at the proposed sites during the April 2005 site visit is included in Table 3-19.

Table 3-18. Exotic/Invasive Species Reported for Sarasota County

Common Name	Scientific Name
Plants	
air potato	<i>Dioscorea bulbifera</i>
american evergreen	<i>Syngonium podophyllum</i>
arrasa con todo	<i>Gomphrena serrata</i>
Asian sword fern	<i>Nephrolepis multiflora</i>
asiatic dewflower	<i>Murdannia spirata</i> var. <i>parviflora</i>
Australian pine	<i>Casuarina equisetifolia</i>
bahiagrass	<i>Paspalum notatum</i>

Common Name	Scientific Name
Plants (continued)	
lilac tasselflower	<i>Emilia sonchifolia</i>
little ironweed	<i>Cyanthillium cinereum</i>
llima	<i>Sida cordifolia</i>
low flatsedge	<i>Cyperus pumilus</i>
luckynut	<i>Thevetia peruviana</i>
Madagascar periwinkle	<i>Catharanthus roseus</i>
Malabar plum	<i>Syzygium jambos</i>

Table 3-18. Exotic/Invasive Species Reported for Sarasota County (continued)

Common Name	Scientific Name
Plants (continued)	
bahiagrass	<i>Paspalum notatum</i> var. <i>saurae</i>
balsampear	<i>Momordica charantia</i>
basketplant	<i>Callisia fragrans</i>
beach naupaka	<i>Scaevola taccada</i>
bellyache bush	<i>Jatropha gossypifolia</i>
bermudagrass	<i>Cynodon dactylon</i>
big-foot water-clover	<i>Marsilea macropoda</i>
bitter dock	<i>Rumex obtusifolius</i>
black medick	<i>Medicago lupulina</i>
black spikerush	<i>Eleocharis nigrescens</i>
blackeyed susan vine	<i>Thunbergia alata</i>
bowstring hemp	<i>Sansevieria hyacinthoides</i>
Brazilian joyweed	<i>Alternanthera brasiliana</i>
Brazilian pepper	<i>Schinus terebinthifolius</i>
Britton's wild petunia	<i>Ruellia tweediana</i>
broomcorn	<i>Sorghum arundinaceum</i>
broomcorn millet	<i>Panicum miliaceum</i>
Browne's blechum	<i>Blechum pyramidatum</i>
caesarweed	<i>Urena lobata</i>
camphortree	<i>Cinnamomum camphora</i>
cape honeysuckle	<i>Tecoma capensis</i>
carrotwood	<i>Cupaniopsis anacardioides</i>
castorbean	<i>Ricinus communis</i>
cathedral bells	<i>Kalanchoe pinnata</i>
centipedegrass	<i>Eremochloa ophiuroides</i>
charlock mustard	<i>Sinapis arvensis</i>
chickenspike	<i>Sphenoclea zeylanica</i>
chinaberrytree	<i>Melia azedarach</i>
Chinese boxorange	<i>Severinia buxifolia</i>
coatbuttons	<i>Tridax procumbens</i>
cochineal cactus	<i>Opuntia cochenillifera</i>
coffeeweed	<i>Senna obtusifolia</i>
cogongrass	<i>Imperata cylindrica</i>
Colombian waxweed	<i>Cuphea carthagenensis</i>
common banana	<i>Musa x paradisiaca</i>
common dandelion	<i>Taraxacum officinale</i>
common dayflower	<i>Commelina diffusa</i>
common plaintain	<i>Plantago major</i>
common sowthistle	<i>Sonchus oleraceus</i>
common sunflower	<i>Helianthus annuus</i>
common water-hyacinth	<i>Eichhornia crassipes</i>
coral vine	<i>Antigonon leptopus</i>
creeping oxeye	<i>Sphagneticola trilobata</i>

Common Name	Scientific Name
Plants (continued)	
Malaysian false pimpernel	<i>Lindernia crustacea</i>
mariana maiden fern	<i>Macrothelypteris torresiana</i>
Mascarene Island leafflower	<i>Phyllanthus tenellus</i>
mazapan	<i>Malvaviscus penduliflorus</i>
Mexican palo verde	<i>Parkinsonia aculeata</i>
Mexican tea	<i>Chenopodium ambrosioides</i>
mile-a-minute vine	<i>Ipomoea cairica</i>
monk orchid	<i>Oeceoclades maculata</i>
nakedstem dewflower	<i>Murdannia nudiflora</i>
natal plum	<i>Carissa macrocarpa</i>
nutgrass	<i>Cyperus rotundus</i>
Oriental false hawksbeard	<i>Youngia japonica</i>
paragrass	<i>Urochloa mutica</i>
parrot feather watermilfoil	<i>Myriophyllum aquaticum</i>
Pennsylvania everlasting	<i>Gamochaeta pensylvanica</i>
Peruvian primrosewillow	<i>Ludwigia peruviana</i>
pink woodsorrel	<i>Oxalis debilis</i> var. <i>corymbosa</i>
pinkqueen spiderflower	<i>Cleome hassleriana</i>
portia tree	<i>Thespesia populnea</i>
Pouzol's bush	<i>Pouzolzia zeylanica</i>
punktree	<i>Melaleuca quinquenervia</i>
purple amaranth	<i>Amaranthus blitum</i> subsp. <i>emarginatus</i>
Queens Anne's lace	<i>Daucus carota</i>
rabbitsfootgrass	<i>Polypogon monspeliensis</i>
rattlebox	<i>Sesbania punicea</i>
rhodesgrass	<i>Chloris gayana</i>
ricefield flatsedge	<i>Cyperus iria</i>
Richard's yelloweyed grass	<i>Xyris jupicai</i>
rosary pea	<i>Abrus precatorius</i>
rose myrtle	<i>Rhodomyrtus tomentosa</i>
rose natalgrass	<i>Rhynchelytrum repens</i>
rough Mexican clover	<i>Richardia scabra</i>
sacatrapo	<i>Caperonia palustris</i>
Santa Maria feverfew	<i>Parthenium hysterophorus</i>
scarlet milkweed	<i>Asclepias curassavica</i>
septicweed	<i>Senna occidentalis</i>
shakeshake	<i>Crotalaria incana</i>
shortleaf spikesedge	<i>Kyllinga brevifolia</i>
showy rattlebox	<i>Crotalaria spectabilis</i>
shrub sunflower	<i>Tithonia diversifolia</i>
slender amaranth	<i>Amaranthus viridis</i>
slender joyweed	<i>Alternanthera ficoidea</i>
smooth rattlebox	<i>Crotalaria pallida</i> var. <i>obovata</i>

Table 3-18. Exotic/Invasive Species Reported for Sarasota County (continued)

Common Name	Scientific Name
Plants (continued)	
crested floating heart	<i>Nymphoides cristata</i>
crown-of-thorns	<i>Euphorbia milii</i>
curly dock	<i>Rumex crispus</i>
cypressvine	<i>Ipomoea quamoclit</i>
ditch firmbry	<i>Fimbristylis schoenoides</i>
dotted duckweed	<i>Landoltia punctata</i>
downy maiden fern	<i>Thelypteris dentata</i>
durban crowfootgrass	<i>Dactyloctenium aegyptium</i>
elliptic yellowwood	<i>Ochrosia elliptica</i>
European watercress	<i>Rorippa nasturtium-aquaticum</i>
false moneywort	<i>Alysicarpus ovalifolius</i>
flattop mille grains	<i>Oldenlandia corymbosa</i>
Florida tasselflower	<i>Emilia fosbergii</i>
fountainbush	<i>Russelia equisetiformis</i>
foxtail bristlegrass	<i>Setaria italica</i>
gale-of-wind	<i>Phyllanthus amarus</i>
gophertail lovegrass	<i>Eragrostis ciliaris</i>
green bristlegrass	<i>Setaria viridis</i>
guava	<i>Psidium guajava</i>
guineagrass	<i>Panicum maximum</i>
hairy crabweed	<i>Fatoua villosa</i>
hairy indigo	<i>Indigofera hirsuta</i>
India mustard	<i>Brassica juncea</i>
Indian crabgrass	<i>Digitaria longiflora</i>
Indian goosegrass	<i>Eleusine indica</i>
Indian lovegrass	<i>Eragrostis pilosa</i>
Indian swampweed	<i>Hygrophila polysperma</i>
itchgrass	<i>Rottboellia cochinchinensis</i>
Japanese clover	<i>Kummerowia striata</i>
Japanese honeysuckle	<i>Lonicera japonica</i>
Japanese jasmine	<i>Jasminum mesnyi</i>
jungle rice	<i>Echinochloa colona</i>
lamb's-quarters	<i>Chenopodium album</i>
lanceleaf rattlebox	<i>Crotalaria lanceolata</i>
lantana	<i>Lantana camara</i>
leli de san jose	<i>Zephyranthes rosea</i>
lemon	<i>Citrus x limon</i>

Common Name	Scientific Name
Plants (continued)	
smutgrass	<i>Sporobolus indicus</i>
soldier's orchid	<i>Zeuxine strateumatice</i>
southern rockbell	<i>Wahlenbergia marginata</i>
spiny amaranth	<i>Amaranthus spinosus</i>
spiny sowthistle	<i>Sonchus asper</i>
star jasmine	<i>Jasminum multiflorum</i>
Surinam cherry	<i>Eugenia uniflora</i>
Texas madeiravine	<i>Anredera vesicaria</i>
thalia lovegrass	<i>Eragrostis atrovirens</i>
threeflower ticktrefoil	<i>Desmodium triflorum</i>
torpedograss	<i>Panicum repens</i>
trailing indigo	<i>Indigofera spicata</i>
trailing shrubverbena	<i>Lantana montevidensis</i>
trompetilla	<i>Hymenachne amplexicaulis</i>
tropical bushmint	<i>Hyptis mutabilis</i>
tropical Mexican clover	<i>Richardia brasiliensis</i>
tuberous sword fern	<i>Nephrolepis cordifolia</i>
turk's turban	<i>Clerodendrum indicum</i>
umbrella plant	<i>Cyperus involucratus</i>
valamuerto	<i>Senna pendula var. glabrata</i>
vaseygrass	<i>Paspalum urvillei</i>
water spangles	<i>Salvinia minima</i>
watermelon	<i>Citrullus lanatus</i>
waterhyme	<i>Hydrilla verticillata</i>
west indian dropseed	<i>Sporobolus indicus var. pyramidalis</i>
white leadtree	<i>Leucaena leucocephala</i>
white sweetclover	<i>Melilotus albus</i>
whitelady	<i>Thunbergia fragrans</i>
wild bushbean	<i>Macroptilium lathyroides</i>
wild tantan	<i>Desmanthus virgatus</i>
wild taro	<i>Colocasia esculenta</i>
yellow alder	<i>Turnera ulmifolia</i>
yellow joyweed	<i>Alternanthera flavescens</i>
yellow nutgrass	<i>Cyperus esculentus</i>
yew plumpine	<i>Podocarpus macrophyllus</i>
zarzabacoa comun	<i>Desmodium incanum</i>

Fishes	
african jewelfish	<i>Hemichromis bimaculatus</i>
arawana	<i>Osteoglossum bicirrhosum</i>
banded cichlid	<i>Heros severus</i>
banded gourami	<i>Colisa fasciata</i>
banded leporinus	<i>Leporinus fasciatus</i>
banded tilapia	<i>Tilapia sparrmani</i>
barred bichir	<i>Polypterus delhezi</i>
bighead carp	<i>Hypophthalmichthys nobilis</i>
black acara	<i>Cichlasoma bimaculatum</i>

Fishes (continued)	
No Common Name	<i>Theraps hybrid</i>
northern snakehead	<i>Channa argus</i>
Oriental weatherfish	<i>Misgurnus anguillicaudatus</i>
oscar	<i>Astronotus ocellatus</i>
paradisefish	<i>Macropodus opercularis</i>
pearl eartheater	<i>Geophagus brasiliensis</i>
pearl gourami	<i>Trichogaster leeri</i>
pike killifish	<i>Belonesox belizanus</i>
pirambeba	<i>Serrasalmus humeralis</i>

Table 3-18. Exotic/Invasive Species Reported for Sarasota County (continued)

Common Name	Scientific Name
Fishes (continued)	
black molly	<i>Poecilia hybrid</i>
black sharkminnow	<i>Labeo chrysophekadion</i>
black tetra	<i>Gymnocorymbus ternetzi</i>
blackchin tilapia	<i>Sarotherodon melanotheron</i>
blue acara	<i>Aequidens pulcher</i>
blue tilapia	<i>Oreochromis aureus</i>
bristlecheek catfish	<i>Ancistrus spp.</i>
brown hoplo	<i>Hoplosternum littorale</i>
bullseye snakehead	<i>Channa marulius</i>
butterfly peacock	<i>Cichla ocellaris</i>
casarudo	<i>Callichthys callichthys</i>
climbing perch	<i>Anabas testudineus</i>
clown knifefish	<i>Notopterus chitala</i>
common carp	<i>Cyprinus carpio</i>
convict cichlid	<i>Cichlasoma nigrofasciatum</i>
corydoras	<i>Corydoras spp.</i>
croaking gourami	<i>Trichopsis vittata</i>
dwarf barb	<i>Puntius gelius</i>
dwarf gourami	<i>Colisa lalia</i>
eastern happy	<i>Haplochromis callipterus</i>
firemouth cichlid	<i>Cichlasoma meeki</i>
freshwater angelfish	<i>Pterophyllum scalare</i>
goldfish	<i>Carassius auratus</i>
granulated catfish	<i>Pterodoras granulosus</i>
grass carp	<i>Ctenopharyngodon idella</i>
green swordtail	<i>Xiphophorus helleri</i>
guppy	<i>Poecilia reticulata</i>
jack dempsey	<i>Cichlasoma octofasciatum</i>
jaguar guapote	<i>Cichlasoma managuense</i>
kissing gourami	<i>Helostoma temmincki</i>
malabar danio	<i>Danio malabaricus</i>
mayan cichlid	<i>Cichlasoma urophthalmus</i>
midas cichlid	<i>Cichlasoma citrinellum</i>
Mozambique tilapia	<i>Oreochromis mossambicus</i>

Common Name	Scientific Name
Fishes (continued)	
pirapatinga	<i>Piractus brachypomus</i>
raphael catfish	<i>Platydoras costatus</i>
red piranha	<i>Pygocentrus nattereri</i>
red tilapia	<i>Tilapia hybrid</i>
redbelly tilapia	<i>Tilapia zilli</i>
redstriped eartheater	<i>Geophagus surinamensis</i>
redtail catfish	<i>Phractocephalus hemiliopterus</i>
Rio Grande cichlid	<i>Cichlasoma cyanoguttatum</i>
ripsaw catfish	<i>Pseudodoras niger</i>
rosy barb	<i>Puntius conchonius</i>
sailfin catfish	<i>Pterygoplichthys multiradiatus</i>
siamese fightingfish	<i>Betta splendens</i>
silver dollar	<i>Metynnis hypsauchen</i>
southern platyfish	<i>Xiphophorus maculatus</i>
speckled peacock	<i>Cichla temensis</i>
spotfin spinyeel	<i>Macrogathus siamensis</i>
spotted tilapia	<i>Tilapia mariae</i>
suckermouth catfish	<i>Hypostomus spp.</i>
swai	<i>Pangasius sutchi</i>
swamp eel	<i>Monopterus albus</i>
pacu	<i>Colossoma macropomum</i>
thicklip gourami	<i>Colisa labiosa</i>
threespot cichlid	<i>Cichlasoma trimaculatum</i>
threespot gourami	<i>Trichogaster trichopterus</i>
tiger barb	<i>Puntius tetrazona</i>
tinfoil barb	<i>Barbodes schwanefeldi</i>
trahira	<i>Hoplias malabaricus</i>
twospot ctenopoma	<i>Ctenopoma nigropannosum</i>
variable platyfish	<i>Xiphophorus variatus</i>
vermiculated sailfin	<i>Pterygoplichthys disjunctivus</i>
walking catfish	<i>Clarias batrachus</i>
yellowbelly cichlid	<i>Cichlasoma salvini</i>
zebra danio	<i>Danio rerio</i>

Birds	
black-hooded parakeet	<i>Nandayus nenday</i>
blue-gray tanager	<i>Thraupis episcopus</i>
budgerigar	<i>Melopsittacus undulatus</i>
cockatiel	<i>Nymphicus hollandicus</i>
common peafowl	<i>Pavo cristatus</i>
Eurasian collared-dove	<i>Streptopelia decaocto</i>
European starling	<i>Sturnus vulgaris</i>
greater sulphur-crested cockatoo	<i>Cacatua galerita</i>
house finch	<i>Carpodacus mexicanus</i>
house sparrow	<i>Passer domesticus</i>
lilac-crowned parrot	<i>Amazona finschi</i>

Birds (continued)	
orange bishop	<i>Euplectes franciscanus</i>
peach-faced lovebird	<i>Agapornis roseicollis</i>
red-crested cardinal	<i>Paroaria coronata</i>
red-crowned parrot	<i>Amazona viridigenalis</i>
ringed turtle-dove	<i>Streptopelia risoria</i>
ring-necked pheasant	<i>Phasianus colchicus</i>
rock dove	<i>Columba livia</i>
rose-ringed parakeet	<i>Psittacula krameri</i>
scarlet ibis	<i>Eudocimus ruber</i>
spot-breasted oriole	<i>Icterus pectoralis</i>
white-winged dove	<i>Zenaida asiatica</i>

Table 3-18. Exotic/Invasive Species Reported for Sarasota County (continued)

Common Name	Scientific Name	Common Name	Scientific Name
Birds		Birds (continued)	
mitred parakeet	<i>Aratinga mitrata</i>	white-winged parakeet	<i>Brotogeris versicolurus</i>
monk parakeet	<i>Myiopsitta monachus</i>	wreathed hornbill	<i>Aceros undulatus</i>
muscovy duck	<i>Cairina moschata</i>	yellow-chevroned parakeet	<i>Brotogeris chiriri</i>
Mammals		Mammals (continued)	
black rat	<i>Rattus rattus</i>	feral pig	<i>Sus scrofa</i>
capybara	<i>Hydrochaeris hydrochaeris</i>	house mouse	<i>Mus musculus</i>
coyote	<i>Canis latrans</i>	nine-banded armadillo	<i>Dasypus novemcinctus</i>
feral cat	<i>Felis catus</i>	Norway rat	<i>Rattus norvegicus</i>
feral dog	<i>Canis familiaris</i>	red fox	<i>Vulpes vulpes</i>
Reptiles		Amphibians	
brown anole	<i>Anolis sagrei</i>	giant toad	<i>Bufo marinus</i>
Indo-Pacific gecko	<i>Hemidactylus garnotii</i>	Cuban treefrog	<i>Osteopilus septentrionalis</i>
Mediterranean gecko	<i>Hemidactylus turcicus</i>		

Note: Exotic fishes listed are exotic freshwater fish of Florida, and these fish species may or may not inhabit Sarasota County. A list of exotic fish species limited to Sarasota County was not available.

Data obtained from Florida Fish and Wildlife Conservation Commission and University of South Florida Atlas of Florida Vascular Plants.

Source: FFWCC, 2005; USF, 2005.

Created by: SAR Checked by: EMH

Table 3-19. Exotic/Invasive Species Observed or Reported from Sites

Site 2 (Hawkins Ranch)

Common Name	Scientific Name
Plants	
Brazilian pepper	<i>Schinus terebinthifolius</i>
camphor-tree	<i>Cinnamomum camphora</i>
Chinese tallow	<i>Sapium sebiferum</i>
curly dock	<i>Rumex crispus</i>
Peruvian primrosewillow	<i>Ludwigia peruviana</i>
torpedograss	<i>Panicum repens</i>
tropical soda apple	<i>Solanum viarum</i>
water hyacinth	<i>Eichhornia crassipes</i>
water lettuce	<i>Pistia stratiotes</i>
wild taro	<i>Colocasia esculenta</i>
Birds	
None	
Reptiles & Amphibians	
None	
Mammals	
coyote	<i>Canis latrans</i>
feral hog	<i>Sus scrofa</i>
nine-banded armadillo	<i>Dasypus novemcinctus</i>

Site 3 (Myakka Ranch)

Common Name	Scientific Name
Plants	
Australian pine	<i>Casuarina equisetifolia</i>
Chinese tallow	<i>Sapium sebiferum</i>
common guava	<i>Psidium guajava</i>
Peruvian primrosewillow	<i>Ludwigia peruviana</i>
torpedograss	<i>Panicum repens</i>
tropical soda apple	<i>Solanum viarum</i>
wandering jew	<i>Tradescantia zebrina</i>
water hyacinth	<i>Eichhornia crassipes</i>
water lettuce	<i>Pistia stratiotes</i>
wild taro	<i>Colocasia esculenta</i>
Birds	
None	
Reptiles & Amphibians	
None	
Mammals	
coyote	<i>Canis latrans</i>
feral hog	<i>Sus scrofa</i>

**Table 3-19. Exotic/Invasive Species Observed or Reported from Sites (continued)
Site 4 (Hi Hat Ranch)**

Common Name	Scientific Name
Plants	
Peruvian primrosewillow	<i>Ludwigia peruviana</i>
torpedograss	<i>Panicum repens</i>
tropical soda apple	<i>Solanum viarum</i>
water hyacinth	<i>Eichhornia crassipes</i>
Birds	
None	
Reptiles & Amphibians	
None	
Mammals	
coyote	<i>Canis latrans</i>
feral hog	<i>Sus scrofa</i>
nine-banded armadillo	<i>Dasypus novemcinctus</i>

Source: MACTEC, 2005.

Created by: SAR Checked by: EMH

3.20 Environmental Justice

Sarasota County has a high average income (Sarasota Chamber of Commerce). All three of the sites under consideration for cemetery development are portions of large ranches (described in Chapter 2). The surrounding land uses are predominantly agricultural. However, each of the sites has a neighboring sub-division: Saddle Creek (across the road from Site 2) and Burnt Creek (adjacent to Site 3 and across the road from Site 4). These are large-lot sub-divisions with sizeable homes that would not be considered affordable housing.

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) requires that federal projects consider whether the project would have an adverse effect on minority or low-income populations. The three sites under consideration in this EA are agricultural lands located in a rural area. Based on the demographic data discussed above (Sections 3.5 and 3.13) there are no known minority or low-income populations in the vicinity of any of the sites.

4.0 Environmental Consequences and Mitigation Opportunities

4.1 Geology

Under the No Action Alternative, there would be no impacts on the geology of the area.

Under the Proposed Alternatives, there would be moderate impacts to the geology of the area resulting from the development of a cemetery at any of the three proposed sites. It is assumed that excavations for stormwater basins, burial vaults, building foundations into the subsoils will be required, but no deeper, larger scale excavations into the deeper strata would occur.

Within the upland portions of each of the proposed sites, surficial soils are typically sandy, within clayey subsoils within an average of three to four feet of the existing ground surface. Several borings, predominately at Sites 2 and 3, also have a somewhat cemented subsoil layers, locally known as “hardpan”, which in turn, overlie cleaner sand layers. Excavations into and mixing of these subsoil layers would result in minor impacts to the near-surface soils profiles.

4.2 Soils

Under the No Action Alternative, there would be no new impacts to site soils.

Under the Proposed Action at Alternative Site 2, construction of a veteran’s cemetery would result in a moderate adverse impact to soils. Currently, this property is utilized for improved pasture, and has been altered by the installation of numerous shallow ditches to facilitate site drainage. As such, the site is no longer under a natural condition, especially in relation to the natural groundwater conditions. The anticipated placement of several feet of fill, as discussed below, would also impact soil conditions.

As previously discussed, it is anticipated that the development of the site considered under the Proposed Action would include the construction of buildings, roadways, and the installation of crypts. This typically involves mass grading. Typical burial practices usually involve the placement of a concrete burial vault to prevent subsurface soil subsidence and to protect the casket from deterioration. The placement of crypts makes for a smooth surface in the burial area, a benefit considered by some, as they do not detract from the expansive pastoral beauty of the site. It is anticipated that crypts would be installed during the initial site development, with soil fill placed over the crypt and then sodded. The spoils would be removed from the crypts in a single phase during cemetery construction.

For several reasons, the construction of crypts would be completed with the vault bottom at an elevation above the normal high water table, estimated at 2.2 feet below land surface at the 20

soil borings completed as part of this evaluation. At Site 2, the relatively high water table could be avoided by the placement of about four feet or more of fill dredged from an on-site borrow pit.

Burying topsoil would destroy the biota, many of which are necessary for ecological health/function. As mitigation against this adverse impact NCA could stock-pile top-soil in a way that protects its natural biota, and then re-use it on site once the additional fill and crypts have been placed. This type of soil conservation mitigation measure will have the added benefit of assisting with water conservation. All of the soils units mapped at Site 2 are classified as having slow infiltration rates, and have permanent high water tables and are often flooded during the year. Relatively slow infiltration rates and localized ponding of storm water could be observed in the placed fill as well, especially if the clayey subsoils, and to some degree the cemented "hardpan" soils, found at the site are used for site grading, and are not segregated from the more sandy layers. This effect could be mitigated by segregating soil layers and only using clayey and cemented layers in locales where infiltration is undesirable (e.g., roads).

The soil units mapped at Site 2 are classified as having a high risk of corrosion to concrete. Protective measures for more resistant concrete may be necessary to avoid or reduce damage from soil-induced chemical reactions that weaken concrete. These characteristics may require an increase in construction costs, or additional long-term maintenance.

Construction activities, dredging for spoils, and site grading would result in the increased potential for sediment impacts to on-site and adjacent wetlands and surface waters. Some soil erosion would also occur during construction activities; however, implementation of a sediment and erosion control plan, including use of best management practices (BMPs) such as silt fencing and hay bales, would dramatically reduce erosion associated with the project.

Under the Alternative Actions (Sites 3 and 4), construction of a veteran's cemetery would also result in moderate adverse impact to soils. As with the location of the Proposed Action (Site 2), these properties are utilized for improved pasture, and have been altered by the installation of numerous shallow ditches to facilitate site drainage. The site soils are no longer under natural conditions, especially in relation to the natural groundwater conditions. The anticipated placement of several feet of fill, would also impact soil conditions. Estimated seasonal high water levels at Sites 3 and 4 are nearly identical to those at Site 2 (discussed above) with an estimated high level of 2.2 feet below ground surface at Site 3, and at 1.9 feet at Site 4.

Sites 3 and 4 also contain clayey and cemented subsoil layers which, if dredged from the site and included as fill, would significantly decrease the infiltration in any placed fills. Segregation of these soil layers should be considered to maximize infiltration rates in placed fills.

Soils at Sites 3 and 4 also have a high risk of corrosion to concrete. Protective measures for more resistant concrete may be necessary to avoid or reduce damage from soil-induced chemical

reactions that weaken concrete would be necessary, as discussed above. As with the soils found at Site 2, these characteristics may require an increase in construction costs, or additional long-term maintenance.

4.2.1 Farmland Protection Policy Act Compliance

According to the NRCS, the federal Farmland Protection Policy Act (FPPA) was created to protect farmland and combat urban sprawl (USDA NRCS, 1999). Consequently, soils specifically suited to agricultural uses may be protected under FPPA. Conversion of these soils from agricultural to nonagricultural uses may be limited. Specifically protected are cultivated areas identified by the FPPA as prime farmland, unique farmland, and farmland that is of local or statewide importance. Areas that have been cultivated within the last 5 years may also qualify.

Of the sites considered in this EA, Sites 2 and 4 are used for grazing cattle and are not cultivated. Sites 2 and 4 have not been cultivated within the last 5 years, according to owner interviews. Site 3 currently consists of both cropland and pastureland. Should Site 3 be chosen, form AD-1006 should be completed and submitted to the NRCS office in Sarasota County in order to determine whether or not portions of the site may be protected by the FPPA (USDA NRCS, 1999).

Mitigation against soil erosion that should be considered during cemetery construction at any of the sites include:

- Require grading contractor to prepare and adhere to a plan for management of excavated material
- Stabilize soft / loose soils during excavation and fill activities
- Soft and near surface soils should be stabilized at all times.
- A qualified engineer should monitor construction, excavation, fill and compaction activities.
- Installation of silt fences / erosion control fabric on slopes created during construction.
- Revegetation of bare areas as soon as practical after their creation.

4.2.2 Earthmoving

Earthmoving, as defined by Article XII of the Sarasota County Code, is the excavating of lakes, pits, and depressions, and/or mounding, stockpiling, creating berms, installing or transporting Type A, B, C, or D fill. Earthmoving activities are regulated by Sarasota County because of the adverse impacts these activities may cause. Earthmoving activities may adversely impact watersheds, drainage patterns, native habitats, water quality, historical resources, and may cause erosion and sedimentation problems. Changes in topography, such as filling of drainageways, could increase the flood potential of the surrounding area. Additionally, earthmoving activities may cause adverse visual, noise, vibration, dust, and safety impacts to surrounding areas.

Excavations cannot be created or altered, nor can fill be applied to a site without obtaining an earthmoving permit. Several types of earthmoving permits are available, depending upon the

cumulative volumes of excavations, stockpiles, and fills over the life of the construction project. It is assumed that any imported fill used during construction of the Proposed Action or at either of the Alternative Action sites would meet the definition of Type A fill (earthen material essentially free of roots and other vegetative debris), as defined in Article XII, Sarasota County Code. Level I and II permits are applicable for projects involving up to 100,000 cubic yards of Type A fill, and Level III permits are applicable for projects involving greater than 100,000 cubic yards of Type A fill. Due to the amount of earthmoving needed to complete the Proposed Action or either of the Alternative Actions, it is anticipated that a Level III permit will be required.

In Article XII, Sarasota County has outlined several excavation and fill, stockpiling, and burying requirements that must be complied with during earthmoving activities. These requirements are mostly related to excavation size and maintenance, and stockpile maintenance. Additional requirements associated with a Level III permit are the submittal of an annual activity report describing past and future construction activities, and the submittal of a Closure Plan that addresses completion of closure activities at the site and any monitoring required beyond the permit expiration date.

Under the No Action Alternative, no permit under Article XII of the Sarasota County Code would need to be obtained.

4.3 Surface Water and Water Quality

Under the No Action alternative there would be no new impacts to water resources.

The proposed action would impact water resources at Site 2 (Hawkins Ranch) in the following ways: removal of cattle waste from the site; control of exotic aquatic plants and animals; temporary water quality modification during construction (discussed in Section 4.3.1 under stormwater concerns); increase impervious surfaces on-site; and increase runoff of excess water and landscaping chemicals as a part of lawn/turf maintenance activities.

The proposed action would impact water resources at Site 3 (Myakka Ranch) in the following ways: removal of cattle waste from the site; cessation of agrochemical applications to croplands; control of exotic aquatic plants and animals; temporary water quality modification during construction (discussed elsewhere under stormwater concerns); increase impervious surfaces on-site; increase runoff of excess water and landscaping chemicals as a part of lawn/turf maintenance activities; and cessation of water quality impacts associated with flooding of the on-site residences during 10 – and 20-year storms.

The proposed action would impact water resources at Site 4 (Hi Hat Ranch) in the following ways: removal of cattle waste from the site; control of exotic aquatic plants and animals; temporary water quality modification during construction (discussed elsewhere under stormwater

concerns); increase impervious surfaces on-site; and increase runoff of excess water and landscaping chemicals as a part of lawn/turf maintenance activities.

Impacts to water resources for each of the project alternatives would be similar given their similar land-use, location within the same watershed, depth-to-groundwater, similarities in construction challenges, and presence of on-site wetlands. Under the Proposed Action Alternatives, cemetery development at sites 2, 3 or 4 should have minimal impacts on the area's surface water resources provided the site is developed and managed according to minimum standards required by federal laws and regulations as they relate to watershed protection.

The mitigation measures discussed above for minimizing soil erosion, in addition to others described below for stormwater management, floodplain protection, and wetland protection should be implemented during construction to also protect surface water quality.

Mitigation measures that can be implemented during cemetery operation and management to protect water quality include:

- Selecting interment sites that are above the seasonal water table.
- Managing turf without, or with minimal, use of pesticides or fertilizers
- Implementation of an integrated pest management plan (IPM)
- Landscaping with native plants
- Maximizing stormwater retention times on-site
- Creating sizable vegetated (natural) buffer areas in and around all wetlands

4.3.1 Stormwater

According to the US Environmental Protection Agency (EPA), the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The NPDES Stormwater Program regulates stormwater discharges. Stormwater runoff from construction sites contains sediments and other pollutants which degrade water quality and habitat of surrounding streams and water bodies. The NPDES Stormwater Program requires all construction sites 1 acre or larger, or smaller sites within a larger development, to obtain a permit to discharge stormwater and utilize BMPs to mitigate the effects of the construction activity (USEPA, NPDES, 2005).

Cemetery construction at any of the alternative sites will require compliance with the federal stormwater program, and implementation of BMPs for stormwater control. An additional stormwater management consideration could be the construction of dry storm water retention areas which would collect storm water runoff and direct it back into the ground. Compliance with the stormwater management sections of 40 CFR 122 (USEPA's NPDES Regulations) is anticipated as long as State/County BMP's are implemented.

4.3.2 Floodplain

In accordance with the requirements of EO 11988, the National Cemetery Administration must demonstrate that there is no practicable alternative to carrying out the Proposed Action within the 100-year floodplain.

For Sites 2, 3, and 4, the majority of the proposed cemetery would be located outside the 100-year floodplain, because only small portions of the floodplain exist at each site. Buildings, such as the Public Information Center, Administration/Maintenance Complex, and Committal Service Shelter, should be constructed above the 100-year floodplain. Elevating the new buildings above the floodplain would reduce the risk of flood loss and dramatically reduce the impacts from floods on human safety, health and welfare. Construction of the new buildings, if constructed within the floodplain, would have a minor negative impact on the floodplain, since the net increase in the amount of impervious surface within the floodplain would be relatively minor. Internment areas will need to be located outside the 100-year floodplain.

Under the No Action Alternative, there would be no impacts to the floodplain.

4.3.3 Landscaping and Turf Irrigation

Southwest Florida has numerous programs in place to protect water quality and quantity in both surface waters and the aquifers. Watering restrictions are in place at all three of the sites under consideration for cemetery development per county regulations. Current landscape water restrictions in Sarasota County (Sarasota County Government, 2005) include:

- Even addresses ("house numbers" ending with a 0, 2, 4, 6, or 8) may only water on Tuesdays.
- Odd addresses ("house numbers" ending with a 1, 3, 5, 7, or 9) may only water on Sundays.
- No irrigation between 10 a.m. and 4 p.m.
- The maximum amount of water applied is limited to 3/4 inch in each zone, once, on each allowable watering day.
- Flower beds, vegetable gardens, and other non-lawn areas may be irrigated as needed using a hand-watering device with a shut-off nozzle, micro irrigation, and other forms of horticulture appropriate, low volume irrigation, without respect to the day of week or time of day.
- Newly planted lawn and landscape areas may be watered on any day of the week for a 60-day establishment period that begins the day that the plant material is installed. No irrigation between 10 a.m. and 4 p.m.

The NCA will need to design site landscaping with water conservation as a prime objective. This may include: irrigation water re-use; xeriscaping, stormwater re-use, installation of rooftop catchment /cistern irrigation systems near buildings, modifying expectations to allow for seasonal die-back of vegetation, etc.

4.3.4 Surface Water Protection

At present, water quality at on-site wetlands is negatively impacted by livestock at all three of the proposed sites. In theory, water quality improvements in on-site surface waters could be achieved at any of the three candidate sites via removal of livestock. Water quality could then be maintained with creation of appropriately-sized wetland buffers (see Section 4.5), implementation of an appropriate turf-management program that minimizes fertilizer or pesticide runoff, and restoration of native vegetation via exotic species management (discussed below).

4.4 Groundwater

Under the No Action Alternative, there would be no impacts to groundwater resources at the three alternative sites.

Under the Proposed Alternatives, the development of the three sites should have no negative impacts on the groundwater provided the site is developed so that any interments are above the zone of saturation. Assuming a burial depth of six feet below ground surface in conjunction with the seasonal high water tables requires additional fill in order to provide a suitable separation from seasonal groundwater for the interments. Periodic saturation/ponding at the grave sites would appear difficult to avoid; however, the design of the site should not allow for the graves to be saturated for long periods of time.

In terms of developmental costs, each of the site appear to have the water table elevations that would require at least several feet of fill for the development areas. On-site subsoils would be suitable for site grading fill; however, the clayey subsoils found at each of the would be much more difficult for use than the relatively clean sands found both above and below that layer. If on-site soils are to be used as fill, segregation of the clayey subsoils or allowances for difficult handling should be considered.

At present, there are groundwater wells at each of the sites which are used for the on-going agricultural practices. The wells will need to be either re-evaluated, re-permitted, or “closed” according to the appropriate local and state regulations.

A potential for negative impacts could result to the groundwater due to the use of formaldehyde in modern embalming techniques. The funeral services industry claims that much of the formaldehyde and other chemicals used in embalming fluids will combine with deteriorating proteins to form complex compounds that are relatively stable. As such, use of any of the sites for interments should not pose a significant threat to groundwater quality.

There is an extremely limited body of literature available on research conducted in the US on migration of embalming fluids (formaldehyde in particular) into soils or groundwater. The funeral services industry has conducted a number of studies on the environmental impact of funeral home

wastewater. In most of those studies the industry concluded that properly constructed and maintained septic systems neutralize the potential hazards (NFDA, 2005; NFDMA, 2002). It follows from these conclusions, that funeral crypts which are properly built and maintained should prevent any embalming fluids or pathogens from entering the surrounding environment.

4.5 Wetlands

Under the No Action Alternative, there would be no new impacts to wetlands. Existing impacts from livestock use of the wetlands would continue.

Under the Proposed Action Alternatives, it is anticipated that the site chosen for construction of the new cemetery would require filling of federal jurisdictional wetlands. Therefore, wetlands that would be impacted during construction would need a formal delineation by a wetland scientist, appropriate jurisdictional confirmation of the wetland boundaries by the United States Army Corps of Engineers, and submittal of a Joint Application for an Environmental Resource Permit (ERP) to the Southwest Florida Water Management District.

The Clean Water Act (CWA) Section 404 permit program relies on the use of compensatory mitigation to offset unavoidable damage to wetlands and other aquatic resources, which can be accomplished by several options. Mitigation for wetland impacts may take place on-site, off-site, in mitigation banks, or be funded by in-lieu fees. Mitigation may include creation, enhancement or restoration of wetlands and their functions or, in some cases, may include preservation of wetlands and associated upland buffers (USACE, 2005).

Several wetlands on each site were identified during the site visits that would be likely locations for mitigation by enhancement of wetlands, by removing exotic/invasive species and removal of cattle from the site. Refer to Figure 3-10 – 3-12 for wetland locations. These include:

- Site 2: Wetlands 2A, 2D, 2E, 2H, 2K, 2L
- Site 3: Wetlands 3B, 3C, 3D, 3F, 3G, 3H, 3K, 3L, 3Q, 3R
- Site 4: Wetlands 4A, 4B, 4E, 4F

Additionally, areas were identified where wetlands could be enhanced for mitigation purposes where the hydrologic connection in and between wetlands could be improved or restored. Refer to Figure 3-10 – 3-12 for wetland locations.

- Site 2: Wetlands 2A, 2B, 2C, 2D, between 2E and 2F, between 2G and 2H, 2K, 2L
- Site 3: Wetlands 3A, 3B, 3C and 3D, 3D and 3G, 3L and 3N, 3M and 3N and 3P and 3O, 3L, 3N, 3Q, and 3P, 3R and 3Q
- Site 4: Wetlands 4A and 4B, 4F, 4G, and 4H

If mitigation is necessary, enhancing these wetlands onsite would allow native species to thrive, and improve the open water habitat of wetlands, thereby providing additional habitat to wildlife. Subsequently, the aesthetic value of these wetlands would increase.

Restoring the hydrologic connection between wetlands would increase available habitat to wildlife and provide additional nesting areas to birds and additional habitat and movement for fish and other aquatic organisms.

Mitigation banking is another mitigation option. However, with all of the mitigation opportunities available on each site, mitigation banking should be used as a last resort. Under this option, the NCA may purchase credits from an approved mitigation bank rather than restoring or creating wetlands on or near the development site. A wetlands mitigation bank is a local wetland area that has been restored, created, enhanced, or preserved, which is set aside to compensate for future conversions of wetlands for development activities (USEPA, 2005).

In accordance with Chapter 62-345, Florida Administrative Code, the Uniform Mitigation Assessment Method (UMAM) should be used to determine the amount of mitigation needed to offset adverse impacts to wetlands and to award and deduct mitigation bank credits. The UMAM assesses the functions provided by wetlands, the amount that those functions are reduced by a proposed impact, and the amount of mitigation necessary to offset that loss. Upon a determination that mitigation is required to offset a proposed impact, the UMAM should be used to quantify the acreage of mitigation, or the number of credits from a mitigation bank or regional offsite mitigation area. Mitigation credits might be obtained by improving wildlife habitat value individual wetlands via exotic plant management, increasing size of nesting areas, improving stocks of food species, etc.

For wetlands that will not be impacted on the site chosen for development, Article XII Earthmoving, Sarasota County Code requires a minimum of a 30-foot wide buffer zone of upland vegetation around preserved wetland areas.

In areas where mesic hammock habitat located adjacent to a wetland extends beyond 30 feet from the wetland, the buffer need to be increased to encompass the hammock up to a maximum width of 50 feet. Sarasota County requires a minimum 1:1 replacement for unavoidable destruction of wetland habitat. The County prefers on-site mitigation but does have provisions for off-site mitigation.

4.6 Vegetation, Fish and Wildlife

Under the No Action Alternative, there would be no impacts to vegetation.

Cemetery construction will replace the existing pasture ecosystem with a managed landscape. Given that the forage vegetation in the pastures is not native to the sites, the overall effect on natural communities will be minimal. Some wetlands may be filled or other natural habitats may be disrupted. However, these overlays are expected to be limited.

NCA will have an opportunity to incorporate native species into its planting plan at the site, which could ultimately result in more habitat diversity for a wider variety of species. For example removing drains and re-connecting wetlands, coupled with re-shaping portions of damaged wetlands to diversify hydrologic zonation, could increase available habitat for amphibians and/or fish, which would in turn increase habitat value for some of the wading birds.

Under the Proposed Action alternatives, human disturbances and alterations of the sites would have a minor impact on most terrestrial species, and construction of any of the three sites may remove portions of the existing natural communities. It is the desire of the NCA to retain the site in as natural a state as possible, retaining features such as natural drainage ways, valuable trees or tree groups, shrubs, ground covers, and streams. Given these goals of the NCA to preserve the natural vegetation communities present on-site, construction should be minimized and/or avoided in these areas, however, some habitat loss due to construction is expected. The wildlife habitat loss at Site 2 would consist of good quality habitat, and loss of moderate quality habitat at Sites 3 and 4.

Most of the species inhabiting or expected to inhabit the sites (see Table 3-16) are mobile generalist species that can survive within wide ranges of food and habitats, and/or are migratory and would use the sites seasonally. Therefore, it is anticipated that most wildlife species would avoid the disturbance during construction activities, and surrounding available habitat would be able to support them. Phased construction will provide some relief to resident wildlife. Clearing of vegetation and earth moving activities would result in some unavoidable mortality to burrowing and less mobile fauna.

Sarasota County requires that permits be obtained in advance before trees are removed. Article XVIII of the Tree Protection ordinance of Sarasota County states that the protection of trees within Sarasota County is desirable. It is a violation of Article XVIII to remove, cause to be removed, or initiate development on properties that contain trees, without the issuance of a Tree Removal and Protection Permit. In some cases, a tree removal permit is not required, such as the removal of trees with diameters smaller than 4.5 inches, and removal of exotic species. However, a permit will not be granted for the removal of any tree in cases where the removal of trees is not minimized in project design. Some trees are considered more significant than others. Trees can be significant due to their character, size, and age. "Grand Trees," as defined by Sarasota County, are trees that are unique and of value to the general public due to their size, age, and ecological value. Several species of trees are included in the Grand Tree designation, include but are not limited to American elm (*Ulmus americana*), live oak (*Quercus virginiana*), pine (*Pinus*

sp.), sugarberry (*Celtis laevigata*), and sweetgum (*Liquidambar styraciflua*). NCA should complete a tree survey prior to site development to determine the presence of “Grand Trees”. Further mitigation could include placing tree specifications in the construction contract and/or monitoring construction activities to ensure that Grand Trees and other trees on-site are protected.

Sarasota County requires special protection for mesic hammock habitats. A detailed site survey to evaluate whether any on-site hammocks are “mesic hammocks” is recommended at the selected site. If mesic hammocks are present, County regulations require that they be preserved and buffers be established.

4.7 Threatened and Endangered Species

Under the no action alternative, there would be no impacts to threatened and endangered species.

4.7.1 Federally Listed Species

Wood Stork

The wood stork is a State and Federally Listed Endangered Species. The wood stork was identified by the USFWS as being the only federally listed species known from the proposed sites. Wood storks are found in peninsular Florida but are rare or absent in the panhandle and Florida Keys. Outside of Florida, they are found in South Carolina and Georgia. Wood storks were observed by MACTEC personnel on Sites 2, 3 and 4

This bird nests in large rookeries with nests in the upper branches of cypress trees or in mangroves on islands. There are usually several nests in each tree. Rookeries are located in a variety of inundated forested wetlands such as cypress swamps, mixed hardwood swamps, sloughs, and mangroves.

Wood storks first breed at the age of 4 years. They lay 2 to 5 eggs with an average of 2 young per successful nest. In south Florida, they may lay eggs as early as October and fledge in February or March. In central and north Florida, they lay eggs from March into May and fledge in July and August. During breeding season, a pair of Wood storks and their young (assuming average production of 2.25 young per nest) need approximately 443 pounds of fish.

Wood storks feed on small fish from 1-6 inches long. A favorite food is topminnows and sunfish. They feed in shallow water in freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches. Due to their method of feeding, wood storks are attracted to falling water levels that concentrate fish. The depressional wetlands found in the pastures at Sites 2 and 4 provide this type of feeding habitat. When feeding, the wood stork probes the water with the bill partially open. The bill quickly snaps shut when the bird encounters a fish.

During the winter, after breeding, wood storks migrate to the more southern reaches of their range. In the summer, the birds move north. Depending on feeding conditions, which are very closely related to hydrologic patterns, wood storks will return to previous nesting sites.

Conservation measures for this species on pasture land consist of maintaining good quality wetlands for foraging.

The success of this species is dependent on the protection of currently occupied nesting, roosting, and foraging habitat. Restoration of suitable nesting and foraging habitat is essential. Water level management at rookeries, such as flooding to stimulate nesting and drying to prevent trees from dying and promote new tree recruitment, may greatly benefit this species. These birds, their nests and eggs are also protected by the U.S. Migratory Bird Treaty Act and state Wildlife Code. (USFWS, 2005; FNAI, 2001). Any project impacts to wetlands will require co-ordination with USACE which will also provide protection for wood stork core foraging habitat.

4.7.2 Crested Caracara

The crested caracara is a State and Federally Listed Threatened Species. Crested caracaras are found in south-central Florida, southeastern Texas, and southern Arizona. In Florida, they are most common in Osceola, Highlands, Okeechobee, De Soto, Glades, and Hendry county. They are nonmigratory. A crested caracara was observed by MACTEC personnel on Site 4 in April, 2004 and has been reported from Sites 2 and 3.

Crested caracaras prefer to nest in cabbage palms. They will also nest in live oaks. They prefer to nest in open areas including dry prairies or pastures which have both trees and shallow ponds/sloughs. Crested caracaras have large territories.

Crested caracaras mate for life. The breeding season is from January to March, usually producing two to three eggs. Although the young leave the nest at about 8 weeks of age, the family group stays together for about 2 to 3 months.

Crested caracaras feed on carrion and live prey. Living prey is usually small and consists of mainly turtles and turtle eggs and also insects, fish, frogs, lizards, snakes, birds, and small mammals. Pairs will sometimes work together to take down larger pray such as smaller wading birds and rabbits.

Conservation on pastures lands can be accomplished by maintaining good quality wetlands for foraging and cabbage palms for nesting.

Due to the large territory required by these birds, land acquisition alone will not suffice in their conservation. While land acquisition should continue, it should be supplemented by conservation easements on private, appropriate lands. Conservation by private landowners can be encouraged with tax breaks and other incentives (FNAI, 2001; USFWS, 2005).

4.7.3 Bald Eagles

Bald eagles are a State and Federally Listed Threatened Species. It has been proposed for delisting. Bald eagles are found throughout the United States with their largest breeding populations in Alaska and Florida. Bald eagles are reported for Site 2.

Bald eagles nest in large nests in tops of large trees near lakes, marshes, rivers, or other wetland or coastal areas. They prefer live pine trees but will nest in mangroves where there are few tall emergent trees. They mate for life and will return to the same nest year after year.

Mating season for Bald eagles in Florida is late May through July. From nest building to fledging of young, the bald eagles' breeding cycle lasts about six months. Bald eagles lay approximately 2 to 3 eggs once a year. The eggs hatch after 35 days, after 3 months the eaglets are flying, and young eagles are on their own after 4 months. Juveniles and younger birds migrate north in summer.

Bald eagles feed on primarily on fish and carrion. But, they will also feed on waterfowl, wading birds, rodents, and snakes. Generally, they will feed on anything they can catch. Food is caught with their powerful talons. Adult bald eagles cannot carry much more than 4 lbs in flight.

In extreme southern Florida, bald eagle adults are year round residents. After breeding season, birds in central and north Florida migrate north. During the summer, some northern populations migrate south to north Florida.

Protection of the bald eagle on pasture lands consists maintaining good quality wetlands for foraging and tall trees for nesting.

The bald eagle was upgraded from Endangered to Threatened in 1996. It has since been proposed for delisting. The continued success of these birds depends on protecting foraging and roosting sites. Acquisition of breeding territories should also continue. Buffer zones should be enforced around nesting areas, especially in Florida where habitat is lost through development. Pesticides should be monitored. Bald eagles and their nests and eggs are protected by the U.S. Migratory Bird Treaty Act and state Wildlife Code. (FNAI, 2001; USFWS, 1995).

4.7.4 State Listed Species

The sandhill crane is a Threatened Species in Florida. According to FNAI, sandhill cranes are found in most of peninsular Florida and were observed on all three sites. On Site 2, an adult sandhill crane was observed with a very young juvenile. These birds are found in prairies, freshwater marshes, and pasture lands. They will feed on crop fields, golf courses, and other open lawns. Their nest is a mound of herbaceous plant material in shallow water or on the ground in marshy areas. The U.S. Migratory Bird Treaty Act and the state Wildlife Code prohibit take of birds, nests, or eggs. These birds have large home ranges and therefore cannot be protected through public lands alone. Conservation easements on ranchlands near existing habitat aid in habitat protection. Also, fire is necessary to prevent invasion of woody vegetation in crane habitat. Some areas may benefit in the restoration of ditches to natural hydrologic conditions. Pesticides for fire ant control should be used cautiously and with the guidance of a wildlife biologist since such pesticides have been linked to the death of sandhill cranes elsewhere. On pasture lands, wetland nesting areas and grassy fields for foraging should be maintained (FNAI, 2001).

Little blue herons are a Species of Special Concern in Florida. The little blue heron was observed on Sites 2 and 4. According to FNAI, this species feed in shallow freshwater, brackish, and saltwater habitats, but they prefer freshwater lakes, streams, and marshes, and swamps. They nest in woody vegetation. The U.S. Migratory Bird Treaty Act and the state Wildlife Code prohibit take of birds, nests, or eggs. Preserves should be established and wetlands regulated to assist in protecting these birds. Also, degraded wetlands should be restored. Conservation measures on pasture land consist of maintaining good quality wetlands for foraging (FNAI, 2001).

The white ibis is also a Species of Special Concern in Florida. White ibises were observed on all three sites. According to FNAI, this species is found in a wide variety of habitats, including wet prairies and man-made ditches. They prefer foraging in freshwater wetlands when feeding young and the young will not grow when access to freshwater is limited. The white ibis nests in colonies in trees, shrubs, and vines. These birds, their nests and eggs are also protected by the U.S. Migratory Bird Treaty Act and the state Wildlife Code. Nesting sites and wetlands should be protected from human disturbance to assist in the protection of this species. On pasture land, good quality wetlands should be maintained fro the conservation of this species (FNAI, 2001).

The snowy egret, a Florida Species of Special Concern, is found throughout Florida This species, which was observed only on Site 4, nests in coastal and inland wetlands. Nests are usually over shallow water or on islands separated by open water from the shoreline. They feed in many types of wetlands and breeding colonies require a wide variety of wetlands within 5 to 7 miles. These birds, their nests and eggs are also protected by the U.S. Migratory Bird Treaty Act and the state Wildlife Code. Wetlands should be managed to prevent rapid changes in water depth. Restoration

of degraded wetlands and conservation of breeding and foraging habitats help this species. On pasture lands, this species will benefit from good quality wetlands (FNAI, 2001).

Ospreys are a Species of Special Concern in Florida. They are found throughout Florida and are reported from Site 2. These birds prefer to nest near large, open water bodies in large trees. They may nest in lower trees, especially in mangrove swamps. Nesting may be colonial. The U.S. Migratory Bird Treaty Act and the state Wildlife Code prohibit take of birds, nests, or eggs. Regulation of boat traffic in nesting areas and the construction of nesting platforms will help protect this species. Conservation measures on pasture lands for this species consist of maintaining existing open water wetlands for foraging (FNAI, 2001).

Burrowing owls are a Florida Species of Special Concern. A burrowing owl was observed outside its burrow on Site 4. These small owls lay their eggs in burrows in high lands with sparse vegetation and sandy ground. They will also use pastures, airports, ball fields, school grounds, road right-of-ways, and vacant spaces in residential areas. The U.S. Migratory Bird Treaty Act and the state Wildlife Code prohibit take of birds, nests, or eggs. This species can be protected through public education to prevent nest disruption and habitat protection. Buffer zones around development in their habitat are also beneficial. High, scrubby areas on pasture lands should be preserved for the protection of this species (FNAI, 2001). Although not observed during the site visits, indigo snakes (a federally listed threatened species) and other wildlife species are often found in owl burrows. By definition, the scraping and filling activities that will be required for cemetery construction would destroy owl burrows. Therefore, an owl survey should be conducted at the selected site by a competent ornithologist prior to each phase of construction in order to identify any birds that may need to be relocated.

Roseate spoonbills are a Species of Special Concern in Florida. A roseate spoonbill was observed on Site 2. Roseate Spoonbills nest on mangrove islands or in Brazilian Pepper on man-made dredge islands and more rarely in willows around freshwater environments. They nest in mixed-species colonies. Roseate spoonbills forage in shallow marine, brackish, and freshwater systems. They are residents in south Florida. The birds and their nests and eggs are protected by the U.S. Migratory Bird Treaty Act and state Wildlife Code. Additionally, a 330 ft buffer zone is recommended around nesting colonies. Wetlands should and foraging habitat should also be monitored and maintained. Pasture land wetlands of good quality should be provided for this species (FNAI, 2001).

The American alligator is a Florida Species of Special Concern. Federally, it is listed as Threatened by Similarity of Appearance to other endangered crocodylians. This large reptile is found in most permanent bodies of freshwater. This species can be protected through the protection of wetlands. Large sized wetlands on pasture land should be maintained for this species (FNAI, 2001).

A Strategic Habitat Conservation Area (SHCA) for wading birds is located within and beyond the southern boundary of Site 2, according to the Florida Fish and Wildlife Conservation Commission (FFWCC). The FFWCC and the Department of Environmental Protection have developed setback distances around wading bird colonies of 330 feet (100 m) to prevent human disturbance (FNAI, 2001).

The NCA could improve upon this set-back request by concentration wetland and habitat mitigation efforts in this portion of the property, should Site 2 be selected for development.

4.7.5 Mitigation

The policy of the Veterans Affairs in cemetery construction is to retain the site in as natural a state as possible and leave undisturbed many natural features. Many landscaping plantings are of regionally native plants. These practices should be maintained at whichever site is selected. The following recommendations are site specific and employ the preexisting policies of the VA.

At this time, we are unsure of the possible effects of intermittent gun salutes. It may well be assumed that this noise will affect birds and animals nearby. We cannot predict whether they will become accustomed to it or become displaced from adjacent habitat.

4.7.5.1 Site 2

Site 2 provides important wetland foraging habitat for state and federally listed wading birds. The wetlands should either be conserved or restored. In-fill and construction should be avoided and/or minimized. The health of these wetlands, and the birds and animals dependent on them, depend greatly on natural hydrologic cycles. These cycles should be restored and maintained. Any drainage and irrigation systems should which may be required for cemetery operation be constructed with the goal of maintaining functional wetlands. These wetlands will not only provide habitat for many species but will be aesthetically pleasing to visitors.

Additionally nesting habitat, such as tall trees, should be conserved. Pesticides use should be limited, and only done in conjunction with an IPM. Trees planted for these birds could also be used as separation areas between burial sections, as recommended by the development guidelines of the VA.

Sandhill cranes use this site for foraging and possibly nesting. Before action is taken in wetland areas, the land should be surveyed for nests. This bird will also benefit from the conservation and restoration of wetlands. Sandhill cranes have been known to forage on golf courses and pasture land. Construction should allow sufficient open grassland or turfgrass to provide foraging areas. Pesticides should be used only in compliance with a site-specific IPM Plan.

Crested caracara prefer to nest in cabbage palms. These trees, and others, especially live oaks, should be conserved and considered for plantings in the separation areas and throughout the site. They will also benefit from the conservation of wetlands.

There is an SHCA wading bird habitat in the southern portion of the site (Figure 3-24). The FFWCC requires a 330 foot setback around wading bird colonies to prevent human disturbance. The FFWCC should be consulted if this site is chosen (FFWCC, 2005).

While gopher tortoises and burrowing owls are not expected to occur at this site, if this site is chosen a survey to determine their presence or absence is recommended before any earthmoving activities are initiated. Such surveys would likely be required during project permitting.

Due to the potential effect of insecticides and herbicides on protected species, an IPM should be designed with the input of a competent wildlife biologist and implemented for construction and operation.

4.7.5.2 Site 3

Wetlands and streams should be conserved and restored and their natural hydrologic cycles should be maintained or restored to provide foraging for wading birds, habitat for alligators, and nesting areas for sandhill cranes. Destruction of good quality wetlands should be avoided and/or minimized. Additionally, before action is taken, wetland areas should be surveyed for sandhill crane nests. The large oaks and other Grand Trees on site should be preserved, and they should be surveyed to see which species nest in them. If they are being used by caracaras, then buffers should be established.

Open grassland or turfgrass should be available for sandhill crane foraging. Cabbage palm and other trees should be planted to serve as roosts and nesting habitat.

While gopher tortoises and burrowing owls are not expected to occur at this site, if this site is chosen a survey to determine their presence or absence is recommended before any earthmoving activities are initiated. Such surveys would likely be required during project permitting.

Due to the potential effect of insecticides and herbicides on protected species, an IPM should be designed with the input of a competent wildlife biologist and implemented for construction and operation.

4.7.5.3 Site 4

Site 4 also provides valuable foraging habitat to listed wading birds and other species. Wetland impacts should be minimized and/or avoided. Natural hydrologic conditions in these wetland areas should be maintained.

Sandhill cranes use this site for foraging and possibly nesting. Before action is taken in wetland areas, the land should be surveyed for nests. This bird will also benefit from the conservation and restoration of wetlands. Sandhill cranes have been known to forage on golf courses and pasture land. Construction should allow sufficient open grassland or turfgrass to provide foraging areas.

Cabbage palms and other trees should be conserved and used in planting. This will benefit the crested caracara that use this site. This species will also benefit from the conservation and restoration of wetlands.

The land occupied by the burrowing owl should be conserved with an appropriate buffer. A more detailed survey should be conducted to ensure other burrowing owl nests are not disturbed. Visitors should be educated about this species to prevent accidental nest disturbance. Additionally, the presence of the burrowing owls indicated suitable habitat for the gopher tortoise, a State Species of Special Concern, and the Eastern indigo snake, a State and Federally Listed Threatened Species. If this site is chosen, a more extensive survey for these animals is necessary. Such surveys would likely be required during project permitting.

Due to the potential effect of insecticides and herbicides on protected species, an IPM should be designed with the input of a competent wildlife biologist and implement for construction and operation.

4.8 Exotic and Invasive Species

The NCA should comply with EO 13112, Invasive Species, which requires all federal agencies to prevent the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health impacts that invasive species cause.

According to Section 54-621, Sarasota County's Exotic Plant Code, melaleuca (*Melaleuca quinquervia*), Australian pine (*Casuarina spp.*), Brazilian pepper (*Schinus terebinthifolius*), carrotwood (*Cupaniopsis anacardioides*), Chinese tallow (*Sapium sebiferum*), and beach naupaka (*Scaevola taccada* or *S. sericea Vahl.*) have spread rapidly throughout Sarasota County, and have displaced native vegetation and associated wildlife habitat, and have created ecologically undesirable vegetative monocultures. Sarasota County encourages the removal of these species, provided such removal does not damage native vegetation. The Sarasota County Comprehensive Plan (Apoxsee) states that melaleuca, Australian pine, and Brazilian pepper are a serious concern and must be controlled. According to the Sarasota County Exotic Plant Code, the importation, transportation, sale, propagation, and planting of these species is prohibited.

Of these particular species, Australian pine and/or Chinese tallow were observed on Sites 2 and 3. None of these species were observed on Site 4. The most effective control methods for Australian pine, Chinese tallow, and other exotic/invasive species of vegetation are mechanical

and chemical. Manual removal is considered best for seedlings, saplings, and small trees. Herbicides approved for aquatic use and terrestrial herbicides can be used to chemically treat exotic/invasive vegetation species, and repeat applications may be required for larger populations (NCISI, 2005; University of Florida, 2005).

Four exotic animal species are also cause for concern at these sites: the coyote (*Canis latrans*), the nine-banded armadillo (*Dasypus novemcinctus*), feral pig (*Sus scrofa*), and fire ant (*Solenopsis invicta*). Control of these animals can be achieved through several strategies. Fencing can be used to physically keep coyotes, nine-banded armadillos, and feral pigs out. An effective fence must be at least 66 inches high with a 38 inch outward overhand to keep animals like coyotes from jumping over. Alternatively, these animal species can be legally trapped and shot in Florida (Barrett and Birmingham, 1994; Coutes *et al.*, 2002; Schaefer and Hostetler, 2003). Fire ants can be controlled by application of insecticides.

Under the No Action Alternative, there would be no impact as a result of invasive species.

Under the Proposed Action Alternatives, all three sites have invasive species that would need to be controlled as part of site development and operation. The control of invasive species would allow for native species to flourish. A more intensive survey should be completed to identify invasive species and their distribution on the selected site prior to site development. Additionally, it is anticipated that the selected site would require a long-term invasive species management plan to control invasive species. All efforts associated with control of nuisance species should be conducted under the auspices of the cemetery's IPM.

4.9 Archaeological Resources and Historical Structures

Alternative 1- No Action

No impacts to cultural resources would occur under the No Action Alternative.

Alternative 2- Site 2, Hawkins Ranch

The approximately 467 acres comprising Site 2 consists of very low lying, flat land which is dotted with small wetlands. The area has been ditched and drained and was likely much more marshy in the past than it is today. There are no elevated areas present which constitute preferred habitation areas for pre-historic peoples. Furthermore, severe ground disturbance is noted throughout the site in the form of ditching and bull wallows which penetrate the surface for 2 to 3 feet. Archaeological artifacts present in such a context would lack provenience integrity (the original relationship between the locations of the artifacts, which could give some indication of order of deposition or shared use, would be lost). Construction of the cemetery will involve disturbing surficial soils on significant portions of the site which would destroy any archaeological sites that may be located there. However, based on the site reconnaissance,

literature, and records searches, the probability of substantial cultural resources on the site is low. During the site visit, no artifacts were identified on Site 2. No recorded archaeological or historical sites or structures were found within the APE of Site 2 in a search of either the Florida Master Site File or the National Register of Historic Places. Should this site be chosen for the location of the cemetery, further investigations of cultural resources would need to be conducted in coordination with the SHPO (Appendix C) prior to ground disturbing activities.

Alternative 3- Site 3, Myakka Ranch

Site 3 comprises approximately 574 acres of cropland and cattle pasture spotted with wetlands. The water table was located a yard below the ground surface and was likely higher before the ditching and draining, making for much marshier conditions in its natural state. Only one area provided somewhat elevated surfaces near a fresh water source. Three test pits were dug along this ridge over-looking the small creek on the southeast portion of the site. No evidence of pre-historic peoples was found. The test pit did uncover historical remains. There is known to have been an old homestead in this area. This homestead is not known to be of historical significance. No recorded archaeological or historical sites or structures were found within the APE of Site 3 in a search of either the Florida Master Site File or the National Register of Historic Places. Based on the results of the preliminary study, the development of Site 3 is unlikely to have a significant impact on regulated cultural resources. Should this site be chosen for the location of the cemetery, further investigations of cultural resources would need to be conducted in coordination with the SHPO (Appendix C) prior to ground disturbing activities.

Alternative 4- Site 4, Hi Hat Ranch

The approximately 460 acres comprising Site 4 are low and marshy and dotted with wetlands. The land is extensively ditched and drained and was likely under wetter conditions in its natural state. No recorded archaeological or historical sites or structures were found within the APE of Site 4 in a search of either the Florida Master Site File or the National Register of Historic Places. There are no structures on the site other than water troughs and feeding bunkers. Only one area was found to provide a high-probability zone for cultural resources. The two test pits placed in this area on the eastern edge of the site uncovered cultural remains (Figure 3-5) in the form of lithic debitage (e.g. stone flakes, presumably from tool making activities). This site was likely a camp for prehistoric peoples in the areas who were making use of the wetlands. Because this area is small and on the eastern central border of the site, the VA may choose to avoid placing burials in this area. It is recommended that a consultation with a professional Cultural Resource Management firm and coordination with the SHPO be conducted before proceeding with excavation of this area. The other areas of the site have a low probability for cultural resources. Should this site be chosen for the location of the cemetery, further investigations of cultural resources would need to be conducted in coordination with the SHPO (Appendix C) prior to ground disturbing activities.

4.10 Noise and Other Aesthetic Concerns

Under the No Action Alternative, there would be no impacts on the noise levels or aesthetics of the area.

Under the Proposed Alternatives, there would be minimal impacts to noise and no impact to the aesthetics of the area resulting from the development of a cemetery at any of the three proposed sites. National cemeteries are required to maintain a park-like setting and keep the grounds visually pleasing. NCA guidelines recommend that native vegetation be used in site landscaping, and valuable trees be preserved. Thus, the pastoral landscape which currently exists at these sites would probably remain, although in an altered form.

Gun salutes will occur at most of internments. The short bursts of noise with the salutes will only occur during weekday business hours and should not be too disruptive to neighbors in these rural sites.

Nesting birds and resident wildlife would be subjected to temporary increases in noise levels during each phase of cemetery construction, but most especially during the first phase. Sources of construction noise would likely include earthmoving equipment, trucks, and paving equipment. Impacts could be minimized by limiting construction activity to daylight hours and by using properly muffled equipment. The VA will need to comply with federal noise regulations during construction and operation, and ensure that all contractors use properly muffled equipment. Compliance with County noise regulations may also be required during project permitting.

Once the cemetery is in operation, daily noises will include gardening equipment (mowers, weed eaters, etc.), backhoes, and dump trucks. Noises associated with funerals will include traffic from the corteges, “taps” or other music, and gun salutes. These sounds will add a human component to the noise in the vicinity which is currently limited to road traffic noise.

4.11 Air Quality

Under the No Action Alternative, there would be no impacts on the air quality of the area.

Under the Proposed Alternatives, there would be minimal impacts to the air quality of the area resulting from the development of a cemetery at any of the three proposed sites. During construction there will be heavy equipment exhaust at the site, in addition to increased fugitive dust emissions. Best management practices to control erosion should also help to minimize releases of fugitive dust. At build-out there may be as many as several hundred vehicle trips per weekday to the cemetery. These vehicles’ emissions will result in a net increase in air pollutants. However, because the air quality in Sarasota County meets standards, the amounts of air

pollutants likely to be released from these vehicle trips are not likely to cause any noticeable impact on air quality in the vicinity.

4.12 Community Services

Under the No Action Alternative, there would be no impacts on community services in the area.

Under the Proposed Alternatives, no significant impacts to community services would be expected. All three site alternatives are located in unincorporated Sarasota County, and are all expected to retain that status into the future. There will be no live-in personnel, thus there would be no noticeable effect on the school districts. There will be jobs created at the site for temporary construction workers and permanent employees. These employees may be drawn from current residents, or they may be recruited from elsewhere and become new residents. Sarasota County has adequate capacity in their emergency and non-emergency service departments to support the employees of and visitors to the proposed cemetery.

4.13 Land Use

Under the No Action Alternative, there would be no impacts to zoning or land use.

Under the Proposed Alternatives, there would be minimal impacts to zoning and land use or the area resulting from the development of a cemetery at any of the three proposed sites. None of the three proposed sites are specifically zoned for cemetery use. However, with cemetery construction the ultimate landscape would still be open space with many of the existing habitat functions either preserved or improved.

4.14 Infrastructure

Under the No Action Alternative, there would be no impacts to infrastructure.

It is anticipated that there would be no impacts to infrastructure if a cemetery were constructed at any of the three alternative sites.

4.15 Local Economy

Under the No Action Alternative, there would be no effect on the local economy.

The taxable value of the land at these three sites is low due to the low millage assigned to these agricultural properties. Removing these properties from the tax roll in Sarasota County would have a minimal effect on the County's tax base. Cemetery construction and operation will result

in creation of more jobs than would be lost. It is anticipated that there would be a net gain in jobs should the cemetery be constructed at any of the three alternative sites. The creation of a National Cemetery at any of the sites would result in beneficial economic effects.

4.16 Traffic, Transportation, and Parking

Under the No Action Alternative, there would be no impacts on local traffic or transportation.

Funerals and employee activity at the proposed cemetery would increase the traffic volume at the chosen site. According to an analysis completed for another proposed national cemetery in Florida (URS, 2002) funerals occur between 9:00 AM and 3:00 PM Monday through Friday. This would constitute the majority of traffic to and from the cemetery. Additional traffic would be generated by visitors to the cemetery, mainly on weekends and holidays. Employees commuting to and from the cemetery would generate the cemetery's only peak hour traffic.

At other similarly-sized cemeteries, the VA employs approximately 15 people. A workforce of that size would therefore increase the volume of traffic on the road, at peak hour, by approximately 15 vehicles.

The cemetery will likely be available for services for approximately 250 days out of the year, on non-holiday weekdays only. The NCA estimates the number of interments will peak at 4,079 in 2012. Assuming approximately 16 funerals per day with approximately 17 vehicles in each funeral procession (URS 2002), there would be approximately 272 vehicles entering and exiting the cemetery for funerals each day.

Non-funeral visits to the cemetery would most likely occur during weekends and holidays. The VA expects approximately 3,000 such visitors a year, averaging about 10 visitors per day (URS, 2002). This data is summarized below in Table 4-1.

Table 4-1. Expected Daily Traffic Volumes Generated by VA Cemetery for Year 2012

Reason for Visit	Vehicles Entering VA Cemetery (vehicles/day)	Vehicles Leaving VA Cemetery (vehicles/day)	During Peak Hours (vehicles/day)	During Off-Peak Hours (vehicles/day)
Attending Funeral	272	272	0	544
Other visitations	10	10	0	20
Employed by VA	15	15	30	0
Total	297	297	30	564
Total daily traffic generated by VA Cemetery (vehicles/day): 594				

Source: URS, 2002; VA NCA 2005.

Created by: SEB Checked by: EMH

4.16.1 Site 2

The traffic volume on SR 72 drops considerably from where it crosses I-75 as it goes east past Site 2. With the VA expecting to add approximately 594 daily vehicle trips to the east and west bound lanes each (with only 30 of those during peak hours) there should be minimal to no impact on the LOS of SR 72. Table 4-2 summarizes the change in traffic volume expected. Although Table 4-2 shows a 20% increase in traffic on a portion of SR72, this portion is east of the site. Assuming most cemetery traffic will be coming from the west (Sarasota and I-75), this portion should actually receive minimal traffic from the cemetery. The majority of traffic generated by the cemetery will travel the portion west of Proctor Road and cause only a 6% increase in vehicles per day.

Table 4-2. Expected Peak Change in Traffic Volume on SR 72 if Site 2 is Selected for Cemetery Development

Portion of SR 72	Current Traffic Volume (vehicles/day)	Traffic Volume after completion of VA Cemetery (vehicles/day)	Percent Increase of Traffic Volume as a Result of VA Cemetery
West of Proctor Road	9,500	10,094	6%
Northwest of Myakka River State Park Road	2,400	2,994	20%

Source: FDOT, 2004; MACTEC, 2005.

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4.16.2 Sites 3 and 4

On the poorest rated (Rating = "F") portions of Fruitville Road (those closest to the interstate), the construction of a new VA cemetery will increase the traffic volume by 3-4%. On the portion of Fruitville Road where the sites are located, a section with a "D" rating, the cemetery will increase the traffic by approximately 7%. This volume is relatively low compared to total volume and most of the volume will be during off-peak hours. Therefore, future changes in the LOS of Fruitville Road should not be attributed to the VA Cemetery. Table 4-3 below summarizes the predicted changes.

Table 4-3. Expected Peak Changes in Traffic Volume on Fruitville Road if Site 3 or 4 is Selected for Cemetery Development

Portion of Fruitville	Current Traffic Volume (vehicles/day)	Traffic Volume after completion of VA Cemetery (vehicles/day)	Percent Increase of Traffic Volume as a Result of VA Cemetery
I-75 to Coburn	20,400	20,994	3%
Coburn to East Road	20,400	20,994	3%
East Road to Sarasota Center Blvd	16,140	16,734	4%
Sarasota Center Blvd to Dog Kennel Road	16,140	16,734	4%
Dog Kennel Road to Verna Road	8,851	9,445	6%

Source: FDOT, 2004; MACTEC, 2005.

Prepared by: SEB Checked by: EMH

Therefore, it is assumed that construction of a national cemetery at either Site 3 or 4 will have minimal impact on traffic.

However, Fruitville Road is out of compliance with the County's concurrency regulations. A search of the County's website and Comprehensive Plan yielded no information on funding for the immediate widening of Fruitville Road. The comprehensive plan allow funds for widening a small (less than 1 mile) portion of Fruitville Road east of I-75, but appropriates no funds to any larger portion of the road east of the interstate. It appears that a source of funds for this project has not yet been determined. The VA should consult with the County regarding this apparent lack of funding to ensure that they are not held responsible as a result of projected increases in traffic volumes generated by the proposed cemetery.

4.17 Potential for Generating Controversy

Local news coverage for this project during the site identification phase was generally positive.

Under the No Action Alternative, controversy may be generated by local veterans who would not have access to local burial services and their public officials.

Agencies and local groups interested in Myakka River issues, particularly water quality, will likely be active participants in the public process associated with this project. Their concerns will be focused on the adequacy of measures to protect water quality, both ground and surface.

Local residents, especially on Fruitville Road, may raise concerns about traffic volumes should Sites 3 or 4 be selected. Road improvements may be required to accommodate the increased traffic from multiple funeral corteges. The family living at Site 3 (Myakka Ranch) would have to relocate if that site were developed. Reasonable notice would need to be given so that they can find suitable alternate living arrangements.

4.18 Solid and Hazardous Wastes

Under the No Action Alternative, there would no new impacts related to waste generation or disposal.

Cemetery development at any of the three alternative sites would require proper disposal of trash, construction debris, bunkers, fencing, etc. Once the cemetery is in operation, proper disposal of trash and yard waste would be required. Hazardous material storage on Site 2 and 3 is minimal (see Section 3.14), and was not noted at Site 4. The cemetery is not likely to generate hazardous wastes.

It is likely that the County would continue their mosquito spraying program after cemetery development. However, given the practice of spraying during the evening hours, it is unlikely that spraying schedules would conflict with cemetery visitors.

4.19 Federal Compliance

The analysis and recommendations in this EA support the conclusion that NCA’s proposed project will be in compliance with Federal Regulations (see Table 4-4).

Table 4-4. Compliance with Federal Regulations

Regulation	Subject	Project Compliance Issues
EO 11988	Floodplain Management	100-year floodplain occupies only a few acres of Sites 2 and 3. These are wetland acres which would likely be preserved anyway. Site 4 has a larger area within the floodplain, land which could easily be used for open space. Project objectives can still be accomplished if site construction avoids floodplain.
EO 11990	Protection of Wetlands	Appropriate Section 404 permits will need to be obtained from the USACE. Wetlands protections will include: avoid impacts; minimize impacts; and/or mitigation.
EO 11987	Exotic Organisms	Exotic / invasive species are present at each of the three alternative sites. The IPM and planting / landscaping plans for the developed site will need to be developed and implemented to ensure that invasive species are not inadvertently introduced and that those present are controlled.
EO 12898	Environmental Justice	No issues identified.
33 USC 1323, Section 313; 40 CFR 122	Clean Water	This project will not require a discharge permit, but coverage under an NPDES stormwater permit will be required. BMPs for construction and operation phases associated with protection of surface- and ground-water are discussed in the report.
PL 93-205	Endangered Species	No incidental “take” of federally-listed species are expected as a result of cemetery development at any of the alternative sites.
16 USC 1274 ET SEQ	Wild and Scenic Rivers	None of the sites lie within the watershed of a river that has federal designation as Wild and Scenic.
Noise Control Act of 1972	Noise Control	Compliance with federal noise standards is expected during construction and operation.
PL 93-523	Safe Drinking Water	BMPs for construction and operation of the cemetery as they related to groundwater protection are discussed in the report.
PL 97-348	Coastal Barriers	Awaiting response from the Florida Department of Community Affairs
16 USC 1451 Et SEQ, Amended by PL 101-508	Coastal Zone Management	Awaiting response from the Florida Department of Community Affairs

Table 4-4. Compliance with Federal Regulations (continued)

Regulation	Subject	Project Compliance Issues
40 CFR 230	Discharge of Dredge or Fill Material	Once a site has been selected and a design plan prepared, NCA will need to consult with the USACE to determine whether or not a dredge and fill permit would be required.
40 CFR 117	Reportable Quantities of Hazardous Substances	Reportable quantities of hazardous substances are not known from any of these agricultural lands.
40 CFR 761	PCB Issues	PCBs are not reported from any of these agricultural lands.
36 CFR 800	Historic Preservation	SHPO consultation and Section 106 compliance are recommended.

Created by: JLD Checked by: ABS

5.0 Summary and Conclusions

Environmental Assessment Summary

Project Location: Sarasota County, Florida

Project Title: National Cemetery

Assessed By: MACTEC

Summary of Environmental Impact of the Proposed Project:

With implementation of the design, construction and operational measures identified in the EA, no significant adverse environmental impacts are anticipated, for cemetery development at Hawkins Ranch (Site 2), the alternative identified through this EA as the site posing the least environmental impact.

Recommendation:

- Finding of No Significant Impact. (This project will not result in a significant adverse impact on the environment and will not result in highly controversial adverse public reaction; therefore an environmental impact statement is not required.)
- An Environmental Impact Statement is required.

S	M	MI	N	Attributes Summary
			X	Aesthetics
			X	Air Quality
			X	Community Services
			X	Cultural Resources
			X	Economic Activity
		X		Floodplains, Wetlands, Coastal Zone
	X			Geology And Soils
		X		Hydrology, Water Quality
			X	Land Use
		X		Noise
			X	Population And Housing
			X	Potential For Generating Substantial Controversy
		X		Real Property
			X	Solid Hazardous Waste
		X		Transportation Traffic And Parking
			X	Utilities
		X		Vegetation And Wildlife
			X	U.S. Environmental Regulations (If Any, List)

Note: S = Severe
M = Moderate
MI = Minimal
N = None

Environmental Assessment Summary

Project Location: Sarasota County, Florida
Project Title: National Cemetery

Definitions of Impacts

1. Severe Complete destruction, disruption, violation of standards, incompatibility, disturbance, or surpassing capability of the attribute under consideration.
2. Moderate Considerable destruction, disruption, violation of standards incompatibility, disturbance or surpassing of capability of the attribute. However, the effect can be minimized through further study and mitigation.
3. Minimal Temporary or minor destruction, disruption, violation of standards, incompatibility, disturbance or surpassing of capability of the attribute. This effect can be mitigated through standard design, construction or operational procedures.
4. None No effect anticipated.

Project Description:

Refer to Section 2 of the EA.

Alternatives Considered:

The “No Action” alternative and various alternatives sites were considered under a separate process, which identified Site 2 as the site posing the lease environmental impact for the cemetery location. As part of the current design effort, three alternative sites were evaluated. The alternatives are described in Sections 2 and 3 of the EA.

Environmental Impacts:

Refer to Section 4 of the EA.

Mitigative Actions:

Refer to Section 4 of the EA.

Environmental Assessment Summary for Site 2

Aesthetics

Impacts

	Adverse
X	Beneficial
X	Long Term
	Short Term

Attributes

X	Vegetation Removal		Building Restoration
	Landform Alteration		Service Area Development
X	Open Space Alteration	X	Grounds Improvements
X	New Building Construction		

Comments:

Refer to Section 3.1 of the EA.

Air Quality

Impacts

	Adverse
	Beneficial
	Long Term
	Short Term

Attributes

X	Dust		Presence Of Odors
X	Occurs in an Air Quality Attainment Area	X	Particulate Emissions

Comments:

Refer to Section 3.2 of the EA.

Community Service

Impacts

	Adverse
	Beneficial
	Long Term
	Short Term

Attributes

	Alteration of Public Facilities
	Alteration of Public Services
	Alteration of Public Utilities

Comments:

Refer to Section 3.3 of the EA.

Cultural Resources

Impacts

	Adverse
	Beneficial
	Long Term
	Short Term

Attributes

	National Register Property		Requires SHPO Consult.
	Eligible Property		Architecturally Significant
	Criteria of Effect		
	Criteria of Adverse Effect		

Comments:

Refer to Section 3.4 of the EA.

Economic Activity

Impacts

	Adverse
X	Beneficial
X	Long Term
X	Short Term

Attributes

	Reduction in Wages to Area
X	Additional Wages in Area
X	Local Purchase of Goods and Services
X	Increase in Direct Work Force

Comments:

Refer to Section 3.5 of the EA.

Floodplains, Wetlands, Coastal Zone

Impacts

X	Adverse
	Beneficial
X	Long Term
	Short Term

Attributes

X	100-Year Floodplain
	Critical Action (E.O. 11988)
	Coastal Zone Management Area
X	Critical Wetlands Areas

Comments:

Refer to Section 3.6 and Appendix D of the EA.

Geology and Soils

Impacts

X	Adverse
	Beneficial
X	Long Term
X	Short Term

Attributes

	Rock Excavation	X	Soil Erosion
	Cut/Fill Operations	X	Soil Compaction
X	Grading	X	Soil Horizon Removal & Mixing

Comments:

Refer to Section 3.7 and 3.8 of the EA.

Hydrology, Water Quality

Impacts

X	Adverse
	Beneficial
X	Long Term
X	Short Term

Attributes

X	Potential for Erosion and/or Sedimentation	X	Alteration/Quality Change of Surface Water Drainage
X	Potential for Contamination of Water Regime from Toxins	X	Alteration/Quality Change of Groundwater Regime

Comments:

Refer to Section 3.9 and 3.10 of the EA.

Land Use

Impacts

	Adverse
	Beneficial
X	Long Term
	Short Term

Attributes

	Encroachment on Existing Land Use
X	Change in Land Use Pattern
X	Public Service (to veterans)

Comments:

Refer to Section 3.11 of the EA.

Noise

Impacts

X	Adverse
	Beneficial
X	Long Term
X	Short Term

Attributes

	Utility Source Generation
X	Traffic
X	Construction (Short Term)
X	Operational (Long Term)

Comments:

Refer to Section 3.1 of the EA.

Potential for Generating Substantial Controversy

Impacts

	Adverse
X	Beneficial
X	Long Term
	Short Term

Attributes

	Indirect or Direct Effects on Community Organizations		Community Response is in Question
X	Consistent with Profile of the Community	X	Provide Needed Benefit to Local Veterans

Comments:

Refer to Section 4.17 of the EA.

Real Property

Impacts

X	Adverse
	Beneficial
X	Long Term
	Short Term

Attributes

X	Change of Land Values	X	Change in Ownership Boundaries
	Change of Easement or Right of Way	X	Encroachment on Critical Areas

Comments:

Refer to Section 3.12 of the EA.

Residential Population

Impacts

	Adverse
	Beneficial
	Long Term
	Short Term

Attributes

	Addition of Staff to Facility
	Alteration of Demographic Characteristics
	Change in Neighborhood Characteristics

Comments:

Refer to Section 3.13 of the EA.

Solid/Hazardous Waste

Impacts

X	Adverse
	Beneficial
	Long Term
X	Short Term

Attributes

X	Steel Removal/Demolition	X	Construction Site Stockpiling
	Bulk Operational Waste		
X	Earth and/or Rock Debris		
	Concrete Debris		

Comments:

Refer to Section 3.14 of the EA.

Transportation/Traffic and Parking

Impacts

X	Adverse
	Beneficial
X	Long Term
X	Short Term

Attributes

	Alteration of Public Transit		Alteration of Existing Onsite Roads or Parking
	Alteration of Access Roads		
	Construction of New Roads	X	Additional Traffic on Existing Roads
	Construction of New Parking		

Comments:

Refer to Section 3.15 of the EA.

Utilities

Impacts

X	Adverse
	Beneficial
X	Long Term
	Short Term

Attributes

	Water System, Supply
X	Storm Water Drainage
	Sewage Treatment

Comments:

Refer to Section 3.16 of the EA.

Vegetation and Wildlife

Impacts

X	Adverse
	Beneficial
X	Long Term
	Short Term

Attributes

	Tree Removal	X	Groundcover Removal
X	Presence of Endangered Wildlife Species	X	Presence of Significant Wildlife Habitat

Comments:

Refer to Section 3.17 and 3.18 of the EA.

6.0 Agency Coordination

The following agencies and persons were contacted during the preparation of this EA:

Federal Agencies

U.S. Fish and Wildlife Service
1339 20th Street
Vero Beach, FL 32960

State Agencies

State of Florida
Florida State Clearinghouse
Department of Environmental Protection
Lauren Milligan
3900 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-3000
(850) 245-2161

Florida Department of Transportation
Martha Birdsong, Public Information Specialist
(863) 519-1900

Florida Fish and Wildlife Commission
Jim Beaver, Biological Scientist
c/o SWF Regional Planning Council
1926 Victoria Avenue
Fort Myers, FL 33901

Florida Fish and Wildlife Commission
Kathleen McGuire
20200 Tuckers Grade
Punta Gorda, FL 33955

Department of State
Division of Historical Resources
Scott B. Edwards
Historic Preservationist
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250
850-245-6333
850-245-6437 fax

Department of State
Division of Historical Resources
Jeff Thirlwall
Community Assistance Consultant
Central Regional Office
1802 E. 9th Avenue
Tampa, FL 33605
(813) 272-3843

Department of State
Division of Historical Resources
Wm. Gerald L. Brinkley
Archaeological Data Analyst, Florida Site
Master File
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250
(850) 245-6440

State Historic Preservation Officer
Frederick P. Gaske
Attn: Review and Compliance Section
R. A. Gray Building, 4th Floor
500 South Bronough Street
Tallahassee, Florida 32399-0250

County Agencies

Sarasota County Mosquito Control District
Lyman Roberts, Ph.D., Director
5531 Pinkney Avenue
Sarasota, FL 34233
(941) 861-9740 fax (941) 861-9765
lroberts@scgov.net

Sarasota County Planning Services
Brian Lichterman, Senior Planner
1301 Cattlemen Road, Bldg. A
Sarasota, FL 34232

Sarasota County
Jim Dierolf, Environmental Specialist
1301 Cattlemen Road, Bldg. D
Sarasota, FL 34232

Sarasota County Area Transit Information Line
Diane
5303 Pinkney Avenue
Sarasota, FL 34233
(941) 861-1234

Sarasota County Extension
Dr. Robert Kluson
6700 Clark Road
Sarasota, FL 34241
(941) 861-9806

County Agencies (continued)

Sarasota County
ESBC Air Quality/Storage Tank Management
Susan Cameron, ESIII
2817 Cattlemen Road
Sarasota, FL 34232
(941) 861-6237

Sarasota County Zoning Department
Lauria Chapman
1301 Cattlemen Road, Bldg. A
Sarasota, FL 34232

City Agencies

City of Sarasota
George Cancro, Foreman 3
941-371-8041
1761 12th St
Sarasota, FL 34236

City of Sarasota
Reclaim Group (Utility Branch)

Property Owners

James Arlin Hawkins, Site 2
Frank Casada, Site 3
Rick Turner, Site 4

Others

Brad Webb (Myakka Ranch caretaker)

C Bar N Ranch
Lester M. Neely
Agricultural Manager, Myakka Ranch
8210 Lakewood Ranch Blvd.
Brandenton, FL 34202
(941) 741-1924

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8.0 List of Preparers

Suzanne Baird (B.S. Environmental Science) assisted with the cultural resources field investigation and the on-site wildlife surveys. She was the primary author of both the transportation and the threatened and endangered species sections of the report.

Allen Conger (B.S. Natural Resources and Ecology) served as the project manager. He also completed a technical review of the report.

Judith Dudley (M.S. Aquatic Ecology, Ph.D. Ecosystems Ecology) served as a senior scientist during the field investigation and for report preparation. She was the primary author of the report sections related to aesthetics, air quality, community services, economic activity, water resources, land use, real property, resident populations, solid/hazardous waste, utilities, and economic justice.

Allison Fleming (B.A. Anthropology, M.S. Geography) served as the cultural resources specialist for the project. She led the archaeology field survey team, completed the required document for SHPO consultation, and was the primary author of the cultural resources sections of the report. She also served as the GIS analyst for the project and provided GIS support for report preparation.

Erin Heinen (B.S. Biology and Environmental Studies) provided technical review during report preparation.

Dan Lewis, PG (B.S. Geology) served as the project geologist. He led the hydrogeology field investigation and was the primary author of the report sections and appendices related to geology and hydrology.

Stacy Rizzo (B.S. Earth and Environmental Science) completed wildlife, wetland and exotic species surveys during the field investigation. She was primary author of the wetlands, wildlife, vegetation, and exotic species sections of the report as well as co-author of the wetlands evaluation appendix.

Joy Ryan (B.S. Forest Resources and Conservation) completed wildlife, wetland and exotic species surveys during the field investigation. She was co-author of the wetlands evaluation appendix.

Ann Shortelle (Ph.D. Limnology) served as the principal project scientist, which included providing senior technical review of the report. She also assisted with the field investigation.



 **MACTEC**

404 SW 140th Terrace
Newberry, FL 32669