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# Timber Creek

# Comprehensive Plan Amendment Application 1st Insufficiency Response

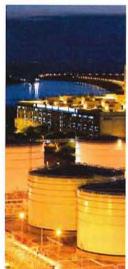
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# Phase I Environmental Site Assessment / Limited Phase II Assessment

Timber Creek 12999 Daniels Parkway Fort Myers Florida

Lennar Homes

2675 Winkler Avenue Suite 180 Fort Myers Florida 33901 11105434 | Report No 1 | December 30 2015

# **Executive Summary**

GHD was retained by Lennar Homes (Lennar) to complete a Phase I Environmental Site Assessment / Limited Phase II Assessment of the Timber Creek property located at 12999 Daniels Parkway in Fort Myers, Florida (Site). Lennar is considering acquisition of the Site. The purpose of the Phase I ESA is to identify recognized environmental conditions (RECs), as defined in ASTM International (ASTM) Standard E1527-13 (the Standard), at the Site. The Limited Phase II Environmental Site Assessment was done in general accordance with E 1903-11. This ESA was conducted to assist Lennar in conducting all appropriate inquiries into previous ownership and use of the Site to qualify for specific landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and to evaluate business environmental risk (BER), as defined in the Standard, for the Site. The Phase I ESA Site reconnaissance was conducted by GHD on October 9, 14, 27 and 28, 2015.

The Site consists of approximately 710 acres of vacant land in Fort Myers, Florida. The Site is divided into two areas; a northern approximately 655-acre tract and a southern approximately 55-acre tract. According to Site personnel and based on a review of historical documents, the northern portion of the northern tract was in use as a World War II moving target gunnery training range in the early 1940s. Portions of the Site were then used as cultivated farmland and/or pastureland from the late 1940s through current day.

# **Findings and Opinion**

Based on the Phase I ESA, including the Site reconnaissance, database search, historical records reviewed, information provided by Site personnel, and interviews, the following findings were identified regarding RECs, historical recognized environmental conditions (HRECs), controlled recognized environmental conditions (CRECs), BER, and/or de minimis conditions, as defined in the Standard, at the Site:

- Former On-Site WWII Gunnery Range: Based on a review of historical documents, the northern portion of the northern Site tract was in use as a World War II moving target gunnery training range in the early 1940s. Three earthen berms are located on the northern portion of the northern tract. Based on historical documents, trainees fired from jeep-mounted machine guns at moving ground targets, including mock-ups of low-flying aircraft, localized at these berm areas. Based on this information and aerial photographs, it is likely that the jeep-mounted machine-gunners fired in a southwesterly direction at the moving targets while traveling along the northern adjoining State Road 82. Several .50 and .30 caliber bullets were observed on the berms at the time of the Site visit. Based on likely southerly firing direction and reports that targets were located above the berms, it is likely that bullets are also located in areas to the south of the berms. Studies have shown that shooting ranges often result in accumulation of metals (from bullets and shot) in the soil. Exposure to infiltrating acidic waters from precipitation can mobilize the transport of metals in surface water runoff and/or migration through the soil column. Due to the likely accumulation of metals in the above-grade earthen berms and suspected sporadic occurrences in peripheral areas, along with the contemplated change in land use for the Site, the WWII gunnery ranges are considered a REC.
- ii) Historical Agricultural Use for Cultivated Crops: Historical research indicates the Site was used as a cultivated farmland from at least the early 1950s through the mid-1990s. Such

agricultural activity may have included the use of beneficial agricultural products such as pesticide, herbicide, and/or fertilizer substances. However, it is important to note that the legal application (i.e., in accordance with manufacturer's specifications and customary practices) of such substances, in the course of standard operational practices does not constitute a "release to the environment" by definition. Further, no reasonably ascertainable information was obtained during the course of our assessment, including historical records review, Site reconnaissance observations, and interviews with persons knowledgeable regarding past Site history that a past release had occurred. Therefore, the mere presence of this historical land use does not meet the definition of a REC. The User should take into consideration the historical use of the Site when undertaking Site development activities.

- iii) Historical On-Site Structures: Based on a review of historical documents, three former farm staging areas and associated structures were located on the northern, northeastern and western portions of the Site at various times from at least the early 1950s through mid-1990s. No information was available regarding demolition of the structures, presence of septic systems, potential storage tanks, water supply, potential chemical use/storage, or potential solid waste generation. No reasonably ascertainable information was obtained during the course of our assessment, including historical records review, Site reconnaissance observations, and interviews with persons knowledgeable regarding past Site history that a past release had occurred. Therefore, the mere presence of these former staging areas does not meet the definition of a REC. The User should take into consideration the historical use of these particular portions of the Site when undertaking Site development activities.
- iv) Historical Irrigation Wells: No obvious evidence of power poles or power lines was observed in the vicinity of the three possible irrigation well locations observed during the Site visit. The former irrigation wells therefore may have utilized diesel-powered pumps. With respect to the possible historical presence of diesel ASTs at the irrigation well locations, no reasonably ascertainable information was obtained during the course of our assessment, including historical records review, Site reconnaissance observations, and interviews with persons knowledgeable regarding past Site history that a past release had occurred. The tanks, if any, have been removed and no evidence of stained soil was observed during the Site reconnaissance. Therefore, the possible historical presence of diesel ASTs does not meet the definition of a REC, but these particular locations should be taken into consideration when undertaking Site development activities.
- v) Potential Filled Areas: Based on a review of available historical aerial photography, areas of earthwork or possible excavation are visible near the former target range berms. No information was available for GHD review to determine the nature of the fill materials, if any. No information was found to suggest that hazardous substances or petroleum products were present in the possible fill material. Based on the above, this issue is not considered a REC. However, potential historical filling activities, and the practice of waste burial documented at other military operations facilities, should be considered when undertaking Site development activities.
- vi) On-Site Solid Waste/Debris: Based on observations during the Site reconnaissance, discarded debris including scrap metal, scrap wood, plastic and approximately three discarded 55-gallon drums were observed in the former staging areas. No staining, odors, or visible indication of hazardous substances or petroleum products was noted in the observable portions of the former staging areas during the Site visit. Based on the above, this issue is not considered a REC. The discarded debris is considered a de minimis condition.

vii) Discarded Vehicle Batteries: Two discarded vehicle batteries were observed at the northern former staging area. Based on the fact that the discarded batteries did not represent a threat to human health or the environment and would not be expected to be the subject of an enforcement action if brought to the attention of the applicable governmental agency, the discarded batteries are considered de minimis condition.

## Conclusions

GHD has performed a Phase I Environmental Site Assessment / Limited Phase II Assessment in conformance with the scope and limitations of the Standard of the Timber Creek property located at 12999 Daniels Parkway in Fort Myers, Florida. Any exceptions to, or deletions from this practice are described in Section 1.0 of this report.

# **Recognized Environmental Conditions**

The following REC, as described above, has been identified to exist in connection with this Site:

Former On-Site WWII Gunnery Range

To further determine if the Former On-Site WWII Gunnery Range is a concern, a limited Phase II ESA was conducted with the following results:

• The results of the laboratory analysis of the eight composite ISM soil samples collected from the former World War II gunnery ranges revealed all 13-Priority Pollutant metals were ether below the detection limits or below the Florida Department of Environmental Protection's Cleanup Target Levels, as stated in Chapter 62-777 FAC. It is our opinion that further inquiry into the environmental condition of the property is not warranted at this time.

This summary does not contain all of the information that is found in the full report. The report should be read in its entirety to obtain a more complete understanding of the information provided, and to aid in any decisions made, or actions taken, based on this information.

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# 1. Introduction

GHD was retained by Lennar Homes (Lennar) to complete a Phase I Environmental Site Assessment / Limited Phase II Assessment of the Timber Creek property located at 12999 Daniels Parkway in Fort Myers, Florida (Site). The purpose of the Phase I ESA was to identify recognized environmental conditions (RECs), as defined in ASTM International (ASTM) Standard E1527-13 (the Standard), at the Site. The Limited Phase II Environmental Site Assessment was done in general accordance with E 1903-11. This ESA was conducted to assist Lennar in conducting all appropriate inquiries into previous ownership and use of the Site to qualify for specific landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) for the Site and to evaluate business environmental risk, as defined in the Standard, for the Site. The Phase I ESA Site reconnaissance was conducted by GHD on October 9, 14, 27 and 28, 2015. A Site location map is provided on Figure 1. A Site plan is provided on Figure 2. Photographs taken during the Site reconnaissance are presented in Appendix A.

The Phase I ESA was conducted in accordance with the Standard for conducting environmental assessments. The assessment included an environmental database search, historical records review, a Site reconnaissance of accessible areas, a review of relevant Site records made available to GHD, and interviews with individuals associated with the Site. This Phase I ESA was prepared by Mr. Jaren Skinner, Roxanne Gause, P.E. and Nicholas Albergo, P.E., DEE of GHD, all of whom are environmental professionals, as defined in the Standard. Copies of curricula vitae outlining their qualifications are contained in Appendix B.

The following terms used in this report are defined in the Standard as follows:

- REC means the presence or likely presence of any hazardous substances or petroleum
  products in, on, or at a property: (1) due to any release to the environment; (2) under conditions
  indicative of a release to the environment; or (3) under conditions that pose a material threat of
  a future release to the environment (de minimis conditions are not RECs).
- Controlled REC (CREC) is a REC resulting from a past release of hazardous substances or
  petroleum products that has been addressed to the satisfaction of the applicable regulatory
  authority with hazardous substances or petroleum products allowed to remain in place subject
  to the implementation of required controls (e.g., property use restrictions, activity and use
  limitations, institutional controls, or engineering controls).
- Historical REC (HREC) is a past release of any hazardous substances or petroleum products
  that has occurred in connection with the property and has been addressed to the satisfaction of
  the applicable regulatory authority or meeting unrestricted use criteria established by a
  regulatory authority, without subjecting the property to any required controls (i.e., property use
  restrictions, activity and use limitations, institutional controls or engineering controls). HRECs
  are not RECs.
- Business Environmental Risk (BER) means a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated by the Standard.
- De minimis condition is a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought

to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not RECs or CRECs.

The following tasks were conducted during the assessment:

- Interviews with personnel associated with the Site
- Review of Federal and State environmental databases and historical records (e.g., fire insurance maps, city directory, etc.)
- Review of historical aerial photographs of the Site
- Review of past and current property use and adjoining property occupancy
- Reconnaissance of the facilities, equipment, utility services, operations, and associated Site records
- Observations of conditions that represent releases or threatened (i.e., likely) releases of hazardous substances or petroleum products to the ground, surface waters or groundwater of the Site
- Review of chemical use and storage and spill/release incidents
- Review of the results of any prior reconnaissance conducted at the Site
- Review of waste handling, accumulation, storage, and disposal practices
- Review of air emissions and wastewater discharges
- Review of equipment that potentially contains polychlorinated biphenyls (PCBs)
- Review of aboveground and underground storage tank records
- Review of previous environmental reports prepared for the Site

GHD relied on information received from third parties and during the ESA interviews to the extent that the information was reasonably ascertainable, and also assumed the information received to be accurate unless contradicted by written documentation or field observations.

The following report summarizes the information gathered by GHD during the Phase I ESA and identifies RECs, HRECs, CRECs, BERs, and de minimis conditions as defined in the Standard at the Site.

# 1.1 Exceptions

No exceptions to the Standard were taken in completion of this ESA. However, additional investigations were undertaken as a limited Phase II Assessment to further evaluate certain issues identified by the Phase I ESA.

# 1.2 Limiting Conditions

The following limiting conditions were experienced in completion of the Phase I ESA:

#### Site Reconnaissance Restrictions:

Portions of the Site were densely vegetated and could not be readily observed

Mr. Jared Holes was identified as the Key Site Manager. GHD interviewed Mr. Holes who
advised that he has been associated with the Site for approximately 34 years. Given the history
of the Site dating back to the 1940s, Mr. Holes had limited knowledge regarding the history of
former operations/uses conducted at the Site.

# 1.3 Significance and Use

This ESA was conducted in a manner consistent with that level of care and skill exercised by members of the environmental engineering and science profession currently practicing under similar conditions, and was based upon the information made available to GHD representatives at the time of this assessment. It remains important to recognize that no Phase I ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with the Site. The performance of the assessment is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with a Site. The User, as defined in the Standard, must recognize reasonable limits of time and cost. For the purpose of this Phase I ESA, the User has been identified as Lennar Homes.

The Phase I ESA has been prepared for the use of Lennar Homes and may not be relied upon by any other party without GHD's written consent. In accordance with Section 4.6 of the Standard, this Phase I ESA is viable until April 4, 2016, which is 180 days from the oldest primary component of the ESA.

# 2. Site Description and Location

# 2.1 Site Description

The Site consists of approximately 710 acres of vacant land in Fort Myers, Florida. The Site is divided into two areas; a northern approximately 655-acre tract and a southern approximately 55-acre tract.

The southern Site tract was viewed as undeveloped land in the 1940s, then in use as cultivated farmland in the 1950s through 1960s. The southern Site tract was then used as improved pastureland from approximately the 1970s through current day.

According to Site personnel and based on a review of historical documents, the northern portion of the northern tract was in use as a World War II moving target gunnery training range in the early 1940s. Portions of the northern Site tract were then used as cultivated farmland and/or pastureland from the late 1940s through current day.

Three earthen berms are located on the northern portion of the northern tract. Based on historical documents, trainees fired from jeep-mounted machine guns at moving ground targets that operated behind the earthen berms. One type of target was a large sheet of canvas stretched on a square frame, mounted on poles extending from a Jeep, or from a small wagon resembling a railroad worker's car. The wagon or Jeep moved along a concrete track behind the earthen berms with the target extending above the berms. Each gunner's projectiles were tipped with a different color paint which the instructors counted to score the hits of each gunner. Based on this information and aerial photographs, it is likely that the jeep-mounted machine-gunners fired in a southwesterly direction at the moving targets while traveling along the northern adjoining State Road 82. Several .50 and .30 caliber bullets were observed on top of and within the northern facing sides of the berms at the time of the Site visit.

Three farm staging areas were observed on the northern Site tract in historical aerial photographs. Small structures were visible in the aerial photographs in the former staging areas. The northern staging area was located south of the central Site berm in the 1950s and 1960s. The west staging area was located on the western portion of the Site in the late 1970s through 1980s. The northeastern staging area was located on the northeastern portion of the Site from approximately 1990 to 1995.

The northern staging area was observed first. One approximately 4-inch metal possible irrigation well was observed in this area. A 2-inch PVC well was observed on the west side of the northern staging area. The Site owner's representative, Mr. Jared Holes, was not aware of any monitoring wells on the Site and it is not known if the well was a previous potable, irrigation or monitoring well.

Discarded lead-acid batteries, scrap metal and a crushed 55-gallon drum were observed within dense vegetation in this northern staging area. No leaks, spills, stained soil or stressed vegetation was observed in the northern staging area.

The northeastern staging area was observed. No structures remain at this location. Two metal pipes with used tires placed around them were observed at this location. These pipes appeared to be possible irrigation wells. No leaks, spills, stained soil or stressed vegetation was observed in the northeastern staging area.

The western staging area was observed next. An approximately 4-inch possible irrigation well was observed east of this staging area. No leaks, spills, stained soil or stressed vegetation was observed in the vicinity of the well.

An empty 55-gallon metal drum was observed in a ditch between the irrigation well and the western staging area. The drum was rusted with several holes. No leaks, spills, stained soil or stressed vegetation was observed in the vicinity of the drum.

Scrap metal, wood and fencing were observed at the former structure location in the western staging area. The former structure location was surrounded by dense vegetation. A drum saddle, scrap metal and half of a rusted 55-gallon drum were observed on the southwest side of the western staging area. No leaks, spills, stained soil or stressed vegetation was observed in the western staging area or in the vicinity of the drum saddle or rusted drum.

Based on the historical use of the Site as cultivated land, agricultural chemicals such as pesticides, herbicides, and fertilizer would likely have historically been used on the Site. Information regarding historical use, storage or application rates was not available.

A cattle pen is located on the east side of the northern Site tract. Based on historical aerial photographs, the pen has been present at this location since approximately 2010. The Site owner's representative was not aware of any cattle dipping vats located on the Site.

# 2.2 Environmental Setting

The Site is located in a predominantly residential area in the eastern portion of Fort Myers, Lee County, Florida. General topographic gradient at the Site and surrounding area is to the west, based on the United States Geological Survey (USGS) topographic map.

The Site is not listed as being in the 100-year or 500-year flood zone. Wetlands are depicted on the northern and southern portions of the Site in the EDR database search overview map.

Based on the general topographic gradient at the Site, it is estimated that shallow groundwater beneath the Site would flow to the west. No Site-specific information was available regarding Site soils, depth to groundwater or groundwater flow direction.

Based on the USGS 7.5-Minute Alva SW, Florida Topographic Map, the Site is located at approximately 26 feet above mean sea level.

# 2.3 Adjoining Properties

The Site is bordered by the following properties:

North: By vacant land, by State Road 82 and beyond by vacant land and residential properties

East: By pastureland, vacant land, Daniels Parkway and beyond by vacant land and

pastureland

South: By vacant land and pastureland

West: By vacant land, residential properties, Gateway elementary School and a wastewater

treatment plant

The adjoining property to the west of the Site, Lee County –Gateway Wastewater Treatment Plant (located at 13240 Griffin Drive), was listed in the AST database (see Section 3.1.2). No violations or discharges were identified associated with the AST listing. An additional western adjoining property, Jetport Substation (located at 13577 Daniels Drive) was listed in the RCRA-CESQG database. No violations were found for the Jetport Substation facility. Based on the review of available historical aerial photographs, and historical topographic maps, with the exception of the northeastern adjoining WWII gunnery range discussed previously, no adjoining property operations or conditions that would typically result in a release of hazardous substances or petroleum products were identified relative to the Site.

No activities were observed on the adjoining properties during the Site reconnaissance, as viewed from the Site and publicly accessible areas that appeared to pose a risk of migration of hazardous substances or petroleum products to the Site. No evidence of gas or oil wells, water supply wells, or bulk chemical/petroleum storage was observed on properties adjoining the Site.

Individuals associated with the Site were unaware of the release or likely release of hazardous substances or petroleum products that would potentially migrate to the Site from the adjoining properties.

# 3. Environmental Databases Search and Document Review

# 3.1 Environmental Databases Search

GHD contracted Environmental Data Resources, Inc. (EDR) to conduct a search of federal and state environmental databases. Based on the address of the Site and the Site boundaries, the database searches were completed to assist in the identification of RECs in connection with the Site and to assess the likelihood of an impact to the Site from migrating hazardous substances or petroleum products within the approximate minimum search distance (AMSD) specified in the Standard as follows:

Database	Search Radius
National Priority List (NPL)	1 mile
Delisted NPL Database	1 mile
NPL Liens	Site only
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)	0.5 mile
CERCLIS No Further Remedial Action Planned (CERC NFRAP)	0.5 mile
Corrective Action Report (CORRACTS)	1 mile
Resource Conservation and Recovery Act Information (RCRA)	0.5 mile
Treatment, Storage or Disposal Facility (TSDF)	en (1 t) 1 t
RCRA Large Quantity Generator (RCRA LQG)	Site /Adjoining Property
RCRA Small Quantity Generator (RCRA SQG)	Site /Adjoining Property
RCRA Conditionally Exempt Small Quantity Generators (RCRA CESQG)	Site /Adjoining Property
Emergency Response Notification System (ERNS)	Site only
Toxic Chemical Release Inventory System (TRIS)	Site only
US Engineering Controls	0.5 mile
US Institutional Controls	0.5 mile
US Brownfields List	0.5 mile
Superfund (CERCLA) Consent Decrees (Consent)	1 mile
Records of Decision (ROD)	1 mile
CERCLA Lien Information (LIENS 2)	Site only
Department of Defense (DOD)	1 mile
Florida's State Funded Action Sites (SHWS)	1 mile
Solid Waste Facilities (SWF) Landfill (LF) Sites	0.5 mile
Underground Storage Tank (UST) Facility List	Site /Adjoining Property
Leaking Underground Storage Tank (LUST)	0.5 mile
Sites List (Florida Sites)	1 mile
Oil and Hazardous Materials Incidents (Spills)	Site only
Institutional Controls Registry (Engineering Controls)	0.5 mile
Institutional Controls Registry (Institutional Controls)	0.5 mile
Voluntary Cleanup Sites (VCP)	0.5 mile
Drycleaners	0.25 mile
Florida Priority Cleaners	0.5 mile
Brownfields	0.5 mile
Indian Reservations	1 mile
ndian UST	Site /Adjoining Property
Indian LUST	0.5 mile

A copy of the database search, which includes definitions for the above-referenced databases, is included as Appendix C. It should be recognized that the availability, accuracy and completeness of the record information may vary among information sources, including governmental sources. GHD reviewed information for properties identified within the referenced AMSD. GHD considers a variety of factors in determining which off-Site properties, if any, have the potential to impact the Site. These factors include, but are not limited to, the following:

- Type of database on which a property was identified
- Information presented in the EDR Radius Map report and reasonably ascertainable government databases
- Direction and distance of the property from the Site

- Suspected or known groundwater flow direction at or near the Site
- Likelihood that released contaminants, if any, could migrate to the Site
- Surface and subsurface features (e.g., soil types, utility corridors, etc.)

The following is a summary of the databases searched with the findings as listed.

# 3.1.1 Database Listing for the Site

The Site was not listed in any of the aforementioned databases searched.

# 3.1.2 Database Listings for Adjoining Properties

The following adjoining property was listed in the aforementioned databases searched with the status as listed.

Property Address	Listed Entity	Listing
13240 GRIFFIN DR	LEE CNTY-GATEWAY WWTP	AST/No Discharges reported
13577 DANIELS DR	JETPORT SUBSTATION	RCRA-CESQG/No Violations Found, No Reported Discharges of petroleum products or hazardous substances

Refer to Section 2.3 for further details.

# 3.1.3 Additional Area Properties

The following additional properties within the effective AMSD of the Site were listed in the aforementioned database(s) searched with the status as listed.

Property Address	Listed Entity	Listing
GRIFFIN DR./SR 82 (1/4 - 1/2 mile NNW)	LEE COUNTY ESA - GRIFFIN DR./SR 82 SITE	SWF/LF - Inactive disaster debris management staging area, not a type of solid waste facility that would bury debris or generate methane

Based on the factors listed in Section 3.1, no evidence of the likelihood for a hazardous substance or petroleum product release impacting the Site through migration from the above-mentioned properties was identified based on information provided in the EDR Radius Map report.

# 3.1.4 Unmapped Properties

No unmapped properties were listed in the EDR Radius Map report.

#### 3.2 Historical Records Review

GHD reviewed the following information, where reasonably ascertainable, to identify the historical usage of the Site and adjoining properties.

Sanborn Fire Insurance Maps

- Property Title Search
- Historical Aerial Photographs
- City Directories
- Historical Topographic Maps

# 3.2.1 Sanborn Fire Insurance Maps

Sanborn Fire Insurance maps assist in the identification of historical land use and commonly illustrate the existence and location of aboveground and underground storage tanks, structures, improvements, and facility operations. Sanborn maps were not available for the Site vicinity.

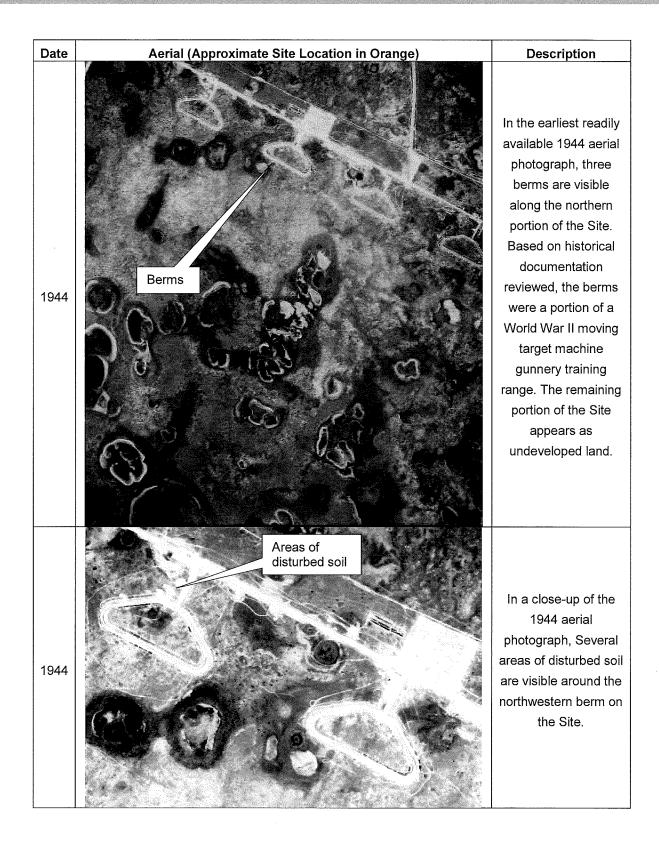
# 3.2.2 Property Title Search

Property records for the Site were reviewed on the Lee County Property Appraiser website June 3, 2015. The Lee County Property Appraiser lists Jared F. Holes Trust as the owner of the Site. Copies of the property information cards for the Site are included in Appendix D.

A chain-of-title search was not performed as part of this assessment and one was not provided to us for our review.

# 3.2.3 Historical Aerial Photographs

Aerial photographs available from Google Earth Pro, University of Florida's Florida aerials collection online, Florida Department of Transportation and the Lee County Property Appraiser were reviewed to study the land use within and in the vicinity of the Site to determine whether activities or businesses could have affected soil or groundwater quality. Specifically, aerial photographs were reviewed to determine the existence of potential sources or features indicative of releases or threatened (i.e., likely) releases of hazardous substances or petroleum products.



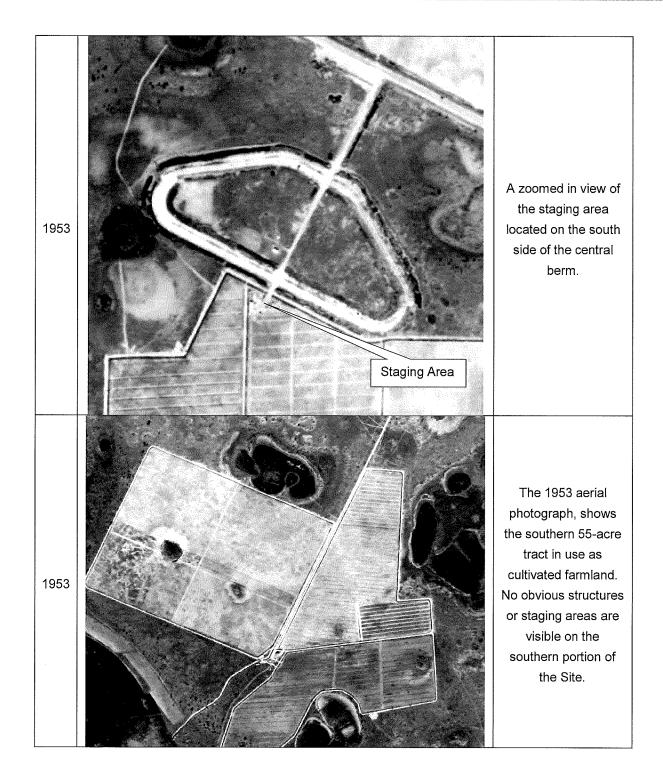


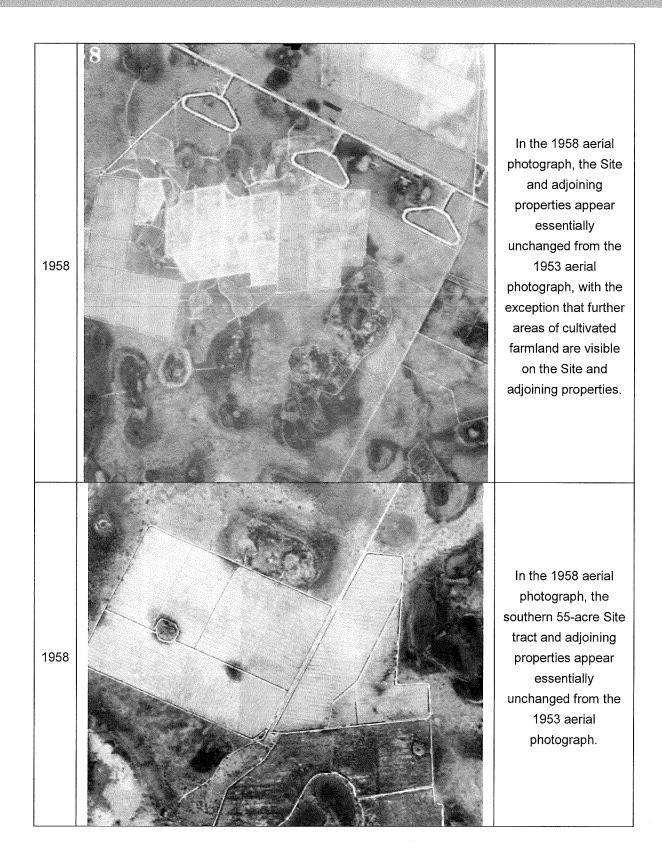
Color postcard from Tyndall Field Gunnery School shows Martin turrets mounted on trucks with an airplane mockup mounted on a jeep. The jeep is hooked to a track system. A postcard (circa early-1940s) from a similar training facility depicting an elevated target behind an earthen berm and truck-mounted machine gun turrets.

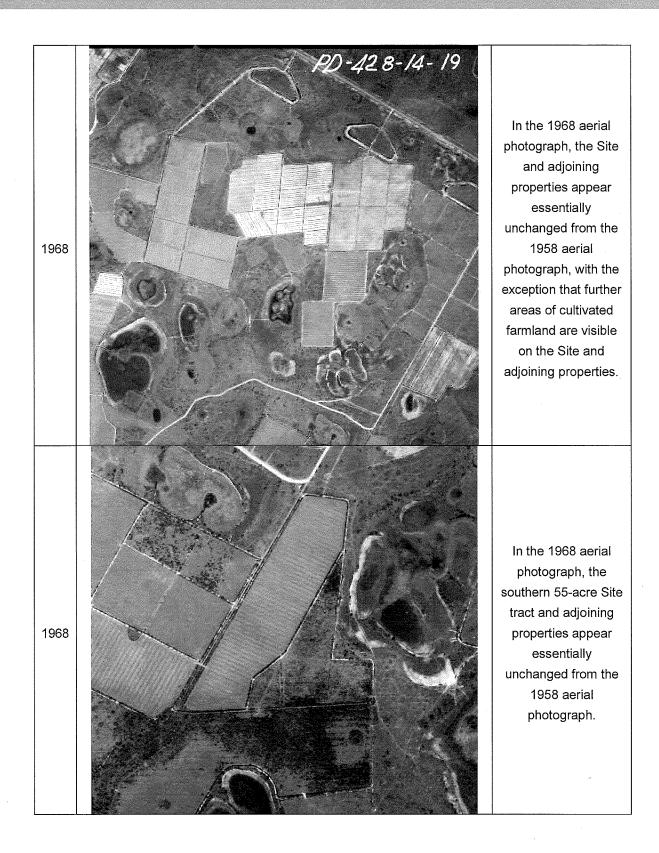


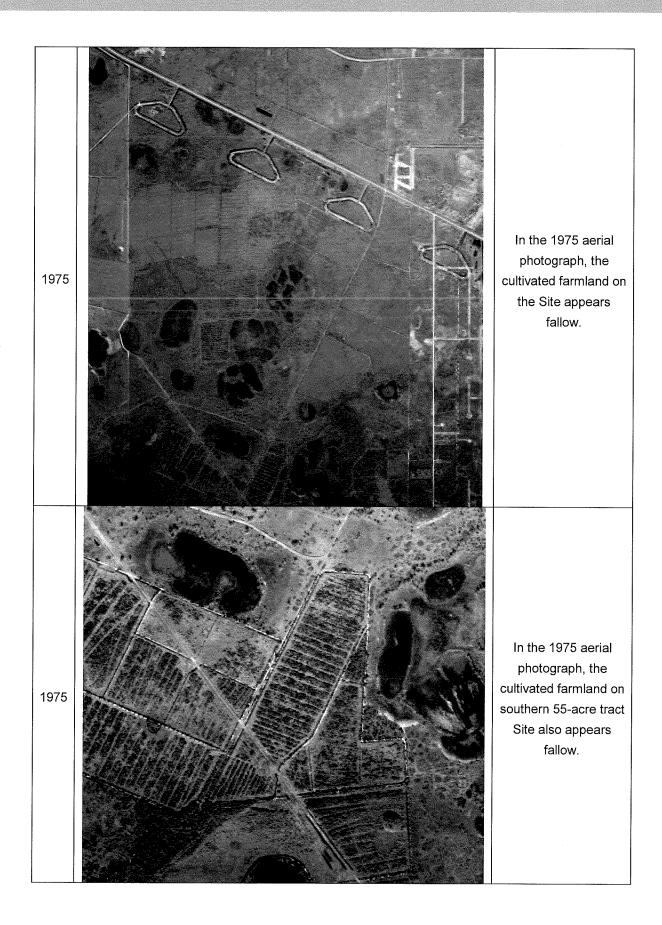
In the 1953 aerial photograph, the berms are no longer in use and a portion of the Site is in use as cultivated farmland. A farm staging area is visible on the south side of the central Site berm.

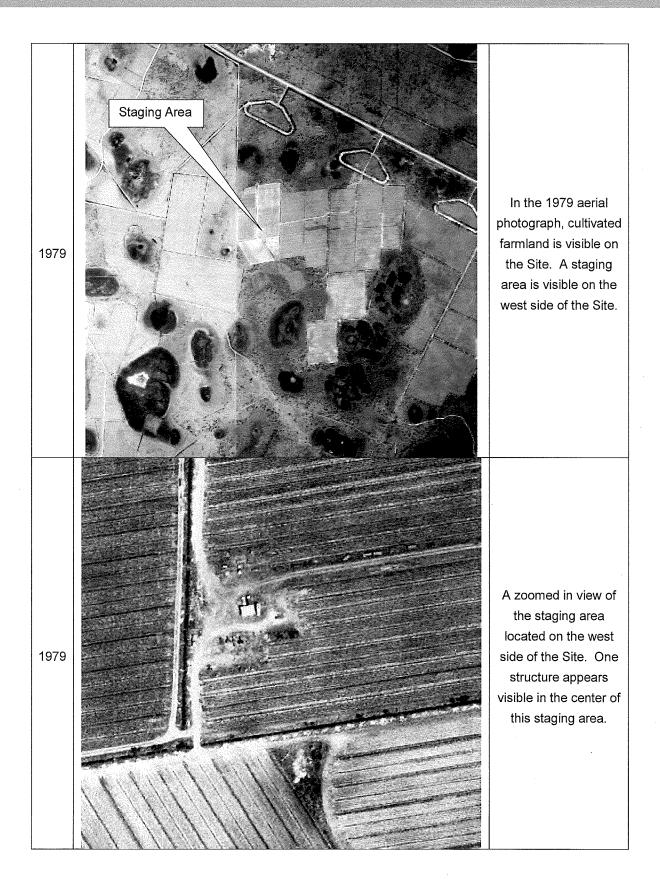
1953

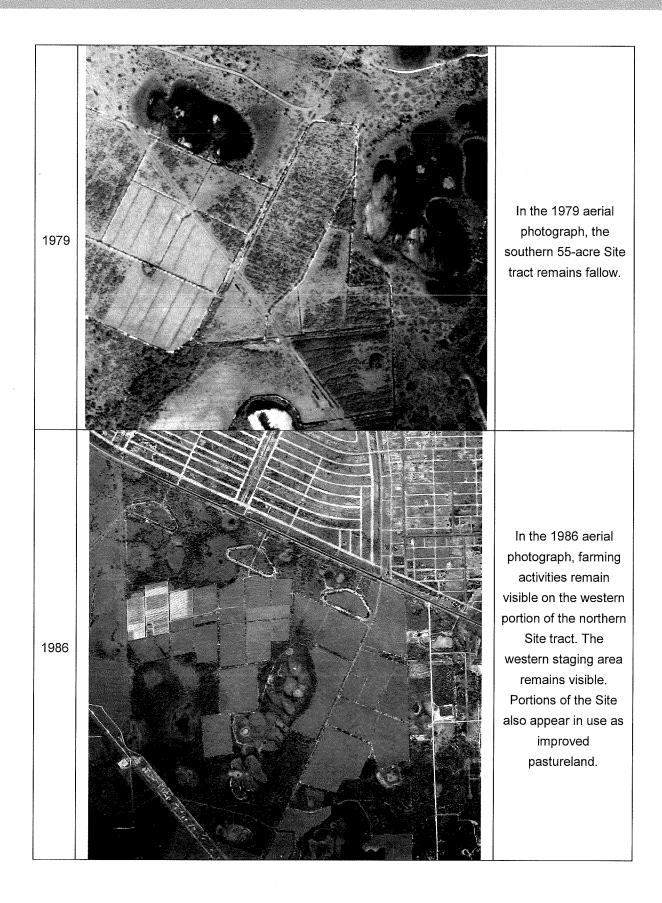


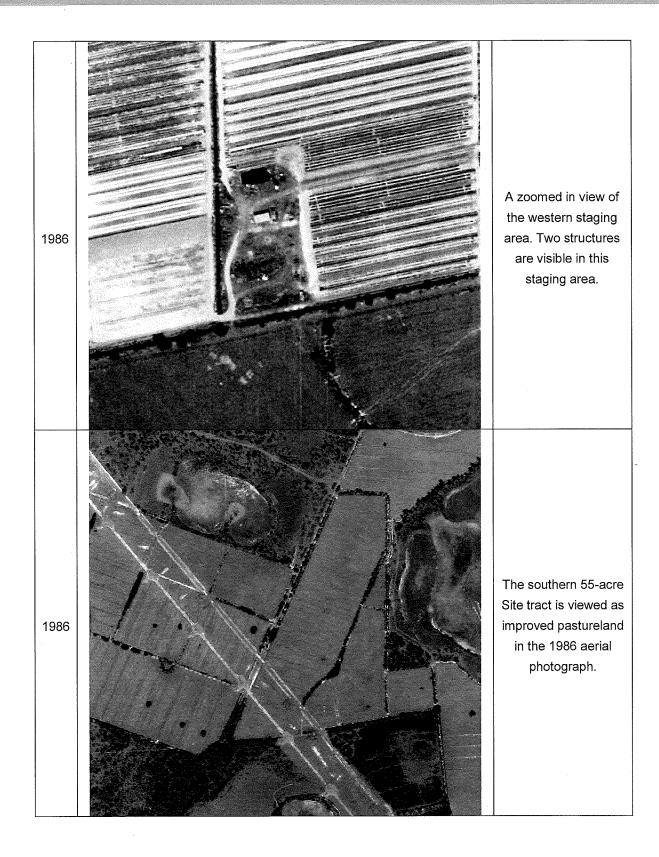


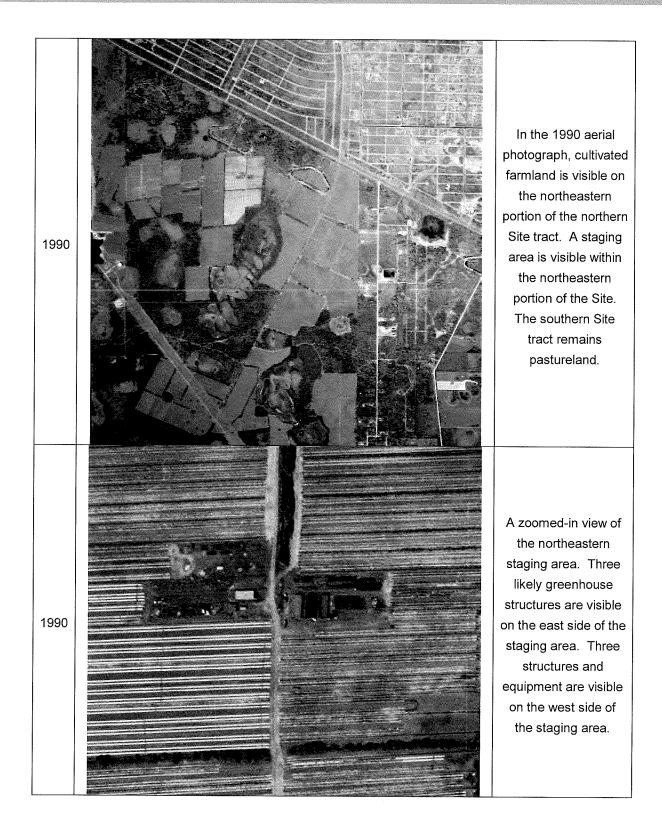


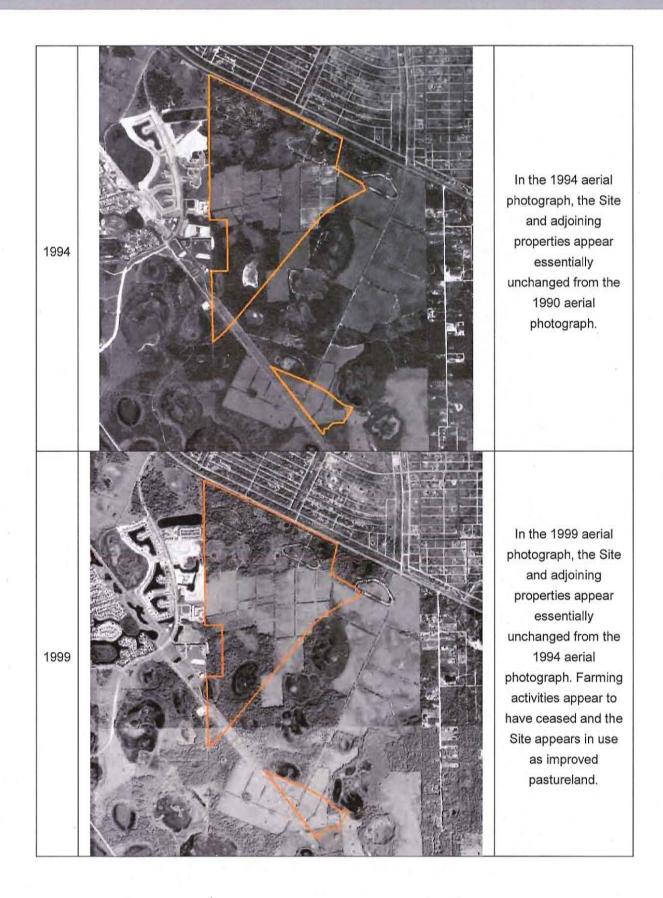


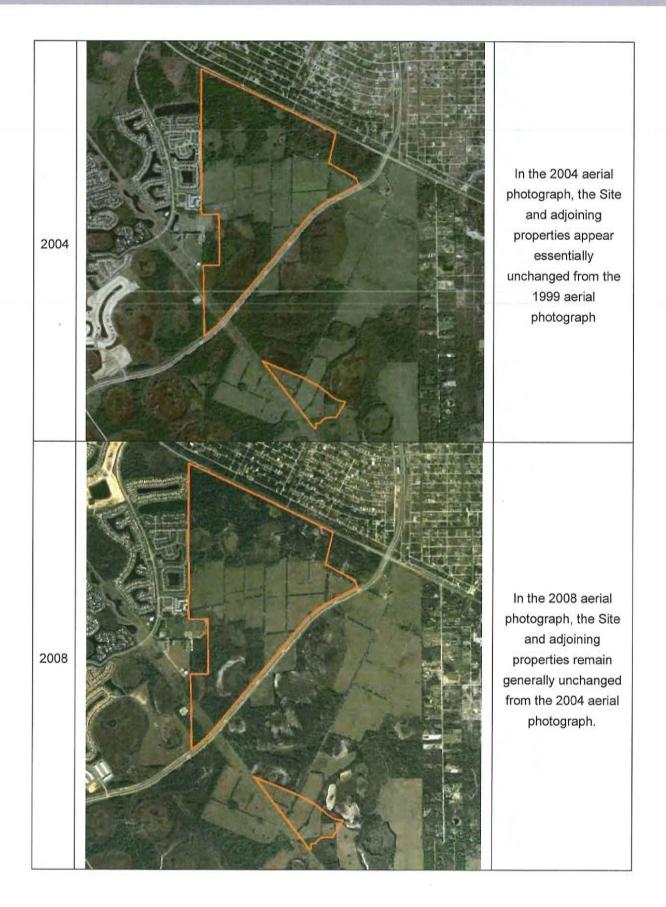


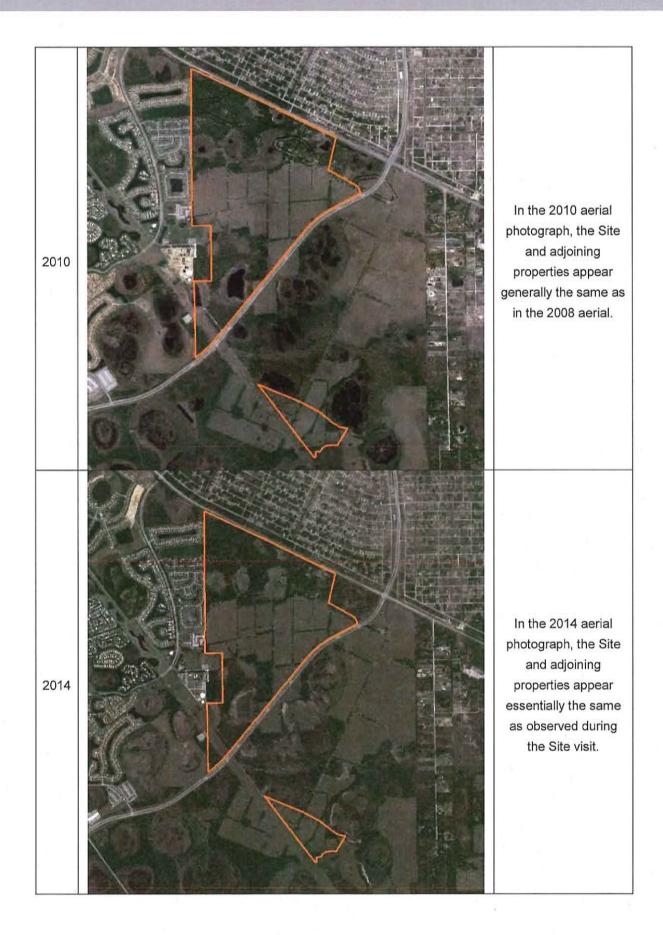












# 3.2.4 City Directories

Based on historic undeveloped and residential nature of the Site and adjoining properties, a traditional city directory search was not deemed viable for this assessment.

# 3.2.5 Historical Topographic Maps

Based on review of the 1958 Alva SW, Florida, 7.5-minute USGS topographic map (photo revised 1987) (Figure 1), the subject Site appears to be relatively flat, with a ground surface elevation of approximately 25 to 27 feet (NGVD). Nothing observed on the topographic map was indicative of the likely presence of hazardous substances or petroleum products at or adjoining the Site. The two Site berms and northeastern adjoining berm are visible on the Site. A structure is depicted at the western staging area on the topographic map.

# 3.3 Government Records Review

GHD conducted review of regulatory files available on the Florida Department of Environmental Protection's OCULUS website to determine if there were any releases or threatened (i.e., likely) releases of hazardous substance or petroleum products to the environment with the Site or on adjoining or surrounding properties that could impact the property. Documents were reviewed for nearby facilities and are discussed in detail in Section 3.1 and Section 2.3. Selected documents from our government records review are available in Appendix E.

Environmental records associated with hazardous and solid waste, water, air, remediation, emergency responses, spills/releases, underground and aboveground storage tanks were requested. It should be noted that summarized information received from the agencies is not intended to be all inclusive of the complete files obtained from the agencies; but only to briefly summarize significant findings.

Additionally, GHD conducted a search on the U.S. EPA's MyPropertyInfo website to determine if information was available based on the Site address. The Site address was not listed on the U.S. EPA MyPropertyInfo website.

# 3.4 Recorded Environmental Clean-up Liens

An environmental lien and AUL search was not conducted by GHD.

The Site address was not listed in the EDR Radius Map report as having any environmental liens or AULs. Site personnel were unaware of any environmental liens or AULs associated with the Site address.

#### 3.5 User Information

A User Questionnaire was submitted to Mr. Terrence Dolan of Lennar Homes for completion to address certain User responsibilities in accordance with the Standard. Mr. Dolan completed the User Questionnaire, a copy of which is provided in Appendix F. Based on the answers to the questionnaire, Mr. Dolan is not aware of any environmental issues that would have resulted in a release of hazardous substances and/or petroleum products to the Site, with the exception of the former WWII target gunnery range located on the northern portion of the Site.

# 3.6 Previous Site Investigations/ESAs

Based on communication with the User, no previous ESAs or environmental investigation reports are known to have been prepared for the Site.

# 4. Site Inspection

On October 9, 14, 27 and 28, 2015, Roxanne Gause, P.E. and Jaren Skinner of GHD completed a reconnaissance of the Site. The visit included a reconnaissance of the Site, review of relevant Site records available to GHD, visual observations of adjoining properties as viewed from the Site and surrounding roadways, and interviews with individuals associated with the Site. Interviews were conducted using a prepared questionnaire covering environmental and other Site-related topics. GHD employs a systematic approach to the Site reconnaissance process that seeks to obtain information indicating the likelihood of identifying RECs in connection with the Site, including both exterior observations and those associated with the interior of structures, as applicable on the Site. Any significant obstructions encountered during the Site reconnaissance were previously identified in Section 1.0.

Site personnel provided information regarding Site operations and historical Site use. Mr. Jared Holes, as the Site owner, was identified as the Key Site Manager to be interviewed.

# 4.1 Utility Services

The Site is currently vacant and does not currently utilize utilities.

# 4.2 Underground Storage Tanks (USTs)

According to Mr. Holes, no USTs are currently located at the Site or are known to have previously been located at the Site. No evidence of USTs (e.g., vent pipes, fill ports, etc.) was observed by GHD during the Site reconnaissance. The Site was not listed in the databases searched as having any USTs or releases therefrom.

# 4.3 Aboveground Storage Tanks (ASTs)

According to Mr. Holes, no ASTs are currently located at the Site. Mr. Holes had no knowledge of previous AST locations. GHD observed no evidence of current ASTs during the Site reconnaissance.

# 4.4 Raw Material and Chemical Use and Storage

No chemicals were observed on-Site at the time of the Site visit.

#### 4.5 Non-Hazardous Waste

Based on observations during the Site inspection, no non-hazardous waste is currently generated on Site. Small amounts of scrap wood, scrap metal and plastic wastes were observed in the former farm staging area on the Site. No stained soil or stressed vegetation was observed on-Site at these locations during the Site visit.

# 4.6 Hazardous/Universal Waste

According to Site personnel, the Site does not generate any hazardous wastes. No evidence of the on-Site generation or management of hazardous waste was observed by GHD during the Site inspection. The Site is not listed in the database search as a hazardous waste generator or management facility.

# 4.7 Wastewater/Sewers

According to Site personnel, no process wastewater is generated or discharged on Site.

# 4.8 Storm Water

Storm water generated at the Site infiltrates into undeveloped Site surfaces or flows to on-Site drainage swales and low-lying areas.

## 4.9 Air Emissions

According to Site personnel and based on GHD's observations, there are no regulated air emissions sources present at the Site.

# 4.10 Polychlorinated Biphenyls (PCBs)

No equipment potentially containing PCBs was observed on-Site.

# 4.11 Spills/Releases

According to Site personnel, no spills or releases of hazardous substances or petroleum products have occurred at the Site. No evidence of any significant spills or releases of hazardous substances or petroleum products was observed by GHD during the Site reconnaissance. No evidence of any exterior staining or distressed vegetation was observed during the Site reconnaissance.

# 4.12 CERCLA Liability Potential

The Site is not listed on the NPL or in the State Hazardous Waste Sites Database. The Site has never defended any environmental-related claims or litigation asserted by any governmental agency or third party, and no potential claims or litigation presently exist to the best knowledge of Mr. Holes. According to Mr. Holes, the Site has never received notification from any government agency or third party of liability as a potential responsible party for any hazardous waste treatment, storage, or disposal Site.

# 5. Summary of Identified Environmental Issues

## **Findings and Opinion**

Based on the Phase I ESA including the Site reconnaissance, database search, historical records reviewed, information provided by Site personnel, and interviews, the following findings were identified regarding RECs, HRECs, CRECs, BERs, and/or de minimis conditions as defined in the Standard, at the Site:

Former On-Site WWII Gunnery Range: Based on a review of historical documents, the northern portion of the northern Site tract was in use as a World War II moving target gunnery training range in the early 1940s. Three earthen berms are located on the northern portion of the northern tract, two of which are located on the subject Site. Based on historical documents, trainees fired from jeep-mounted machine guns at moving ground targets, including mock-ups of low-flying aircraft, localized at these berm areas. Based on this information and aerial photographs, it is likely that the jeep-mounted machine-gunners fired in a southwesterly direction at the moving targets while traveling along the private Military Road, which is now the northern adjoining State Road 82. Several .50 and .30 caliber bullets were observed on the berms at the time of the Site visit. Based on likely southerly firing direction and reports that targets were located above the berms, it is likely that bullets are also located in areas to the south of the berms. According to the book on World War II ammunition, "Browning .50-Caliber Machine Guns" by Gordon L Rottman; the .50 caliber bullet ranged from 1.5 to 2.3 inches in length. The bullets were typically gilding metal (copper alloy, comprising 95 percent copper and 5 percent zinc) or gilding metal-clad steel. Most rounds had lead-antimony point filler for weight and balance and a bullet shaped steel core to make them technically "semi-armor-piercing. Some of the cores were sleeved in a lead envelope.

Studies have shown that shooting ranges often result in accumulation of metals (from bullets and shot) in the soil. Exposure to infiltrating acidic waters from precipitation can mobilize the transport of metals in surface water runoff and/or migration through the soil column. Due to the likely accumulation of metals in the above-grade earthen berms and suspected sporadic occurrences in peripheral areas, along with the contemplated change in land use for the Site, the WWII target ranges are considered a REC.

- ii) Historical Agricultural Use for Cultivated Crops: Historical research indicates the Site was used as a cultivated farmland from at least the early 1950s through the mid-1990s. Such agricultural activity may have included the use of beneficial agricultural products such as pesticide, herbicide, and/or fertilizer substances. However, it is important to note that the legal application (i.e., in accordance with manufacturer's specifications and customary practices) of such substances, in the course of standard operational practices does not constitute a "release to the environment" by definition. Further, no reasonably ascertainable information was obtained during the course of our assessment, including historical records review, Site reconnaissance observations, and interviews with persons knowledgeable regarding past Site history that a past release had occurred. Therefore, the mere presence of this historical land use does not meet the definition of a REC. The User should take into consideration the historical use of the Site when undertaking Site development activities.
- iii) Historical On-Site Structures: Based on a review of historical documents, three former farm staging areas and associated structures were located on the northern, northeastern and western portions of the Site at various times from at least the early 1950s through mid-1990s. No information was available regarding demolition of the structures, presence of septic systems, potential storage tanks, water supply, potential chemical use/storage, or potential solid waste generation. No reasonably ascertainable information was obtained during the course of our assessment, including historical records review, Site reconnaissance observations, and interviews with persons knowledgeable regarding past Site history that a past release had occurred. Therefore, the mere presence of these former staging areas does not meet the definition of a REC. The User should take into consideration the historical use of these particular portions of the Site when undertaking Site development activities.

- iv) Historical Irrigation Wells: No obvious evidence of power poles or power lines was observed in the vicinity of the three possible irrigation well locations observed during the Site visit. The former irrigation wells therefore may have utilized diesel-powered pumps. With respect to the possible historical presence of diesel ASTs at the irrigation well locations, no reasonably ascertainable information was obtained during the course of our assessment, including historical records review, Site reconnaissance observations, and interviews with persons knowledgeable regarding past Site history that a past release had occurred. The tanks, if any, have been removed and no evidence of stained soil was observed during the Site reconnaissance. Therefore, the possible historical presence of diesel ASTs does not meet the definition of a REC, but these particular locations should be taken into consideration when undertaking Site development activities..
- v) Potential Filled Areas: Based on a review of available historical aerial photography, areas of earthwork or possible excavation are visible near the former target range berms. No information was available for GHD review to determine the nature of the fill materials, if any. No information was found to suggest that hazardous substances or petroleum products were present in the possible fill material. Based on the above, this issue is not considered a REC. However, potential historical filling activities, and the practice of waste burial documented at other military operations facilities, should be considered when undertaking Site development activities.
- vi) On-Site Solid Waste/Debris: Based on observations during the Site reconnaissance, discarded debris including scrap metal, scrap wood, plastic and approximately three discarded 55-gallon drums were observed in the former staging areas. No staining, odors, or visible indication of hazardous substances or petroleum products was noted in the observable portions of the former staging areas during the Site visit. Based on the above, this issue is not considered a REC. The discarded debris is considered a de minimis condition.
- vii) Discarded Vehicle Batteries: Two discarded vehicle batteries were observed at the northern former staging area. Based on the fact that the discarded batteries did not represent a threat to human health or the environment and would not be expected to be the subject of an enforcement action if brought to the attention of the applicable governmental agency, the discarded batteries are considered de minimis condition.

#### 5.1 Conclusions

GHD has performed a Phase I Environmental Site Assessment / Limited Phase II Assessment in conformance with the scope and limitations of the Standard of the Timber Creek property located at 12999 Daniels Parkway in Fort Myers, Florida. Any exceptions to, or deletions from this practice are described in Section 1.0 of this report.

## 5.1.1 Recognized Environmental Conditions

The following REC, as described above, has been identified to exist in connection with this Site:

Former On-Site WWII Gunnery Range

To further determine if the Former On-Site WWII Gunnery Range was a concern, a limited Phase II ESA was conducted with the following results:

 The results of the laboratory analysis of the eight composite ISM soil samples collected from the former World War II gunnery ranges revealed all 13-Priority Pollutant metals were ether below the detection limits or below the Florida Department of Environmental Protection's Cleanup Target Levels, as stated in Chapter 62-777 FAC. It is our opinion that further inquiry into the environmental condition of the property is not warranted at this time.

# 5.2 Data Gaps/Data Failure

A data gap, as defined in the Standard, is an absence of information that affects the ability of the environmental professional to identify RECs. Data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met. Data failure is not uncommon in trying to identify the use of the Site at five year intervals back to first use or 1940 (whichever is earlier). The following data gaps/data failures were identified in this Phase I ESA.

- Historical Information: Available historical information for the Site dates only to 1944, the date
  of the earliest available aerial photograph. Based on the information obtained by GHD, it is
  unlikely that additional information prior to 1944 will have an impact on the conclusions
  regarding this Phase I ESA.
- Historical Source Interval: Standard historical sources reviewed for this ESA were not
  available at the 5-year intervals described in Section 8.3.2.1 of the Standard. Additional
  information sources were not considered reasonably ascertainable. Based on the consistent
  historical use of the Site as undeveloped or agricultural land, it is unlikely that additional
  information would impact the conclusions of this report.

# 6. Limited Phase II Assessment

# 6.1 Soil Investigation

In order to further evaluate the historical uses of the subject Site and the REC identified by the Phase I ESA findings, GHD completed limited Phase II Assessment activities. The limited Phase II Assessment activities consisted of FDEP approved Incremental Sampling Methodology (ISM) soil sample collection within the two former World War II Gunnery ranges. The samples collected for laboratory analysis was submitted under sample chain-of-custody to a certified environmental laboratory subcontractor. The project laboratory selected was Jupiter Environmental Laboratories, Inc. (Jupiter, FL, State of Florida Certification No. E86546). Quality assurance (QA) procedures for the collection of soil samples and decontamination of sampling apparatus prior to and during use in the field was conducted in general conformance with the Florida Department of Environmental Protection field sampling and laboratory analysis quality assurance protocol codified in Chapter 62-160 FAC Standard Operation Procedures for Field Activities (FDEP SOP-001/01).

# 6.2 Field Investigation Findings

The following discussion summarizes the investigative activities for the specified areas of the Site that were assessed. Sampling locations are depicted on Figure 3. Pertinent field records, an analytical summary table, and copies of laboratory reports are provided in Appendix G.

On October 28, 2015, GHD conducted ISM sampling at the two former gunnery ranges. Each site consists of a "coat-hanger" shaped berm with a length of approximately 4,100 linear feet and approximately 4 - 6 feet high. A concrete curb runs along the interior and exterior base of each berm. For the ISM sample collection, the berms were divided into four areas – Inside Top Slope, Outside Top Slope, Inside Bottom Slope, and Outside Bottom Slope. GHD collected 30 equal

aliquots from each of the four designated areas from each berm. The soil was then field mixed to yield one sample for analysis from each of the four locations per berm for a total of eight (8) ISM composite soil samples. Samples were collected with a stainless steel auger at an approximate depth of 0-12 inches. Samples were placed in laboratory-supplied jars, capped, labeled, packed on ice for analysis according to EPA Methods 6020 13-Priority Pollutant Metals. (Due to the procedures required for ISM sampling, mercury was not analyzed. Mercury is not a metal associated with the manufacturing of .50 and .30 caliber bullets and was not listed in any of the literature that we reviewed for this project.)

As indicated in the laboratory analysis results and shown in Table 1, for all eight ISM composite soil samples (ISM001 through ISM008), all metals tested were either below the SCTLS or the laboratory detection limits.

Additional research was conducted for information on the WWII ammunition identified on the Site. Initially, the berms, the accessible areas surrounding the berms, and the area in-between SR82 and the berms were inspected for any surface bullets or shell casings. Bullets were observed on the face and the base of the berms. No bullets and shell casings were observed with the accessible area between SR82 and the berms. Shovel tests were conducted along the north exterior face of the central berm, the interior south face of the berm and along the south exterior backside of the berm. Along the north face and back exterior side, there were no bullets found in the seven shovel tests. The majority of the bullets appeared inside the interior south wall of the berm, especially at the turns. The density of the bullets along the south interior of the berm is as follows:

- Shovel Test #1 Fifty bullets were identified in the southwest excavation measuring 5 feet by 3 feet from the surface to a depth of 1 foot.
- Shovel Test #2 Three bullets were identified in the central excavation measuring 2 feet by 2 feet from the surface to a depth of 1 foot.
- Shovel Test #3 Four bullets were identified in the southeast excavation measuring 2 feet by 2 feet from the surface to a depth of 1 foot.

Both .50 and .30 caliber bullets were observed and are shown in Photograph #26. The bullets observed ranged from %-inch, 1-inch and 2¼-inches in length.

#### 6.3 Conclusions and Recommendations

The results of the laboratory analysis of the eight composite ISM soil samples collected from the former World War II gunnery ranges revealed all 13-Priority Pollutant metals were ether below the detection limits or below the Florida Department of Environmental Protection's Cleanup Target Levels, as stated in Chapter 62-777 FAC. It is our opinion that further inquiry into the environmental condition of the property is not warranted at this time.

# 7. Environmental Professional Statement

This Phase I ESA was completed by or under the direct supervision of an Environmental Professional (EP), who to the best of our professional knowledge and belief, meets the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. The EP has the specific qualifications based on education, training, and experience to assess a property of the nature,

history, and setting of the Site. We have developed and performed all appropriate inquiries (AAI) in conformance with the standards and practices set forth in 40 CFR Part 312. Under the final AAI Standard, certain aspects of the Phase I ESA (interviews, on-site visual reconnaissance, the historical records review, and the search for environmental liens) may require an update if the timeframe between their completion and acquisition of the Site exceeds 180 days.

# 8. References

- ASTM Standard E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.
- The EDR Radius Map™ Report, 4613-4641 Daniels Parkway, Fort Myers, Florida, dated October 7, 2015
- Environmental Questionnaire completed by Mr. Jared Holes on October 20, 2015
- Aerial Photography: Florida, University of Florida Digital Collections.
   October 2015. < http://ufdc.ufl.edu/aerials >
- Google Earth Pro Historical Aerial Photographs.
- Lee County Property Appraiser's aerial photographs.
- Florida Department of Environmental Protection's OCULUS web site.
   October 2015. <a href="http://dwmedms.dep.state.fl.us/Oculus/">http://dwmedms.dep.state.fl.us/Oculus/</a> >
- Lee County Property Appraiser Online.
   October 2015. <a href="http://www.leepa.org/">http://www.leepa.org/</a>
- USGS 7.5 Minute Quadrangle Series Topographic Maps of Alva SW, FL, published by the USGS
- Bomber Legends, Aerial Gunner Training

October 2015. <

http://thebombercommand.info/DEDICATED\_BOMBER\_SQUADRON/DBS\_TRAINING/AerialGunnery/BL\_Mag\_v2-2-GunneryTrain.pdf >

All of Which is Respectfully Submitted,

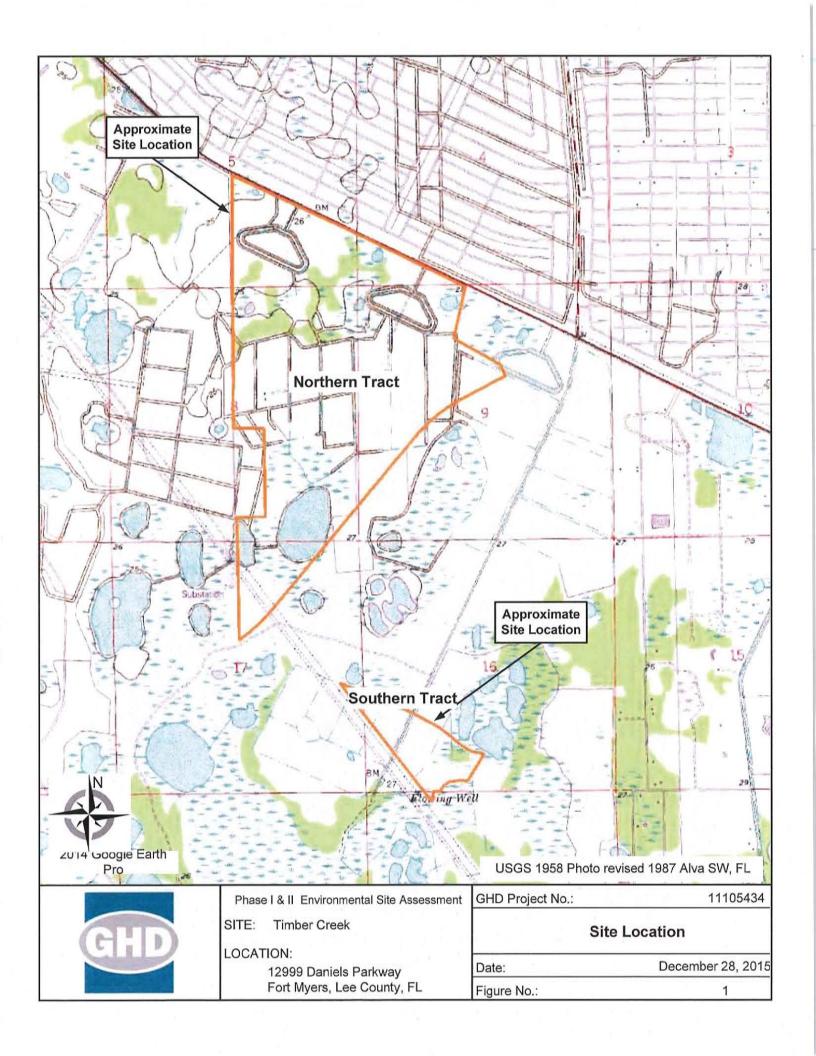
GHD

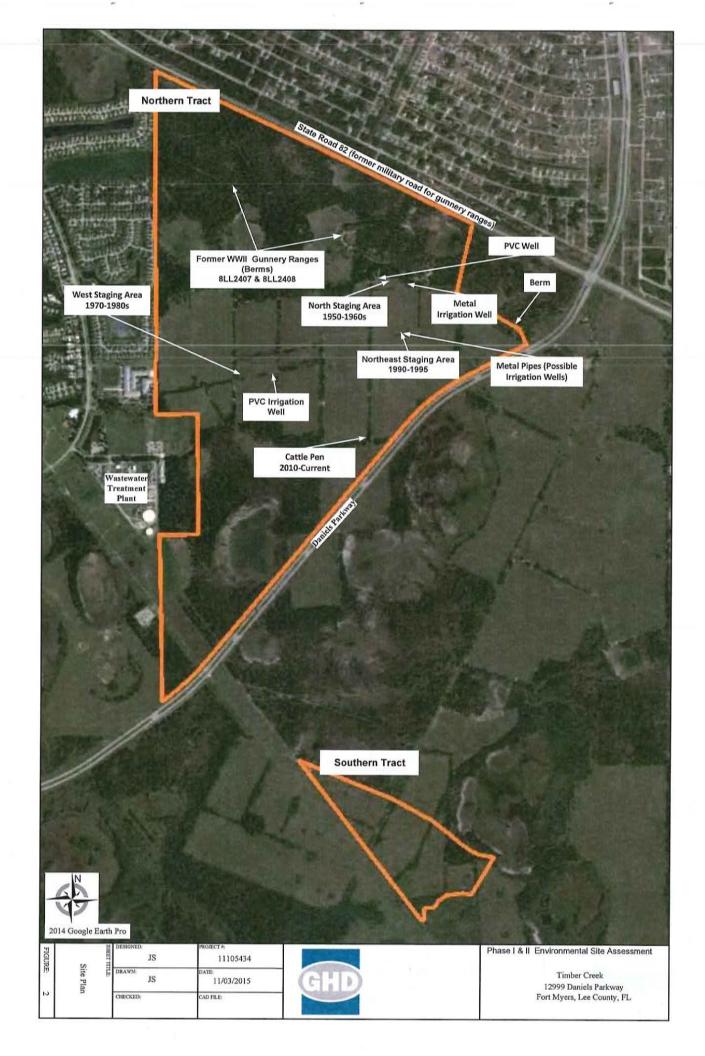
Jaren Skinner Assessor Nicholas Albergo, P.E., DEE

Senior Reviewer

Roxanne L. Gause, P.E. Senior Project Engineer

**Figures** 







SALIN CAA 12/28/15 ВВ ВG 11102434

ISM Sample · Locations

Timber Creek 12999 Daniels Parkway Fort Myers, Lee County, FL

Phase I & II Environmental Site Assessment

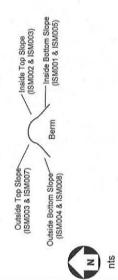
Direction



# Northwest Gunnery Range (8LL2407) Approximate Length 4100 feet Samples +/-135 feet apart 1944 Aerial Photograph (UFDC website)

Central Gunnery Range (8LL2408)
Approximate Length 4100 feet Samples +/-135 feet apart 1944 Aerial Photograph (UFDC website)

- Shovel Test
- Represents Approximate Soil Sample Location (30 equal aliquots locations per composite sample)
- Composite ISM Soil Sample



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Parameter	Ħ S	ISM001	ISM002		ISM003 ISM004	ISM005	ISMODE	ISM007 ISM008	ISM008	Residential	Commercial / Industrial	Leachability
Beryllium	mg/kg	U(27)U	(0.27)U	(0.27)U	U(27)U	(0.27)U	(0.27)U	(0.27)U	(0.27)U	120	1,400	83
Chromium	mg/kg	0.76	0.88i	0.46i	0.34	1.4	1.8	1.4	1.5	210	470	38
Nickel	mg/kg	(0.31)U	(0.31)U	(0.31)U	U(15:0)	0,44i	0,36i	(0.31)U	(0.31)U	340**	35,000	130
Copper	mg/kg		17	0.21i	1.7	4.0	6.2	3.4	1.2	150**	000'68	:
Zinc	тджд	2.00i	1.90i	(0.49)U	(0.49)U	1.60i	0.84i	0.87i	0.70i	26000	630,000	:
Arsenic	mg/kg	0.16i	0.11	(0.082)U (	(0.082)U	_	0.131	0.084i	U(80.0)	2.1	12	:
Selenium	mg/kg	U(747)U	(0.47)U	_	(0.47)U	(0.47)U	(0.47)U	(0.47)U	(0.47)U	440	11,000	5.2
Silver	mg/kg	U(0.070.0)	8	U(070.0)	8	9	U(0.070.0)	U(070.0)	U(070.0)	410	8,200	- 17
Cadmium	mg/kg	(0.092)U	U(560.0)	-	0.092)U	=	$\sim$		(0.093)U	82	1,700	7.5
Antimony	mg/kg		0.058)U (0.058)U	(0.058)U	8	5	U(820.0)	-	(0.058)U	27	370	5.4
Thallium	mg/kg	(0.11)U	(0.11)U	(0.11)U	(0.11)U		(0.11)U	(0.11)U		6.1	150	2.8
Lead	mg/kg	45	56	0.38i	1.2	18	20	13	5.3	400	1,400	:

**Appendices** 

# Appendix A Site Photographs



Photo 1 - Subject Property - Timber Creek Phase I



Photo 2 - Northeast corner looking west alongside proposed commercial property





Photo 3 - Northeast corner looking south alongside Daniels Parkway

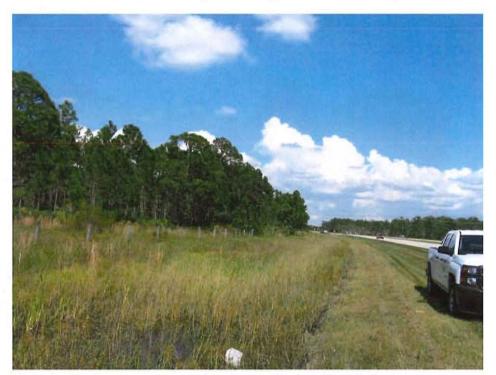


Photo 4 – Southern boundary point looking north along Daniels Parkway





Photo 5 - Southern boundary point looking north along western boundary



Photo 6 - Western boundary south central portion at end of Soccer Drive





Photo 7 - Looking north along western boundary at end of Soccer Drive



Photo 8 – Western boundary looking south alongside residential homes along Hampton Park Court





Photo 9 – Western boundary looking north alongside residential homes along Hampton Park Court



Photo 10 - Adjoing residential homes to the west along Hampton Park Court





Photo 11 – Western portion of the subject property looking east near Highland Chase Place



Photo 12 - North boundary point looking south along western boundary from S.R. 82





Photo 13 - North boundary point looking southeast along S.R. 82



Photo 14 - Mid-center along north boundary looking northwest along S.R. 82





Photo 15 – Entrance gate located mid-center along north boundary



Photo 16 - Adjoining property to the north along SR 82





Photo 17 - Northeast corner of subject property looking northwest along SR 82



Photo 18 - Northeast corner of subject property looking south along commercial property along SR 82





Photo 19 - World War II gun range berms located mid-center along north boundary



Photo 20 - Concrete curb at base of berm around the WW II gun range





Photo 21 - Agriculture plastic observed on subject property in several locations



Photo 22 - Irrigation well located on subject property





Photo 23 – Abandoned drum observed on subject property



Photo 24 - Remnants of abandoned drum observed in former staging area





Photo 25 - Used tires observed on subject property



Photo 26 – Bullets found on top of WWII gun range berm





Photo 27 – 55-acre Public Use Tract I located on south side of Daniels Parkway



Photo 28 - Northwest point of 55-acre Public Use Tract looking south along powerlines





Photo 29 - Southern point of 55-acre Public Use Tract looking southeast



Photo 30 - Southernmost point of 55-acre Public Use Tract looking northwest





Photo 31 - Adjoining property to the south of the 55-acre Public Use Tract I



# Appendix B Assessor Qualifications



# **Jaren Skinner**

# **Environmental Specialist**

Qualified (Education): A.A., General Studies, 2013, Valencia College; Environmental Science & Engineering Technology, Seminole State College, FL 1997-1999

Connected: E.P.A. Licensed Asbestos Inspector, TSCA Title II/AHERA

**Professional Summary:** With experience in the environmental consulting field since 1998, Mr. Skinner meets the definition of Environmental Professional as defined in §312.10 of 40 CFR 312 and has prepared well over 2,000 Phase I and Phase II Environmental Site Assessments in Florida, Georgia, Virginia, North Carolina and South Carolina. In addition to Phase I and II ESAs, Mr. Skinner has also conducted hundreds of Asbestos Renovation and Demolition Surveys and other environmental due diligence reports for banks, cellular companies, municipalities, developers and government agencies. In addition to due diligence reports, Mr. Skinner also has over 10 years of experience in site remediation including Contamination Assessments, Source Removals, Monitoring Reports and assisting with Remedial Action Plans and remediation projects.

# Project Manager Phase I Environmental Site Assessments/Asbestos Demolition Surveys | CVS/Caremark Corporation Various Locations throughout Florida | 2005-2012

Jaren has completed approximately 50 Phase I ESAs and Asbestos Demolition Surveys at properties throughout Florida for planned redevelopment as CVS/Caremark Pharmacy facilities. Jaren was project manager for several projects which included gas station facilities requiring Phase II ESAs, Site Assessments, source removals, active remediation and/or natural attenuation monitoring prior to and during site development activities. Jaren worked with regulatory authorities to speed up remediation activity approval process to keep site development plans on schedule and also to obtain approval of placement of natural attenuation monitoring wells at locations acceptable to CVS/Caremark building specifications.

# Project Manager Phase I Environmental Site Assessments/Asbestos Demolition Surveys | Family Dollar, Advanced Auto Parts & Chase Bank | Various Locations throughout Florida | 2009-2014

Jaren has completed approximately 30 Phase I ESAs and Asbestos Demolition Surveys at properties throughout Florida for planned redevelopment as Family Dollar, Advanced Auto parts or Chase Bank facilities.

# Project Manager Phase I and II Environmental Site Assessments; 7,700-Acre Citrus Grove Property | Cutrale Farms, Inc. | Highlands County, FL | 2012

Jaren completed a Phase I and Phase II ESA of a 7,700-Acre citrus grove property to be purchased by Cutrale Citrus Juices. Jaren also conducted oversight and verification of source removal of contaminated areas identified in the Phase II ESA.

#### **Project Manager**

Phase I Environmental Site Assessments | SunTrust Bank, Florida Community Bank, Popular Bank, Regions Bank, CNL Commercial Real Estate, Lennar Homes, TaylorMorrison, KBHomes, Various other Banks and Developers | Various Locations throughout Florida | 2000-2015

Jaren has completed Phase I ESAs and Asbestos Demolition Surveys for hundreds of properties throughout Florida for banking, commercial real estate and private developer clients.

# Project Manager

Asbestos Renovation Survey; Apollo 13 Launch Pad Rehabilitation | NASA | Cape Canaveral, FL | 2013

Completed an asbestos survey of the Apollo 13 launch pad in Cape Canaveral, FL. Purpose was to identify asbestos containing materials prior to cleanup and rehabilitation of the monument. Client was NASA as an employee of Tetra Tech, Inc.



# **Jaren Skinner**

# **Environmental Specialist**

#### **Project Manager**

# Asbestos Renovation Survey; Mark's Quality Drycleaning | Paramount Pictures | Miami Beach, FL | 2012

Jaren completed an asbestos demolition survey and report preparation for this facility that was later to be used as a filming location for Paramount Pictures "Pain & Gain." Identified asbestos containing materials within the facility and provided periodic safety inspection of the identified materials prior to, and during, filming. Jaren also provided consulting for safety measures to prevent fiber release during filming.

# **Project Manager**

# Asbestos Renovation Survey; Abandoned Residences/Office Buildings | Osceola County | Osceola County, FL | 2006-2013

Jaren completed several asbestos surveys for Osceola County to identify the presence, quantity and condition of asbestos containing materials (ACM). The surveys were conducted for several residences throughout Osceola County that were to be demolished for road-widening projects and several office buildings for County renovation projects.

#### **Project Manager**

# Asbestos Renovation Survey; Residential Apartment | Fort Myers, FL | 2015

Jaren completed an asbestos demolition survey of a residential apartment destroyed by fire prior to the demolition and renovation of the apartment in Fort Myers, Florida. Survey was conducted within 2 hours of proposal acceptance and the completed report was delivered to the client within 48 hours because an expedited turnaround time was requested.

#### **Project Manager**

# Asbestos Renovation Survey; Alachua Retail Properties | Alachua, FL | 2014

Jaren completed a limited asbestos demolition survey of two facilities consisting of restaurant building and a car wash to be redeveloped as a Family Dollar and Advanced Auto Parts in Alachua, Florida.

#### **Project Manager**

# Asbestos Renovation Survey; Avis-Budget Car Rental Facility | Avis-Budget | Miami Beach, FL | 2014

Completed an asbestos renovation survey and prepared the report for Avis-Budget car rental facility in South Beach prior to planned renovation.

#### **Work history**

November 2013 – present	Environmental Specialist, GHD (formerly Conestoga-Rovers & Associates), Fort Myers, FL
2003 – 2013	Environmental Specialist, Tetra Tech, Inc./Ardaman & Associates, Inc., Orlando, FL
1999 – 2002	Environmental Specialist, GFA International, Fort Myers, FL
1998-1999	Laboratory/Field Technician, PBS&J Analytical Services, Orlando, FL



# Roxanne L. Gause

# **Environmental Engineer**

**Qualified (Education):** BS, Civil Engineering (Environmental), Department of Civil Engineering & Mechanics, University of South Florida, 1991; BA, Sociology, College of Liberal Arts, University of West Florida, Pensacola, 1971, Post Graduate Studies, University of South Florida

**Connected (professional affiliations):** Registered Professional Engineer: Florida (53261), 1998, Engineer Intern: Florida, 1991, Florida Licensed Asbestos Consultant (000046)

**Professional Summary:** Roxanne has over 23 years of experience in the Civil and Environmental fields. She has performed hundreds of Phase I Environmental Assessments in South Florida. She has been the Project Manager for emergency Source Removal Activities, Site Assessment Reports, Remedial Action Plans, UST Closure Reports, Background Studies and Institutional Controls for site specific projects.

#### **Project Manager**

#### **Project Manager**

# Cargill | Trademark Metals Recycling Facility | Tampa, FL

After 15 years of monitoring of the large recycling facility, a large scale source removal of over 11,000 tons of impacted soil was conducted, followed by a Site Assessment Report and Background Study for the historic metal company metal recycling facility with documented PCB, petroleum and metal contamination. Following the remediation of site (Source Removal/SARA), the site received an SRCO with Conditions. A Restrictive Covenant was submitted to the FDEP and an Institutional Control was placed on the property.

# Project Manager Collier Resources Company | Naples, FL

Managed the coordination and development of an animated video depicting the nature of the geology and subsurface fate and transport of the area surrounding the Collier-Hogan oil. Following the preparation of a groundwater model, an animation was designed to educate the general public to have a basic understanding of the site geology and the movement of groundwater and chemicals in the subsurface. The main function of the animation was to present the information in a scientific terms understandable to the general public to dispel many of the myths and misunderstands people may have about subsurface transport.

# Project Manager Everglades Harvesting & Hauling, Inc. | LaBelle, FL

Completed three Spill Prevention Control and Countermeasures Plans (SPCC Plan) for three large orange grove sites located in LaBelle, Felda and Immokalee. The purpose of an SPCC Plan is to meet EPA requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters. The SPCC plan is required for farm sites with greater than 10,000 gallons of oil of any kind or in any form including,

but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil and oily mixtures or with oil storage container greater than 5,000 gallons.

#### **Project Manager**

#### Pepper Ranch | Collier County | Immokalee, FL

Pepper Ranch Cattle Dip Vat, Collier County, Florida: Conducted a Limited Phase II Environmental Assessment for the +/- 2,500-acre Pepper Ranch prior to a real estate transaction. The objective of the Limited Phase II Environmental Assessment was to address the recognized environmental concerns; developed a Site Assessment Report and Remedial Action Plan (SAR/RAP) on behalf of the owner, conducted a Source Removal and submitted a report to the FDEP. A Restrictive Covenant was submitted and an Institutional Control was placed on the property for Collier County.

## Project Engineer Anadarko Petroleum | Felda, FL

CRA is contracted with Anadarko Petroleum Corporation for weekly operation, maintenance and groundwater monitoring of the new remediation system for their former oil wells located at Tank Battery 32 in Felda, Florida. In addition, CRA monitors the former oil well production areas Tank Battery 30-3 and West Felda. CRA works alongside the FDEP, EPA, and the Southwest Florida Water Management District for the required regulatory framework and has a comprehensive plan of making the system more efficient. CRA monitors the progress of the site remediation and continues to evaluate site conditions by sampling and analysis. In addition, CRA is in the process of further assessment for the development of a new remediation system on the West Felda and Section 30-3 sites.

## Phase I & Phase II Environmental Assessments:

 Naples: Conducted Phase I and II ESA's in Naples including the Caterpillar Inc., Temple Citrus Orange Grove, Orange Tree Utility.



#### Fort Myers: Conducted Phase I and II ESA's in Cape Coral including the Industrial site on Towne Lake Dr., Kmart Plaza.

 Cape Coral: Conducted Phase I and II ESA's in Cape Coral including the Gulf Plaza Shopping Center Plaza, Milton Street Plaza, residential properties prior to development of the Midpoint Center, Cape Coral Boat Club, gasoline stations on Del Prado and Cape Coral Boulevard, a golf driving range on Pine Island Road.

#### Residential Developments | Various Locations

Conducted Phase I and Phase II Environmental Assessments, Source Removal activities and Site Assessment Reports for major home builders on large tracts of land prior to residential developments.

# **Project Manager**

# Five Collier County Underground Storage Tanks | Collier County, FL

Conducted Tank Closure Assessments for the removal and replacement of four emergency generator underground diesel storage tanks and one underground gasoline storage tank (USTs) and dispenser. The five USTs ranged from 3,000-gallons to 10,000-gallons and were located in the city of Naples, the City of Immokalee at the Collier County Immokalee Jail Center and Port of the Isles development in southern Collier County. Following the tank closures, four of the five tank projects were replaced with new USTs.

# Project Manager Bayshore Agency Gateway Triangle | Collier County, FL

Conducted the Florida State required Tank Closure and Interim Source Removal for the former Hubert's Welding & Repair gasoline station. Following the removal of the three underground storage tanks and hydraulic lift, a Site Assessment Report was conducted and an SRCO was granted by the Florida Department of Environmental Protection.

# Roxanne L. Gause

# **Environmental Engineer**

#### **Work history**

October 2013 - present	GHD (formerly Conestoga-Rovers & Associates), Fort Myers, FL
2007 - 2013	HSA, a Division of Conestoga-Rovers & Associates, Fort Myers, FL
1993 - 2007	Ardaman & Associates, Fort Myers, FL
1992 - 1993	South District Florida Department of Environmental Protection, Fort Myers, FL

#### Other related areas of interest

## Recognized (Certifications/Trainings)

- Neutral Evaluator: Florida, 2008
- Registered Professional Engineer, Florida (53261), 1998
- Engineer Intern, 1991
- State of Florida Licensed Asbestos Consultant, (00046)
- OSHA 40-hour Hazardous Waste Worker, Refresher, 2007
- OSHA 8-hour Hazardous Waste Supervisor, 1994

#### Award:

· Florida Engineering Society : Engineer of the Year



Senior Engineer

Qualified (Education): Ph.D. Candidate - Chemical Engineering (Admitted 08/05), Master of Science - Civil Engineering 08/86, Bachelor of Science - Engineering Science 08/86,

**Connected (Professional Affiliations):** Professional Engineer (Florida, South Carolina, North Carolina, Georgia, Alabama, Mississippi, New Jersey), Professor – Department of Civil and Environmental Engineering, University of South Florida, ASTM E50.02 Vice Chair on Environmental Assessment, Risk Management and Corrective Action, Certified Florida Circuit Civil Mediator, Arbitrator – American Arbitration Association Roster of Neutrals, Certified Florida DFS Neutral Evaluator, American Academy of Environmental Engineers – Diplomate, American Academy of Water Resources Engineers – Founding Diplomate, American College of Forensic Engineers – Fellow

**Professional Summary:** Nick Albergo was the founder and CEO of HSA Engineers & Scientists, a Florida-based engineering consulting firm that he successfully grew to more than 300 professionals spread throughout fifteen offices. The firm was sold to GHD in 2013. He has had a distinguished career as an inventor, as the author of over 185 professional publications, and as the founder and Keynote Speaker for the Florida Remediation Conference on Innovative Remedial Technologies which, for the past 20 years, attracts greater than 400 professionals annually. He has shaped the rules and regulations that are now in common use throughout the United States, as one of the primary authors of the ASTM E 1527, 1528 and E 1903 Standard Practice for Environmental Site Assessments. He also co-authored the statutes for the State of Florida's Dry cleaning Solvent Clean-up Program, and assisted the State with the development of the regulations and the training of staff. Finally, he assisted the Governmental Accounting Standards Board in their development of Statement No. 49, Accounting and Financial Reporting for Pollution Remediation Obligations. Beyond his domestic accomplishments, he is also a sought after lecturer abroad, working as a technical trainer for Governments, the World Bank and United Nations.

Areas of Expertise environmental / geotechnical / chemical engineering including landfill design, environmental site assessment and remedial design, advanced hydrogeology, geochemistry, contaminant fate and transport, risk assessment, water/wastewater quality/treatment design, regulatory compliance, waste characterization, storm water management, ground subsidence and structural settlement evaluation.

#### **EXPERIENCE**

#### **Chemical/Environmental Engineering**

Nick's chemical/environmental experience is well established and includes contamination assessment, degradation and migration analysis, water/wastewater treatment and permitting, and soil & groundwater remedial strategy and design, specifically in the areas pertaining to heavy metals and recalcitrant compounds including, chlorinated solvents, pesticides and explosives.

## **Regulatory Compliance**

- Evaluation of facility activities with respect to processes and waste streams
- Evaluation of compliance with deadlines established through applicable permits
- Cross program compliance analysis
- Evaluation of the effectiveness of in-place environmental management systems

- Assessment of risks from regulated and unregulated materials and practices
- · Analysis of new requirements or regulations
- Process or waste management changes
- Surface water and stormwater compliance

#### **Storm water Compliance**

- Completing and submitting storm water and National Pollutant Discharge Elimination System permit applications, modifications, and termination forms
- Conducting site inspections and reviewing existing BMPs
- Measuring and calculating berm containment measurements and calculations
- Evaluating surface water flow directions, drainage systems, and structural controls
- Setting up storm water analytical sampling programs
- Completing Discharge Monitoring Reports (DMRs) and state-required annual reports
- Installing and constructing drainage flow systems, oil/water separators, absorbent drain filters, continuous-pour berms, and covered drum storage areas
- Preparing final Storm water Pollution Prevention Plan (SPPP) documentation and delivery
- Preparing of Spill Prevention Control and Countermeasure Plans for oil and gas clients



#### Storm water training

#### **CERCLA/RCRA Experience**

Nick has extensive CERCLA / DOD and BRAC experience at sites where numerous Areas of Concern (AOCs) were investigated and evaluated during the Remedial Investigation/Feasibility Study (RI / FS) phase, as well as similar experience at RCRA sites involving managing the complete corrective action process from the RFA / RFI, through the CMS / CMI, and including numerous instances where interim/ stabilization measures were implemented to prevent or minimize the further spread of contamination. He has also conducted numerous facility inspections geared compliance with major regulatory frameworks such as RCRA and TSCA.

## **Geotechnical Engineering**

For over 30 years, Nick has been consulting for domestic and international clients in the areas of environmental and geotechnical engineering, including geotechnical/geological/geophysical and forensic studies for the presence of, and potential for, sinkhole activity in karst regions. In addition, he provides opinions for studies involving the presence of detrimental soil or geotechnical conditions, which have or may affect existing structures. His versatile experience also includes his assistance in many structural damage assessments pertaining to natural catastrophic events (i.e., hurricane, tornado, flood, etc.).

#### **Expert Witness**

Nick has been previously qualified as an expert in the fields of environmental and chemical engineering, engineering geology, forensic analysis, operations, environmental site assessment, characterization, storm water management soil assessment. transport, fate and migration contaminants and fugitive emissions, risk analysis, and remedial design and performance. Both his academic and professional experience also includes substantial training in the fields of biology and chemistry.

He has served as an expert during jury and non-jury trials, within State, Federal and international court systems, and has represented plaintiffs and defendants evenly. He has also assisted counsel with *Daubert* challenges to the admissibility of expert testimony based on Fed. R. Evid. 702, where he has provided support or expert testimony regarding a factors analysis including: 1) Was it subjected to peer-reviewed publication? 2) Does it have a known or knowable error

# Nicholas Albergo, DEE, PE

Senior Engineer

rate? 3) Is it generally accepted in the relevant scientific field? And 4) Has it been tested or is it testable?

His strengths as an expert witness include: credibility, ability to articulate, sincerity, authoritativeness, correctness, common sense, wisdom, invulnerability, professional manner, and an ability to be a problem solver. He speaks in a language that is understandable to the judge and jury. In summary, he has an outstanding reputation as a "street smart" scientist with a strong theoretical background. His hands-on expertise gained through experience and training, has afforded counsel and their clients with a persuasive advantage in cases involving the application of principles, as opposed to many academics that merely offer an explanation of principles. He always remains cognizant of the importance of satisfying the primary objectives of assisting the judge and jury's understanding of the case, and presenting an opinion that determines the verdict.

In offering an opinion, he traditionally performs several separate functions as follows: (i) establish the facts by studying available documentation, and determine technical information of relevance; (ii) interpret the facts so as to provide a technical basis for the case; (iii) define the "standard of care" which should be exercised by professionals in the field; and (iv) comment on the opposing expert's facts and opinions through an "intelligence" effort.

#### National/International Training/Consulting

Technical Trainer – Environmental Regulatory Framework Development / Environmental Assessment / Compliance / Closure, **Doha, Qatar,** February 2015

Pesticide Expert – Food and Agriculture Organization of the United Nations, Civil War Bombing Site, Hargeisa, Somalia, April 2014

Nation-wide Technical Trainer – **Distinguished**Speaker Series – American Society of Civil
Engineers (ASCE), Environmental Assessment/Due
Diligence, October, 2013 and 2014

Guest Professor - Jiangxi Academy of Environmental Sciences, Environmental Regulatory Framework Development/Risk Assessment, Nanjuang, China, October, 2013

Nation-wide Technical Trainer – U.S. Department of Housing and Urban Development, Environmental Assessment/Due Diligence, September, 2013

Technical Trainer – Panama Canal Authority, Environmental Assessment / Compliance / Closure, Panama City, June, 2013

Guest Lecturer - Vietnam Environment



Administration, Toxic Sites Identification Program, July 2012

Guest Lecturer – Food and Agriculture Organization of the United Nations, Toxic Sites Identification Program, July 2012

Country-wide Technical Trainer – Indonesia State Ministry of Environment, Environmental Regulatory Framework Development / Environmental Assessment / Compliance / Closure, Jakarta, Sumatra, October, 2010

# ASTM Environmental Site Assessment Training

Primary Author & Trainer - ASTM Environmental Assessment Standard E 1527 & E 1528, Philadelphia, Pa., 4/94, 10/97, 9/05, 3/07 & 4/08, Tampa, Fl., 11/94, 10/95, 1/96, 2/98, 2/99, 3/01, 12/02 & 12/03, 11/04, 11/05; Orlando, Fl., 1/97, 1/07, 4/08, 4/09 & 11/11; Atlanta, Ga., 2/95, 4/99, 11/00, 9/01, 4/03, 2/04, 5/05, 5/07, 5/08, 4/11, 4/14 Butte, Mn., 4/95; Dayton, OH., 8/95; Chicago, III., 9/96, 6/98, 10/99, 10/00, 9/02, 10/03, 5/04, 9/05, 5/10, 10/11, 6/12, 5/14, 10/14; Memphis TN., 2/97; Myrtle Beach, SC., 3/97; Cincinnati, OH., 4/97, 9/98 & 9/07; San Francisco CA., 7/98; Ft. Lauderdale, Fl. 10/13, 12/00, 11/07 & 10/13; San Juan P.R. 10/02, 11/03, 4/05 & 3/07; Los Angeles, Ca 5/04, Honolulu, HI 9/03; New Orleans, La. 11/03, 4/09, 11/12; 5/14 & 5/15, Harrisburg, Pa. 4/05, 4/06, Pittsburgh, Pa. 5/06, Wichita, Ks. 12/05, Oklahoma City, Ok. 3/06, Little Rock, Ar 3/06, 10/06 & 2/07, Fayetteville, Ar 3/06; Washington DC 4/06, New York City 5/06, Valdosta, Ga 8/06, Boston, Ms 9/06, Las Vegas, Nv 10/06, 10/09, 9/13, 11/14; Columbus OH 10/06, 12/06 & 9/08, Denver Co 11/06, Indianapolis, In 12/06, Cleveland, OH 1/07 & 2/08, St. Louis, Mo. 4/07, Baltimore, Ma. 5/07 & 4/08, Norfolk, Va. 9/08, and Jakarta, Indonesia 10/10.

Technical Task Group Leader & Trainer - ASTM Environmental Assessments: Phase II E 1903-02/11, Chicago, III., 9/02, 10/03, 6/12, 10/14, San Juan, P.R., 11/03 & 4/05, New Orleans, La., 11/03, 11/12; Ft. Lauderdale, Fl. 10/13, Atlanta, Ga., 2/04, 5/08, 4/11, 4/14 Los Angeles, Ca 5/04, Harrisburg, Pa. 4/05, 4/06, Philadelphia, Pa. 9/05 & 4/08, Pittsburgh, Pa. 5/06, Wichita, Ks. 12/05, Oklahoma City, Ok. 3/06, Little Rock, Ar 3/06, 10/06 & 2/07, Fayetteville, Ar 3/06; Washington DC 4/06, Valdosta Ga 8/06, Indianapolis In 12/06, Cleveland, OH 1/07 & 2/08, Columbus, OH 9/08, St. Louis, Mo. 4/07, Baltimore, Ma. 5/07 & 4/08, Cincinnati, OH 9/07, Norfolk, Va. 9/08, Jakarta, Indonesia, 10/10, Orlando, Fl., 11/11, Chicago, IL 06/5, 06/06 & 06/07/12, New Orleans, LA, 11/06, 11/07 & 11/08 & 9/12; Las Vegas, NV 11/14.

# Nicholas Albergo, DEE, PE

Senior Engineer

#### **Professor**

Department of Civil and Environmental Engineering, University of South Florida

#### **Work history**

1983 - 1985	Staff Engineering Technician, United States Army Corps of Engineers
1985 – 1988	Project Engineer, Delta Engineering
1988 – 1989	Director of Environmental Services, McClymont & Rak Engineers, Inc.
1989 – 2013	President & CEO, HSA Engineers & Scientists
2013 - Present	Senior Engineer, GHD



# Senior Engineer

#### Other related areas of interest

#### Recognized (Certifications/Trainings)

- Neutral Evaluator: Florida, 2014
- Certified Florida Circuit Civil Mediator 2015
- Arbitrator American Arbitration Association Roster of Neutrals, 2009
- ASTM E50.02 Vice Chair on Environmental Assessment, Risk Management and Corrective Action
- American Society of Civil Engineers Distinguished Speaker Webinar Series
- Supreme Court of Florida Guardian Ad Litem Appointee, 2001

#### Awards

- 1995 Small Business of the Year Tampa Bay
- 2009 EBJ Gold Metal Business Achievement (\$20M \$100M) C&E Firms
- 2007, 2009-12' Inc. Magazine (Fastest growing private firms in America)
- 2009 & 2011 Florida Trend Best Midsized Companies to Work For
- 2008 EBJ/CE News Best Environmental Service Firms to Work For
- 2007, 2010-12' ZweigWhite Hot Firm (200 Fastest-Growing A/E/P & Environmental Consulting Firms (98% Revenue Growth in Past 3 years)
- Suncoast Fast 50 (Fastest Growing Publicly and Privately Held Technology-Related Companies #50 -11', #35 - 98', #25 - 97', #24 - 96', #13 - 95
- #285 1995 National 500 Technology List
- Member of the University of South Florida President's Council
- 2014 USF Alumni Fast 50

#### **Patents**

Apparatus for Utilization in Subsurface Bioremediation
 U.S. Patent #5,133,625

#### **Affiliations**

- · University of South Florida Academy of Inventors
- Blacksmith Institute Technical Advisory Board
- National Groundwater Association Brownfields Task Force
- Council of Examiners for Engineers and Surveyors (Committee on Prof. Registration - Exam Questions)

- American Society of Civil Engineers & American Water Works Association - Technical Paper Reviewer
- American Academy of Water Resources Engineers -Water Policy/Management/Law
- National Registry of Environmental Professionals/National Society of Professional Engineers
- National Groundwater Association/Association of Groundwater Scientists and Engineers
- The Environmental Manager's Compliance Advisor Board of Experts
- BLR National Environmental Advisory Board Board of Experts

## **Published Refereed Papers**

Diffuse Anthropogenic Pollution and its Potential Affect on Brownfield Development and the Landowner Liability Protections to CERCLA, N. Albergo, Environmental Practice - Journal of the National Association of Environmental Professionals, Volume 11, No. 3, September 2009

AAI and the Necessity for an Opinion regarding Additional Investigation as Part of the Performance of an ASTM E1527-05 Phase I Environmental Site Assessment, N. Albergo, Journal of Environmental Engineering, Volume 132, No. 12, December 2006

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Year 2000: Are You Ready? N. Albergo, Civil Engineering, Volume 68, No. 9, September 1998

Year 2000: Will Y2K Bug Bite You?, N. Albergo, Environmental Technology, Volume 8, Issue 4, July/August 1998

Aromatic Solvent Bioreclamation in a Highly Anaerobic Aquifer, R.E. Moon and N. Albergo, in <u>Applied Bioremediation of Petroleum Hydrocarbons</u>, Battelle Press, 1995, R.E. Hinchee, J.A. Kittel and H.J. Reisinger Eds.

Nonequilibrium Sorption: The Achilles Heal of Groundwater Remediation, N. Albergo, Environmental Resources Expo '95, Conference Proceedings, Orlando, Florida, June 1995

DNAPL Assessment and Site Restoration: A Technology Update, N. Albergo, Environmental Resources Conference '94 Proceedings, Orlando, Florida, May 1994



Senior Engineer

Analytical Technology Development Raises Serious Questions For The Environmental Profession, N. Albergo, Journal of Environmental Engineering, Volume 120, No. 2, March/April 1994

Defensive Engineering Can Be Dangerous, N. Albergo, Civil Engineering, Volume 62, No. 10, October 1992

Biomedical Waste: How Can It Be Controlled? N. Albergo, W.E. Lee, 1991 Association of Engineering Geologists National Conference Proceedings, Chicago, Illinois, October 1991

Risk Assessment Concerns in the Utilization of Engineered Organisms in Bioremediation, N. Albergo, W.E. Lee, 1991 Association of Engineering Geologists National Conference Proceedings, Chicago, Illinois, October 1991

Risk Assessment Concerns in the Utilization of Engineered Organisms in Bioremediation, N. Albergo, W.E. Lee, 1991 ASCE National Conference Proceedings on Environmental Engineering, Reno, Nevada, July 1991

Biomedical Waste: How Can It Be Controlled? W.E. Lee, N. Albergo, Proceedings of the Haztech Canada International Conference, Toronto, Ontario 1990

Site Remediation Via In-Situ Bioremediation, W.E. Lee, N. Albergo, P. Hildebrand, Proceedings of the Haztech Canada International Conference, Toronto, Ontario 1990

Innovative Technologies for the Investigation of Hazardous Waste Sites, N. Albergo, P. Hildebrand, W.E. Lee, Proceedings of the Haztech Canada International Conference, Toronto, Ontario/Edmonton, Alberta, 1989; and Proceedings of the United States Hazwaste Symposium, Chicago, 1989

On-Site Solutions to Waste Management Through Bioremediation, N. Albergo, W.E. Lee, Proceedings of the Haztech Canada Int. Conf., Toronto, Ontario/Edmonton, Alberta, 1989; and Proceedings of the United States Hazwaste Symposium, Chicago, 1989

Anaerobic Fixed Film, Plug Flow Reactors for Dissimilatory Nitrate Reduction of Munitions Waste, N. Albergo, University of South Florida - Thesis, 1986

# Papers Presented and Published in Conference Proceedings or Industry Journals

What the Heck is a "Controlled Recognized Environmental Condition?", N. Albergo, The Florida Specifier, Volume 36, No. 11, March 2014

AAI and the necessity for an opinion regarding additional investigation as part of the performance of an ASTM E 1527-05 Phase I Environmental Site Assessment, N. Albergo and A. Chatham, Florida Engineering Society Journal, September 2010

Diffuse Anthropogenic Pollution and its Potential affect on Brownfields Development and the Landowner Liability Protections to CERCLA, N. Albergo and R. Gause, Florida Engineering Society Journal, September 2010

Continuing Obligations: Beyond All Appropriate Inquires, N. Albergo and S. Folsom, Florida Engineering Society Journal, September 2010

The Re-birth of the ASTM E 1903 Phase II Environmental Site Assessment Standard, N. Albergo and B. Moore, Florida Engineering Society Journal, September 2010

Environmental Due Diligence Training, Entering the World of Social facilitated eLearning, N. Albergo and J. Huntress, Florida Engineering Society Journal, September 2010

Federal Rule revisions will enhance experts contribution, requests for discovery, N. Albergo, The Florida Specifier, Volume 32, No. 3, March 2010

Diffuse Anthropogenic Pollution and its Potential affect on Brownfields Development and the Landowner Liability Protections to CERCLA, N. Albergo, The Florida Specifier, Volume 30, No. 9, September 2008

The Re-birth of the ASTM E 1903-07 Phase II Environmental Site Assessment Standard, N. Albergo, The Environmental and Land Use Law Section Reporter, Volume XXIX, No. 2, April 2008

The Re-birth of the ASTM Phase II Environmental Site Assessment Standard, N. Albergo, The Florida Specifier, Volume 29, No. 8, August 2007

ESA Rules: Explored and Explained (Part 2), N. Albergo, Environmental Protection , Volume 17, No. 9, November/December 2006

ESA Rules: Plain English Version (Part 1), N. Albergo, Environmental Protection , Volume 17, No. 8, October 2006

AAI and the necessity for an opinion regarding additional investigation as part of the performance of an ASTM Phase I ESA, N. Albergo, The Florida Specifier, Volume 28, No. 5, May 2006

Negotiators Finalize Consensus to Procedures for "All Appropriate Inquiry," Part 4, N. Albergo, Lawyer, The



# Senior Engineer

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### Nicholas Albergo, DEE, PE

Senior Engineer

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### **Presentations**

Conference Chair (1995 – Current) Florida Remediation Conference: Orlando, Florida

Primary Author & Trainer - ASTM Environmental Assessment Standard E 1527 & E 1528 - 1993 - current

Technical Task Group Leader & Trainer - ASTM Environmental Assessments: Phase II E 1903-02 - 2002 - current

Conference Moderator – Annual Southeast Brownfields Association Conference, CRECs, Orlando, Florida, October 30, 2014

Guest Lecturer – **NGWA**, International Water Challenges, Denver, May 4-7, 2014

Guest Lecturer - Florida Water Law & Policy, Global Water Challenges, Orlando, February 6-7, 2014

Guest Lecturer – Annual Conference of the Florida Brownfields Association, The Role of Continuing Obligations in Due Diligence, Palm Beach, Florida, October 28-30, 2013



### Nicholas Albergo, DEE, PE

Senior Engineer

Guest Speaker – Annual Conference of the Florida Association of Environmental Professionals, Water Wars and Lessons for Florida Engineers, September 11-13, 2013

Guest Speaker – Annual Conference of the American Society of Civil Engineers, The State of Water Resources Around the World and Lessons for Florida Engineers, July 11-13, 2013

Guest Speaker - Symposium on ASIA-USA Partnership Opportunities (SAUPO), Providing Engineering Services in the Asian Market, Atlanta, Georgia, April 19, 2013

Guest Lecturer – Annual Conference of the National Association of Environmental Professionals, Using Technology to Sustainably Manage Water Quality, Los Angeles, April 3, 2013

Guest Lecturer - Association of Environmental Engineering and Science Professors (AEESP), Education and Research Conference, Integrating Sustainability into Engineering Practice, July 12, 2011

Guest Speaker – 4<sup>th</sup> National Conference on Ecosystem Restoration, Water Quality Nutrients, Contaminants and Sustainable Sediment Management Session, Baltimore, Maryland, August 3, 2011

Guest Lecturer - Water, Energy & Climate Change, October 21-22, 2010

Program Chair – Florida Water Quality Regulation Conference – EPA's Numeric Nutrient Standards from all Perspectives, Tampa, Florida June, 2010

Guest Speaker - Florida Engineering Society "Lunch & Learn" Webinar Series: Excelling as an Expert Witness - Tips and Strategies from a Technical Perspective, September 9, 2009

Beyond All Appropriate Inquiry – ASTM Update and Status of the ASTM E 1903 Phase II Standard, August 18, 2009

Guest Speaker – **Brownfields 2008**: Urban Soil Risks & Common Contaminants: Things to Understand as a New Owner or User

Trainer – Florida Environmental Assessors Association, Inc. Phase I Environmental Site Assessment, November 5-6, 2007

Technical Liaison – **Governmental Accounting Standards Board**: Statement No. 49, Publication No. 260-A. Accounting and Financial Reporting for Pollution

Remediation Obligations, November 2006

Guest Speaker - The Florida Bar: Environmental and Land Use Law Section: "Knowing me, Knowing You: The Practical Impacts of All Appropriate Inquiry to Real Estate Transactions," Amelia Island, Florida, August 2006 Notifying Third Parties about Contamination in Florida: Ethical and Practical Challenges – What's Required? What's in the Pipeline? Financial Disclosures? Ponte Vedra, August 2010

Guest Lecturer – Eminent Domain Super Conference: Environmental Law Overview and Update, Tampa, Florida, October 2004

Guest Speaker - The Florida Bar: Environmental & Land Use Law Section: Changes to the Innocent Purchaser/All Appropriate Inquiry Regulatory Framework, Orlando, Fl, March 2004

Guest Lecturer – U. S. Environmental Protection Agency Region IV: Small Business Liability Relief & Brownfields Revitalization Act, ASTM Phase I and Phase II, Atlanta, Georgia, February 2004

Guest Speaker - The Florida Bar: Environmental and Land Use Law Section: New Regulatory Trends and options for Environmental Data Assessment, Tampa, Florida, November 2003

Guest Lecturer - Florida Department of Environmental Protection: DNAPL Fate, Migration and Degradation; Tallahassee, Florida, October, 1994; Daytona Beach, Florida, October, 1996

**Technical Session Chairman** - Environmental Resources Expo '96: *Innovative Technologies for Site Remediation*, Orlando, Florida, May 1996

**Technical Session Chairman** - Florida Environmental Expo '95: *Site Remediation*, Tampa, Florida, September 1995

Guest Speaker - National Assoc. of Legal Assts: Risk Assessment, Tampa, Florida, May, 1995

Presenter - In Situ and On-Site Bioreclamation: The Third International Symposium, San Diego, California, April 1995

**Technical Session Chairman** - Florida Environmental Expo '94: *Update - RCRA Corrective Actions*, Tampa, Florida, October 1994

Guest Speaker - The Florida Bar: Environmental and Land Use Law Section: DNAPL Assessment and Site Restoration - A Technology Update, Orlando, Florida, May



### Nicholas Albergo, DEE, PE

Senior Engineer

1994

**Technical Session Chairman** - Environmental Resources Conference '94, Florida Environmental Expo '93, Tampa, Florida, October 1993

**Technical Session Chairman** - 34th Annual Association of Engineering Geologists Meeting: *Biomedical Waste: How Can It Be Controlled?*, Chicago, Illinois, October 1991

Guest Speaker - ASCE National Conference on Environmental Engineering: Risk Assessment Concerns in the Utilization of Engineered Organisms in Bioremediation, Reno, Nevada, April, 1991

Keynote Speaker - 1990 Environmental Control/Hazardous Waste Management Conference, Toronto, Ontario, May 1990

# Appendix C Environmental Database Search Results

Timber Creek 4613-4641 DANIELS PKWY Fort Myers, FL 33913

Inquiry Number: 4432397.2s

October 07, 2015

## The EDR Radius Map™ Report



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

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### GEOCHECK ADDENDUM

GeoCheck - Not Requested

*Thank you for your business.* Please contact EDR at 1-800-352-0050 with any questions or comments.

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A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

### **ADDRESS**

4613-4641 DANIELS PKWY FORT MYERS, FL 33913

### COORDINATES

Latitude (North): Longitude (West): 26.5773000 - 26° 34' 38.28" 81.7281000 - 81° 43' 41.16"

Universal Tranverse Mercator: Zone 17 UTM X (Meters): 427490.8

Zone 17 427490.8

UTM Y (Meters):

2939659.5

Elevation:

24 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:

5652574 ALVA SW, FL

Version Date:

2012

West Map:

5652666 FORT MYERS SE, FL

Version Date:

2012

### **AERIAL PHOTOGRAPHY IN THIS REPORT**

Portions of Photo from:

20100428

Source:

USDA

### MAPPED SITES SUMMARY

Target Property Address: 4613-4641 DANIELS PKWY FORT MYERS, FL 33913

Click on Map ID to see full detail.

MAP				RELATIVE	DIST (ft. & mi.)
ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	ELEVATION	DIRECTION
A1		11556 LAKE CYPRESS	EDR US Hist Cleaners	Higher	280, 0.053, WNW
A2		11452 LAKE CYPRESS	EDR US Hist Auto Stat	Higher	396, 0.075, WNW
В3	JETPORT SUBSTATION	13577 DANIELS DR	RCRA-CESQG	Higher	1151, 0.218, SSW
B4	JETPORT SUBSTATION	13577 DANIELS DR	FINDS	Higher	1151, 0.218, SSW
5		13213 HIGHLAND CHAS	EDR US Hist Auto Stat	Higher	1416, 0.268, NW
6		11050 LAKELAND CIR	EDR US Hist Auto Stat	Higher	2105, 0.399, NW
7	LEE CNTY-GATEWAY WWT	13240 GRIFFIN DR	AST	Higher	2296, 0.435, WSW
8	LEE COUNTY ESA - GRI	GRIFFIN DR./SR 82	SWF/LF	Higher	2402, 0.455, NNW

### TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

### **DATABASES WITH NO MAPPED SITES**

No mapped sites were found in EDR's search of available ("reasonably ascertainable") government records either on the target property or within the search radius around the target property for the following databases:

### STANDARD ENVIRONMENTAL RECORDS

Fodoval NDL -it- li-t	
Federal NPL site list	Matienal Delante, List
NPLProposed NPL	National Priority List Proposed National Priority List Sites
NPL LIENS.	Federal Superfund Liens
= 1	<b></b> .
Federal Delisted NPL site	
Delisted NPL	National Priority List Deletions
Federal CERCLIS list	
FEDERAL FACILITY	Federal Facility Site Information listing
CERCLIS.	Comprehensive Environmental Response, Compensation, and Liability Information System
Federal CERCLIS NFRAP	site List
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
Federal RCRA CORRACTS	S facilities list
CORRACTS	
001110101011111111111111111111111111111	20 Out of Notion Report
Federal RCRA non-CORRA	ACTS TSD facilities list
RCRA-TSDF	RCRA - Treatment, Storage and Disposal
Federal RCRA generators	list
RCRA-LQG	RCRA - Large Quantity Generators
RURA-SQG	RCRA - Small Quantity Generators
Federal institutional contro	ols / engineering controls registries
LUCIS	Land Use Control Information System
US ENG CONTROLS	Engineering Controls Sites List Sites with Institutional Controls
09 INST CONTRUL	Sites with institutional Controls

Federal ERN	SI	IST
-------------	----	-----

ERNS..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SHWS\_\_\_\_\_Florida's State-Funded Action Sites

State and tribal leaking storage tank lists

LUST\_\_\_\_\_Petroleum Contamination Detail Report LAST.....Leaking Aboveground Storage Tank Listing

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing

FF TANKS..... Federal Facilities Listing

UST..... Storage Tank Facility Information

INDIAN UST...... Underground Storage Tanks on Indian Land

TANKS..... Storage Tank Facility List

State and tribal institutional control / engineering control registries

ENG CONTROLS..... Institutional Controls Registry

INST CONTROL Institutional Controls Registry

State and tribal voluntary cleanup sites

.....Voluntary Cleanup Sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Brownfields Sites Database

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY...... Recycling Centers

INDIAN ODI\_\_\_\_\_ Report on the Status of Open Dumps on Indian Lands DEBRIS REGION 9....... Torres Martinez Reservation Illegal Dump Site Locations ODI...... Open Dump Inventory

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... National Clandestine Laboratory Register

PRIORITYCLEANERS...... Priority Ranking List

FI Sites List

US CDL..... Clandestine Drug Labs

Local Land Records

LIENS 2..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

SPILLS..... Oil and Hazardous Materials Incidents SPILLS 90...... SPILLS 90 data from FirstSearch SPILLS 80 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR...... RCRA - Non Generators / No Longer Regulated

FUDS..... Formerly Used Defense Sites DOD...... Department of Defense Sites

SCRD DRYCLEANERS...... State Coalition for Remediation of Drycleaners Listing

US FIN ASSUR\_\_\_\_\_ Financial Assurance Information

EPA WATCH LIST EPA WATCH LIST 2020 COR ACTION 2020 Corrective Action Program List TSCA..... Toxic Substances Control Act

TRIS...... Toxic Chemical Release Inventory System

SSTS\_\_\_\_\_Section 7 Tracking Systems ROD..... Records Of Decision RMP\_\_\_\_\_ Risk Management Plans

RAATS......RCRA Administrative Action Tracking System

PRP..... Potentially Responsible Parties PADS..... PCB Activity Database System

ICIS..... Integrated Compliance Information System

FTTS......FIFŘA/ TSCA Tracking System - FIFŘA (Federal Insecticide, Fungicide, & Rodenticide

Act)/TSCA (Toxic Substances Control Act) ..... Material Licensing Tracking System

COAL ASH DOE..... Steam-Electric Plant Operation Data

COAL ASH EPA...... Coal Combustion Residues Surface Impoundments List PCB TRANSFORMER...... PCB Transformer Registration Database

RADINFO...... Radiation Information Database

HIST FTTS\_\_\_\_\_ FIFRA/TSCA Tracking System Administrative Case Listing

DOT OPS..... Incident and Accident Data

CONSENT..... Superfund (CERCLA) Consent Decrees

INDIAN RESERV.....Indian Reservations UMTRA..... Uranium Mill Tailings Sites LEAD SMELTERS....Lead Smelter Sites

US AIRS..... Aerometric Information Retrieval System Facility Subsystem

US MINES..... Mines Master Index File AIRS..... Permitted Facilities Listing

CLEANUP SITES..... DEP Cleanup Sites - Contamination Locator Map Listing

DEDB..... Ethylene Dibromide Database Results

DRYCLEANERS...... Drycleaning Facilities

DWM CONTAM..... DWM CONTAMINATED SITES

Financial Assurance Information Listing

FL Cattle Dip. Vats..... Cattle Dipping Vats

RESP PARTY...... Responsible Party Sites Listing

### **EDR HIGH RISK HISTORICAL RECORDS**

#### **EDR Exclusive Records**

EDR MGP..... EDR Proprietary Manufactured Gas Plants

### EDR RECOVERED GOVERNMENT ARCHIVES

### Exclusive Recovered Govt. Archives

RGA HWS	Recovered Government Archive State Hazardous Waste Facilities List
RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

#### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### STANDARD ENVIRONMENTAL RECORDS

### Federal RCRA generators list

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 06/09/2015 has revealed that there is 1 RCRA-CESQG site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JETPORT SUBSTATION	13577 DANIELS DR	SSW 1/8 - 1/4 (0.218 mi.)	B3	8

### State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Environmental Protection's Facility Directory (Solid Waste Facilities).

A review of the SWF/LF list, as provided by EDR, and dated 07/21/2015 has revealed that there is 1 SWF/LF site within approximately 0.75 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LEE COUNTY ESA - GRI Facility-Site Id: 98008 Class Status: PROPOSED (P)	GRIFFIN DR./SR 82	NNW 1/4 - 1/2 (0.455 mi.)	8	12

### State and tribal registered storage tank lists

AST: Shortly after the Sept 11 event, the DEP was instructed to remove the detail about some of the storage tank facilities in the state from their reports. Federal-owned facilities and bulk storage facilities are included in that set.

A review of the AST list, as provided by EDR, and dated 07/06/2015 has revealed that there is 1 AST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LEE CNTY-GATEWAY WWT Facility-Site Id: 9800767 Facility Status: OPEN Facility Status: OPEN	13240 GRIFFIN DR	WSW 1/4 - 1/2 (0.435 mi.)	7	10

### ADDITIONAL ENVIRONMENTAL RECORDS

### Other Ascertainable Records

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 01/18/2015 has revealed that there is 1 FINDS site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JETPORT SUBSTATION	13577 DANIELS DR	SSW 1/8 - 1/4 (0.218 mi.)	B4	9

### **EDR HIGH RISK HISTORICAL RECORDS**

### **EDR Exclusive Records**

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 3 EDR US Hist Auto Stat sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page	
Not reported	11452 LAKE CYPRESS	WNW 0 - 1/8 (0.075 mi.)	A2	8	
Not reported	13213 HIGHLAND CHAS	NW 1/4 - 1/2 (0.268 mi.)	5	10	
Not reported	11050 LAKELAND CIR	NW 1/4 - 1/2 (0.399 mi.)	6	10	

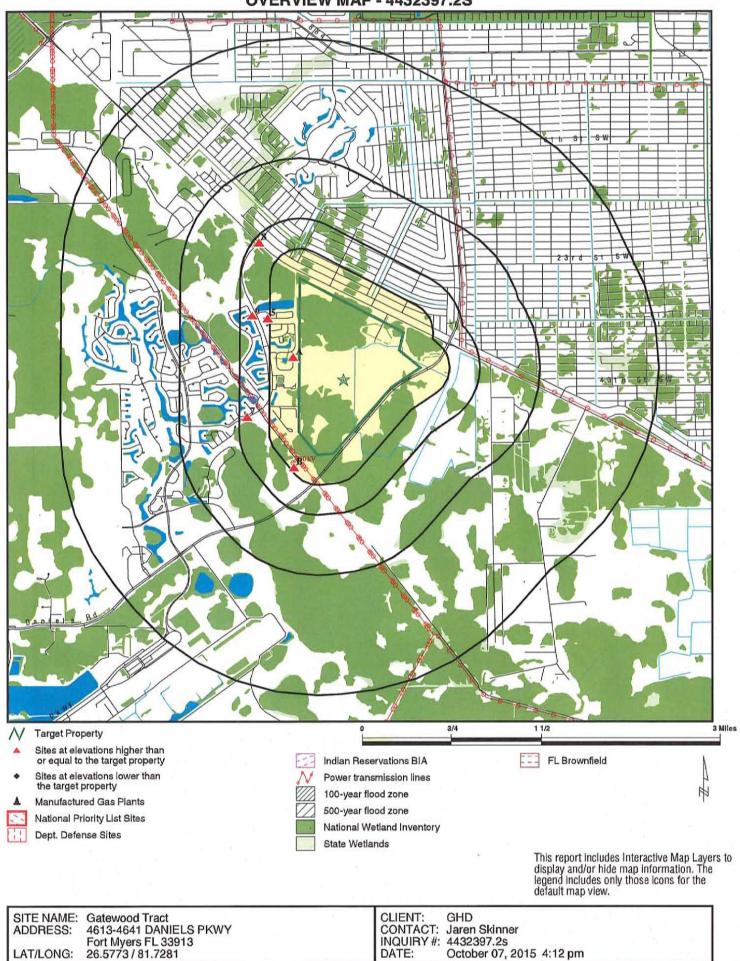
EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there is 1 EDR US Hist Cleaners site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	11556 LAKE CYPRESS	WNW 0 - 1/8 (0.053 mi.)	A1	8

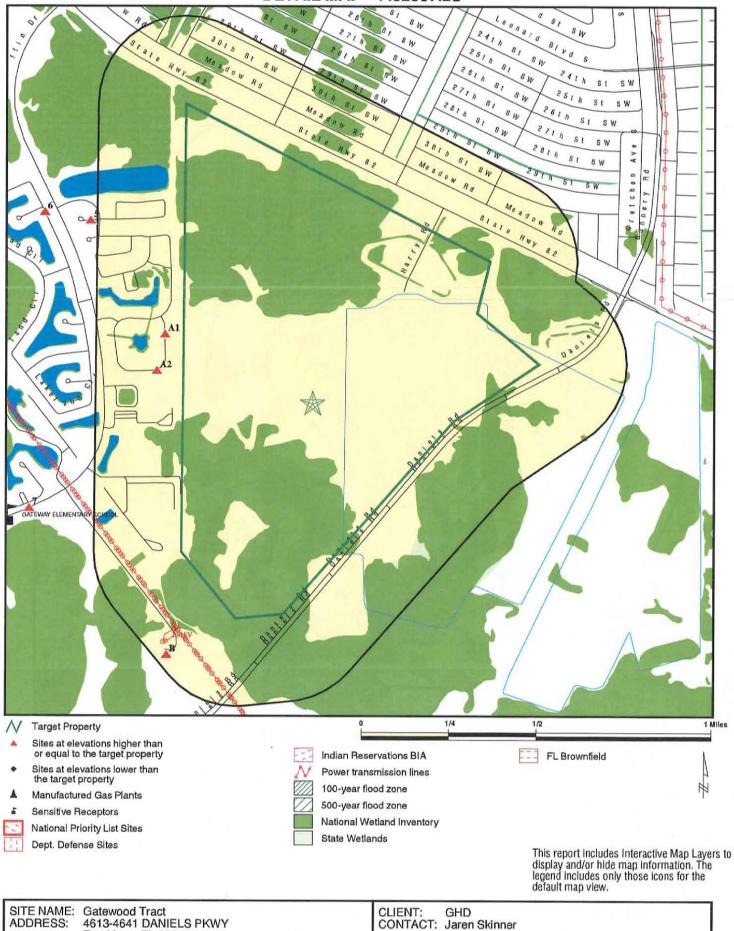
There were no unmapped sites in this report.

### **OVERVIEW MAP - 4432397.2S**



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### **DETAIL MAP - 4432397.2S**



Fort Myers FL 33913

26.5773 / 81.7281

LAT/LONG:

October 07, 2015 4:14 pm
Copyright © 2015 EDR, Inc. © 2010 Tele Atlas Rel. 07/2009.

INQUIRY#: 4432397.2s

DATE:

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMEN	TAL RECORDS							
Federal NPL site list								
NPL Proposed NPL NPL LIENS	1.250 1.250 0.250		0 0 0	0 0 0	0 0 NR	0 0 NR	0 0 NR	0 0 0
Federal Delisted NPL sit	te list							
Delisted NPL	1.250		0	0	0	0	0	0
Federal CERCLIS list								
FEDERAL FACILITY CERCLIS	0.750 0.750		0 0	0 0	0	0 0	NR NR	0 0
Federal CERCLIS NFRA	P site List							
CERC-NFRAP	0.750		0	0	0	0	NR	0
Federal RCRA CORRAC	TS facilities lis	it .						
CORRACTS	1.250		0	0	0	0	0	0
Federal RCRA non-COR	RACTS TSD fa	cilities list						
RCRA-TSDF	0.750		0	0	0	0	NR	0
Federal RCRA generator	rs list							
RCRA-LQG RCRA-SQG RCRA-CESQG	0.500 0.500 0.500		0 0 0	0 0 1	0 0 0	NR NR NR	NR NR NR	0 0 1
Federal institutional con engineering controls reg								
LUCIS US ENG CONTROLS US INST CONTROL	0.750 0.750 0.750		0 0 0	0 0 0	0 0 0	0 0 0	NR NR NR	0 0 0
Federal ERNS list								
ERNS	0.250		0	0	NR	NR	NR	0
State- and tribal - equiva	alent CERCLIS							
SHWS	1.250		0	0	0	0	0	0
State and tribal landfill a solid waste disposal site								
SWF/LF	0.750		0	0	1	0	NR	1
State and tribal leaking	storage tank lis	sts						
LUST LAST INDIAN LUST	0.750 0.750 0.750		0 0 0	0 0 0	0 0 0	0 0 0	NR NR NR	0 0 0
State and tribal registere		k lists	_	_		_		
FEMA UST	0.500		0	0	0	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FF TANKS UST AST INDIAN UST TANKS	0.500 0.500 0.500 0.500 0.500		0 0 0 0	0 0 0 0	0 0 1 0	NR NR NR NR NR	NR NR NR NR NR	0 0 1 0 0
State and tribal institution control / engineering co		s						
ENG CONTROLS INST CONTROL	0.750 0.750		0 0	0 0	0 0	0 0	NR NR	0
State and tribal voluntar	y cleanup site	es						
VCP INDIAN VCP	0.750 0.750		0 0	0 0	0 0	0 0	NR NR	0 0
State and tribal Brownfi	elds sites							
BROWNFIELDS	0.750		0	0	0	0	NR	0
ADDITIONAL ENVIRONMENT	NTAL RECORDS	<u>3</u>						
Local Brownfield lists	·							
US BROWNFIELDS	0.750		0	0	0	0	NR	0
Local Lists of Landfill / S Waste Disposal Sites	Solid							
SWRCY INDIAN ODI DEBRIS REGION 9 ODI	0.750 0.750 0.750 0.750		0 0 0	0 0 0	0 0 0	0 0 0 0	NR NR NR NR	0 0 0 0
Local Lists of Hazardous Contaminated Sites	s waste /							
US HIST CDL PRIORITYCLEANERS FI Sites US CDL	0.250 0.750 1.250 0.250		0 0 0	0 0 0 0	NR 0 0 NR	NR 0 0 NR	NR NR 0 NR	0 0 0 0
Local Land Records								
LIENS 2	0.250		0	0	NR	NR	NR	0
Records of Emergency I	Release Repoi	ts						
HMIRS SPILLS SPILLS 90 SPILLS 80	0.250 0.250 0.250 0.250		0 0 0	0 0 0	NR NR NR NR	NR NR NR NR	NR NR NR NR	0 0 0
Other Ascertainable Rec	ords							
RCRA NonGen / NLR FUDS DOD	0.500 1.250 1.250		0 0 0	0 0 0	0 0 0	NR 0 0	NR 0 0	0 0 0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SCRD DRYCLEANERS US FIN ASSUR EPA WATCH LIST 2020 COR ACTION TSCA TRIS SSTS ROD RMP RAATS PRP PADS ICIS FTTS MLTS COAL ASH DOE COAL ASH EPA PCB TRANSFORMER RADINFO HIST FTTS DOT OPS CONSENT INDIAN RESERV UMTRA LEAD SMELTERS US AIRS US MINES FINDS AIRS CLEANUP SITES DEDB DRYCLEANERS DWM CONTAM FINANCIAL ASSURANCE FL Cattle Dip. Vats RESP PARTY SITE INV SITES TIER 2 UIC NPDES  EDR HIGH RISK HISTORICA	0.750 0.250		000000000000000000000000000000000000000	000000000000000000000000000000000000000	ORRORRSORRRRRR ORRRROSORROSOROSORRSORRR	○ R R R R R R R R R R R R R R R R R R R		000000000000000000000000000000000000000
EDR Exclusive Records								
EDR MGP EDR US Hist Auto Stat EDR US Hist Cleaners	1.250 0.500 0.500		0 1 1	0 0 0	0 2 0	0 NR NR	0 NR NR	0 3 1
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Go	vt. Archives							
RGA HWS	0.250		0	0	NR	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	<u>1/2 - 1</u>	> 1	Total Plotted
RGA LF	0.250		0	0	NR	NR	NR	0
RGA LUST	0.250		0	0	NR	NR	NR	0
- Totals		0	2	2	4	0	0	8

### NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID MAP FINDINGS Direction

Distance EDR ID Number Elevation Site Database(s) EPA ID Number

1014978760 Α1 **EDR US Hist Cleaners** N/A

WNW 11556 LAKE CYPRESS LOOP < 1/8 FORT MYERS, FL 33913

0.053 mi. 280 ft, Site 1 of 2 in cluster A

EDR Historical Cleaners: Relative: MGD CLEANERS INC Name: Higher

Year: 2007

Actual: 11556 LAKE CYPRESS LOOP Address: 24 ft.

Name: MGD CLEANERS INC 2008 Year:

> Address: 11556 LAKE CYPRESS LOOP

EDR US Hist Auto Stat 1015167074 A2 N/A

WNW 11452 LAKE CYPRESS LOOP < 1/8 FORT MYERS, FL 33913

0.075 mi. 396 ft. Site 2 of 2 in cluster A

EDR Historical Auto Stations: Relative: Name: THE TRAVELING MECHANIC Higher

Year: 2007 Actual: Address: 11452 LAKE CYPRESS LOOP

В3 JETPORT SUBSTATION

**RCRA-CESQG** 1007201392 FLR000098905 SSW 13577 DANIELS DR 1/8-1/4 FORT MYERS, FL 33901

0.218 mi. Site 1 of 2 in cluster B 1151 ft.

RCRA-CESQG:

Description:

24 ft.

Relative: Date form received by agency: 07/14/2003 Higher

Facility name: JETPORT SUBSTATION Actual: Facility address: 13577 DANIELS DR 24 ft. FORT MYERS, FL 33901 EPA ID: FLR000098905

Mailing address: UP THE GROVE LA ENV/WP8 WEST PALM BEACH, FL 33407

A W RUECKERT Contact: Contact address: UP THE GROVE LA ENV/WP8

WEST PALM BEACH, FL 33407 Contact country:

(561) 309-3101 Contact telephone: Contact email: Not reported EPA Region: 04

Classification: Conditionally Exempt Small Quantity Generator

Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any

Map ID Direction Distance Elevation MAP FINDINGS

Site

Database(s)

EDR ID Number **EPA ID Number** 

### **JETPORT SUBSTATION (Continued)**

1007201392

time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: **FPL** 

Owner/operator address:

9250 W FLAGLER ST

MIAMI, FL 33174

Owner/operator country:

US

Owner/operator telephone:

Not reported Private

Legal status: Owner/Operator Type:

Owner

Owner/Op start date: Owner/Op end date:

06/05/2003 Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW; No Underground injection activity: Nο On-site burner exemption: Nο Furnace exemption: Νo Used oil fuel burner: No Used oil processor: Nο User oil refiner: No Used oil fuel marketer to burner: Nο Used oil Specification marketer: Nο Used oil transfer facility: No

Waste code:

Used oil transporter:

D008

Waste name:

LEAD

Violation Status:

No violations found

No

В4 SSW JETPORT SUBSTATION 13577 DANIELS DR FORT MYERS, FL 33913

1/8-1/4

0.218 mi. 1151 ft.

Site 2 of 2 in cluster B

Relative: Higher

FINDS:

Registry ID:

110016736380

Actual: 24 ft.

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and FINDS

1007218095

N/A

Map ID Direction Distance

MAP FINDINGS

Database(s)

EDR US Hist Auto Stat 1015207614

EDR US Hist Auto Stat 1015155152

EDR ID Number **EPA ID Number** 

1007218095

N/A

N/A

AST A100251292

N/A

**JETPORT SUBSTATION (Continued)** 

affiliation data for the State of Florida.

NW

13213 HIGHLAND CHASE PL FORT MYERS, FL 33913

1/4-1/2 0.268 mi.

Elevation

Site

1416 ft.

Relative: Higher

24 ft.

EDR Historical Auto Stations:

Name: Year:

ACE AUTO REPAIR INC 2004

Actual: Address: 13213 HIGHLAND CHASE PL

Name: Year:

ACE AUTO REPAIR INC 2005

Address: 13213 HIGHLAND CHASE PL

6 NW 11050 LAKELAND CIR

1/4-1/2 0.399 mi. FORT MYERS, FL 33913

2105 ft.

EDR Historical Auto Stations: Relative:

Higher

Name: **BOSTON AUTOMOTIVE INC** 

Year:

2006

Actual: 24 ft.

11050 LAKELAND CIR Address:

LEE CNTY-GATEWAY WWTP

wsw 13240 GRIFFIN DR FORT MYERS, FL 33913 1/4-1/2

0.435 mi.

2296 ft.

Relative: Higher

24 ft.

AST:

Facility ID: Facility Status: 9800767 **OPEN** 

Type Description:

County Government

Actual: Facility Phone:

(239) 357-6486

DEP Contractor Own: D

Region:

STATE

Positioning Method:

AGPS

Lat/Long (dms):

26 34 24 / 81 44 4

Owner:

Owner Id:

36261

Owner Name:

LEE CNTY BD OF COMMISSIONERS UTIL

Owner Address: Owner Address 2: 1500 MONROE ST 3RD FL ATTN: CHERYL CARBONE

Owner City,St,Zip: Owner Contact:

FORT MYERS, FL 33901 TONY PELLICER | PELLICLA@LEEGOV.COM

Owner Phone:

(239) 479-8129

TC4432397.2s Page 10

Map ID Direction Distance Elevation

Site

#### MAP FINDINGS

Database(s)

**EDR ID Number EPA ID Number** 

A100251292

### LEE CNTY-GATEWAY WWTP (Continued)

Tank Id:

Status: Status Date:

Removed 01-APR-1999 01-SEP-1991

Install Date: Substance:

Diesel-emergen generator

Content Description:

**Emerg Generator Diesel** 

Gallons:

1000

Tank Location:

**ABOVEGROUND** 

Tank Id:

2

Status: Status Date: Install Date:

Removed 22-DEC-2014 01-APR-1999

Substance:

Diesel-emergen generator Emerg Generator Diesel

Content Description: Gallons:

1000

Tank Location:

**ABOVEGROUND** 

Tank Id:

Status:

In service 01-APR-2010

Status Date: Install Date:

01-APR-2010

Substance: Content Description: Diesel-emergen generator **Emerg Generator Diesel** 

Gallons:

6000 Tank Location:

**ABOVEGROUND** 

Construction:

Tank Id:

Construction Category:

**Primary Construction** 

Construction Description:

Steel

Tank Id:

Construction Category:

Overfill/Spill

Construction Description:

Level gauges/alarms

Tank Id:

3

Construction Category:

Secondary Containment

Construction Description: Double wall

Monitoring:

Tank ID:

Monitoring Description:

Visual inspection of ASTs

Tank ID:

3

Monitoring Description:

Monitor dbl wall tank space

Tank ID:

Monitoring Description:

Automatic tank gauging - USTs

Piping:

Tank ID:

Piping Category: Piping Description: Primary Construction Steel/galvanized metal Map ID MAP FINDINGS Direction Distance EDR ID Number **EPA ID Number** Elevation Site Database(s) LEE CNTY-GATEWAY WWTP (Continued) A100251292 Click here for Florida Oculus: SWF/LF S109688747 LEE COUNTY ESA - GRIFFIN DR./SR 82 SITE NNW **GRIFFIN DR./SR 82** N/A 1/4-1/2 FORT MYERS, FL 0.455 mi. 2402 ft. SWF/LF: Relative: 98008 Facility ID: Higher District: SD Actual: 26:35:31.5 / 81:44:28.2 Lat/Long: 24 ft. Class Type: 910 Classification: DISASTER DEBRIS MANAGEMENT SITE Class Status: PROPOSED (P) Section: Not reported Township: Not reported Range: Not reported Not reported Responsible Authority Name: Responsible Authority Address: Not reported Responsible Authority City, St, Zip: Not reported Responsible Authority Phone: Not reported EMail Address1: Not reported EMail Address2: Not reported Site Supervisor Name: Not reported Site Supervisor Addr: Not reported Site Supervisor City/State/Zip: Not reported Site Supervisor Telephone: Not reported Not reported Land Owner Name: Not reported Land Owner Address: Land Owner City/State/Zip: Not reported Land Owner Telephone: Not reported

Click here for Florida Oculus:

ORPHAN SUMMARY

Count: 0 records.

Site Address	
Site Name	NO SITES FOUND
EDR ID Site Na	
City	

Zip Database(s)

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

### STANDARD ENVIRONMENTAL RECORDS

#### Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program, NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 03/26/2015 Date Data Arrived at EDR: 04/08/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 75

Telephone: N/A

Last EDR Contact: 07/09/2015

Next Scheduled EDR Contact: 10/19/2015

**NPL Site Boundaries** 

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

**EPA Region 1** 

Telephone 617-918-1143

EPA Region 3

Telephone 215-814-5418

EPA Region 4

Telephone 404-562-8033

EPA Region 5

Telephone 312-886-6686

EPA Region 10

Telephone 206-553-8665

Source: EPA

Data Release Frequency: Quarterly

EPA Region 6

Telephone: 214-655-6659

EPA Region 7

Telephone: 913-551-7247

EPA Region 8

Telephone: 303-312-6774

EPA Region 9

Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 03/26/2015 Date Data Arrived at EDR: 04/08/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 75

Source: EPA Telephone: N/A

Last EDR Contact: 07/09/2015

Next Scheduled EDR Contact: 10/19/2015 Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991 Date Data Arrived at EDR: 02/02/1994 Date Made Active in Reports: 03/30/1994

Number of Days to Update: 56

Source: EPA

Telephone: 202-564-4267 Last EDR Contact: 08/15/2011

Next Scheduled EDR Contact: 11/28/2011 Data Release Frequency: No Update Planned

### Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/26/2015 Date Data Arrived at EDR: 04/08/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 75

Source: EPA Telephone: N/A

Last EDR Contact: 07/09/2015

Next Scheduled EDR Contact: 10/19/2015 Data Release Frequency: Quarterly

#### Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 03/26/2015 Date Data Arrived at EDR: 04/08/2015 Date Made Active in Reports: 06/11/2015

Number of Days to Update: 64

Source: Environmental Protection Agency

Telephone: 703-603-8704 Last EDR Contact: 07/10/2015

Next Scheduled EDR Contact: 10/19/2015 Data Release Frequency: Varies

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013 Date Data Arrived at EDR: 11/11/2013 Date Made Active in Reports: 02/13/2014

Number of Days to Update: 94

Source: EPA

Telephone: 703-412-9810 Last EDR Contact: 05/29/2015

Next Scheduled EDR Contact: 09/07/2015 Data Release Frequency: Quarterly

### Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013 Date Data Arrived at EDR: 11/11/2013 Date Made Active in Reports: 02/13/2014

Number of Days to Update: 94

Source: FPA

Telephone: 703-412-9810 Last EDR Contact: 05/29/2015

Next Scheduled EDR Contact: 09/07/2015 Data Release Frequency: Quarterly

### Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/09/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/16/2015 Number of Days to Update: 82

Source: EPA Telephone: 800-424-9346 Last EDR Contact: 06/26/2015

Next Scheduled EDR Contact: 10/12/2015 Data Release Frequency: Quarterly

#### Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/09/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/16/2015 Source: Environmental Protection Agency Telephone: (404) 562-8651 Last EDR Contact: 06/26/2015

Number of Days to Update: 82

Next Scheduled EDR Contact: 10/12/2015 Data Release Frequency: Quarterly

### Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA), Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/09/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/16/2015 Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 06/26/2015

Number of Days to Update: 82

Next Scheduled EDR Contact: 10/12/2015 Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/09/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/16/2015

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 06/26/2015

Next Scheduled EDR Contact: 10/12/2015 Number of Days to Update: 82 Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/09/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/16/2015 Number of Days to Update: 82

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 06/26/2015

Next Scheduled EDR Contact: 10/12/2015 Data Release Frequency: Varies

TC4432397.2s Page GR-3

### Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015 Date Data Arrived at EDR: 05/29/2015 Date Made Active in Reports: 06/11/2015 Number of Days to Update: 13 Source: Department of the Navy Telephone: 843-820-7326 Last EDR Contact: 08/12/2015 Next Scheduled EDR Contact: 11/30/2015

Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 06/09/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/02/2015 Number of Days to Update: 68

Source: Environmental Protection Agency Telephone: 703-603-0695 Last EDR Contact: 08/31/2015 Next Scheduled EDR Contact: 12/14/2015 Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 06/09/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/02/2015 Number of Days to Update: 68 Source: Environmental Protection Agency Telephone: 703-603-0695 Last EDR Contact: 08/31/2015

Next Scheduled EDR Contact: 12/14/2015 Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/22/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/16/2015 Number of Days to Update: 82

Source: National Response Center, United States Coast Guard Telephone: 202-267-2180

Last EDR Contact: 06/26/2015

e: 82 Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Florida's State-Funded Action Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 01/23/2015 Date Data Arrived at EDR: 02/24/2015 Date Made Active in Reports: 03/05/2015

Telephone: 850-488-0190 Last EDR Contact: 05/29/2015

Number of Days to Update: 9

Next Scheduled EDR Contact: 09/07/2015 Data Release Frequency: Semi-Annually

Source: Department of Environmental Protection

#### State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facility Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 07/21/2015 Date Data Arrived at EDR: 07/21/2015 Date Made Active in Reports: 08/06/2015

Number of Days to Update: 16

Source: Department of Environmental Protection

Telephone: 850-922-7121 Last EDR Contact: 07/21/2015

Next Scheduled EDR Contact: 11/02/2015 Data Release Frequency: Semi-Annually

### State and tribal leaking storage tank lists

LAST: Leaking Aboveground Storage Tank Listing

The file for Leaking Aboveground Storage Tanks. Please remember STCM does not track the source of the discharge so the agency provides a list of facilities with an aboveground tank and an open discharge split by facilities with aboveground tanks only and facilities with aboveground and underground tanks.

Date of Government Version: 08/25/2015 Date Data Arrived at EDR: 08/27/2015 Date Made Active in Reports: 09/30/2015

Number of Days to Update: 34

Source: Department of Environmental Protection

Telephone: 850-245-8799 Last EDR Contact: 07/31/2015

Next Scheduled EDR Contact: 11/16/2015

Data Release Frequency: Varies

LUST: Petroleum Contamination Detail Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 07/02/2015 Date Data Arrived at EDR: 08/04/2015 Date Made Active in Reports: 09/01/2015

Number of Days to Update: 28

Source: Department of Environmental Protection

Telephone: 850-245-8839 Last EDR Contact: 08/04/2015

Next Scheduled EDR Contact: 11/16/2015 Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/30/2015 Date Data Arrived at EDR: 05/29/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 24

Source: EPA, Region 5 Telephone: 312-886-7439 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/03/2015 Date Data Arrived at EDR: 02/12/2015 Date Made Active in Reports: 03/13/2015

Number of Days to Update: 29

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/08/2015 Date Data Arrived at EDR: 01/08/2015 Date Made Active in Reports: 02/09/2015

Number of Days to Update: 32

Source: Environmental Protection Agency

Telephone: 415-972-3372 Last EDR Contact: 07/31/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/30/2015 Date Data Arrived at EDR: 05/05/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 48

Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/30/2015 Date Data Arrived at EDR: 04/28/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 55

Source: EPA Region 7

Telephone: 913-551-7003 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 03/17/2015 Date Data Arrived at EDR: 05/01/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 52

Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 09/30/2014 Date Data Arrived at EDR: 03/03/2015 Date Made Active in Reports: 03/13/2015

Number of Days to Update: 10

Source: EPA Region 4 Telephone: 404-562-8677 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/03/2015 Date Data Arrived at EDR: 04/30/2015 Date Made Active in Reports: 06/22/2015 Number of Days to Update: 53

Source: EPA Region 1 Telephone: 617-918-1313 Last EDR Contact: 07/31/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Varies

### State and tribal registered storage tank lists

FF TANKS: Federal Facilities Listing

A listing of federal facilities with storage tanks.

Date of Government Version: 06/22/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 07/17/2015

Number of Days to Update: 21

Source: Department of Environmental Protection

Telephone: 850-245-8250 Last EDR Contact: 06/22/2015

Next Scheduled EDR Contact: 10/12/2015 Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010 Date Data Arrived at EDR: 02/16/2010 Date Made Active in Reports: 04/12/2010 Number of Days to Update: 55

Source: FEMA

Telephone: 202-646-5797 Last EDR Contact: 07/10/2015

Next Scheduled EDR Contact: 10/28/2015 Data Release Frequency: Varies

UST: Storage Tank Facility Information

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 07/06/2015 Date Data Arrived at EDR: 08/06/2015 Date Made Active in Reports: 09/01/2015

Number of Days to Update: 26

Source: Department of Environmental Protection

Telephone: 850-245-8839 Last EDR Contact: 08/06/2015

Next Scheduled EDR Contact: 11/16/2015 Data Release Frequency: Quarterly

AST: Storage Tank Facility Information Registered Aboveground Storage Tanks.

Date of Government Version: 07/06/2015 Date Data Arrived at EDR: 08/06/2015 Date Made Active in Reports: 09/01/2015 Number of Days to Update: 26 Source: Department of Environmental Protection Telephone: 850-245-8839 Last EDR Contact: 08/06/2015

Next Scheduled EDR Contact: 11/16/2015 Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (lowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014 Date Data Arrived at EDR: 11/25/2014 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 65

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/30/2015 Date Data Arrived at EDR: 05/05/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 48

Source: EPA Region 8 Telephone: 303-312-6137 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 12/14/2014 Date Data Arrived at EDR: 02/13/2015 Date Made Active in Reports: 03/13/2015

Number of Days to Update: 28

Source: EPA Region 9 Telephone: 415-972-3368 Last EDR Contact: 07/31/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/06/2015 Date Data Arrived at EDR: 05/19/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 34

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Quarterly

### INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/03/2015 Date Data Arrived at EDR: 04/30/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 53

Source: EPA, Region 1 Telephone: 617-918-1313 Last EDR Contact: 07/31/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Varies

### INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/30/2015 Date Data Arrived at EDR: 05/26/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 27

Source: EPA Region 5 Telephone: 312-886-6136 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Varies

#### INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 03/17/2015 Date Data Arrived at EDR: 05/01/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 52

Source: EPA Region 6 Telephone: 214-665-7591 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Semi-Annually

#### INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 09/30/2014 Date Data Arrived at EDR: 03/03/2015 Date Made Active in Reports: 03/13/2015

Number of Days to Update: 10

Source: EPA Region 4 Telephone: 404-562-9424 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Semi-Annually

### TANKS: Storage Tank Facility List

This listing includes storage tank facilities that do not have tank information. The tanks have either be closed or removed from the site, but the facilities were still registered at some point in history.

Date of Government Version: 07/06/2015 Date Data Arrived at EDR: 08/06/2015 Date Made Active in Reports: 09/01/2015

Number of Days to Update: 26

Source: Department of Environmental Protection

Telephone: 850-245-8841 Last EDR Contact: 08/06/2015

Next Scheduled EDR Contact: 11/16/2015 Data Release Frequency: Quarterly

### State and tribal institutional control / engineering control registries

#### ENG CONTROLS: Institutional Controls Registry

The registry is a database of all contaminated sites in the state of Florida which are subject to engineering controls. Engineering Controls encompass a variety of engineered remedies to contain and/or reduce contamination, and/or physical barriers intended to limit access to property. ECs include fences, signs, guards, landfill caps, provision of potable water, slurry walls, sheet pile (vertical caps), pumping and treatment of groundwater, monitoring wells, and vapor extraction systems.

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 07/08/2015 Date Made Active in Reports: 07/17/2015

Number of Days to Update: 9

Source: Department of Environmental Protection

Telephone: 850-245-8927 Last EDR Contact: 07/08/2015

Next Scheduled EDR Contact: 10/19/2015 Data Release Frequency: Semi-Annually

Inst Control: Institutional Controls Registry

The registry is a database of all contaminated sites in the state of Florida which are subject to institutional and engineering controls.

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 07/08/2015 Date Made Active in Reports: 07/17/2015

Number of Days to Update: 9

Source: Department of Environmental Protection

Telephone: 850-245-8927 Last EDR Contact: 07/08/2015

Next Scheduled EDR Contact: 10/19/2015 Data Release Frequency: Semi-Annually

#### State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Sites

Listing of closed and active voluntary cleanup sites.

Date of Government Version: 08/20/2015 Date Data Arrived at EDR: 08/27/2015 Date Made Active in Reports: 09/30/2015

Number of Days to Update: 34

Source: Department of Environmental Protection

Telephone: 850-245-8705 Last EDR Contact: 08/24/2015

Next Scheduled EDR Contact: 12/07/2015 Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/29/2014 Date Data Arrived at EDR: 10/01/2014 Date Made Active in Reports: 11/06/2014

Number of Days to Update: 36

Source: EPA, Region 1 Telephone: 617-918-1102 Last EDR Contact: 06/26/2015

Next Scheduled EDR Contact: 10/12/2015 Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisiting

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008 Date Data Arrived at EDR: 04/22/2008 Date Made Active in Reports: 05/19/2008

Number of Days to Update: 27

Source: EPA, Region 7 Telephone: 913-551-7365 Last EDR Contact: 04/20/2009

Next Scheduled EDR Contact: 07/20/2009 Data Release Frequency: Varies

### State and tribal Brownfields sites

BSRA: Brownfield Site Rehabilitation Agreements Listing

The BSRA provides DEP and the public assurance that site rehabilitation will be conducted in accordance with Florida Statutes and DEP's Contaminated Site Cleanup Criteria rule. In addition, the BSRA provides limited liability protection for the voluntary responsible party. The BSRA contains various commitments by the voluntary responsible party, including milestones for completion of site rehabilitation tasks and submittal of technical reports and plans. It also contains a commitment by DEP to review technical reports according to an agreed upon schedule. Only those brownfield sites with an executed BSRA are eligible to apply for a voluntary cleanup tax credit incentive pursuant to Section 376.30781, Florida Statutes,

Date of Government Version: 05/06/2015 Date Data Arrived at EDR: 07/08/2015 Date Made Active in Reports: 08/10/2015

Number of Days to Update: 33

Source: Department of Environmental Protection

Telephone: 850-245-8934 Last EDR Contact: 07/08/2015

Next Scheduled EDR Contact: 10/19/2015

Data Release Frequency: Varies

#### BROWNFIELDS AREAS: Brownfields Areas Database

A "brownfield area" means a contiguous area of one or more brownfield sites, some of which may not be contaminated, that has been designated as such by a local government resolution. Such areas may include all or portions of community redevelopment areas, enterprise zones, empowerment zones, other such designated economically deprived communities and areas, and Environmental Protection Agency (EPA) designated brownfield pilot projects. This layer provides a polygon representation of the boundaries of these designated Brownfield Areas in Florida.

Date of Government Version: 07/06/2015 Date Data Arrived at EDR: 07/10/2015 Date Made Active in Reports: 08/10/2015

Number of Days to Update: 31

Source: Department of Environmental Protection

Telephone: 850-245-8934 Last EDR Contact: 07/10/2015

Next Scheduled EDR Contact: 10/19/2015 Data Release Frequency: Quarterly

#### BROWNFIELDS: Brownfields Sites Database

Brownfields are defined by the Florida Department of Environmental Protection (FDEP) as abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

Date of Government Version: 07/07/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 08/10/2015

Number of Days to Update: 33

Source: Department of Environmental Protection

Telephone: 850-245-8927 Last EDR Contact: 07/08/2015

Next Scheduled EDR Contact: 10/19/2015 Data Release Frequency: Semi-Annually

#### ADDITIONAL ENVIRONMENTAL RECORDS

#### Local Brownfield lists

#### US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/22/2015 Date Data Arrived at EDR: 06/24/2015 Date Made Active in Reports: 09/02/2015

Number of Days to Update: 70

Source: Environmental Protection Agency

Telephone: 202-566-2777 Last EDR Contact: 06/24/2015

Next Scheduled EDR Contact: 10/05/2015 Data Release Frequency: Semi-Annually

# Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Centers

A listing of recycling centers located in the state of Florida.

Date of Government Version: 07/24/2014 Date Data Arrived at EDR: 10/22/2014 Date Made Active in Reports: 01/12/2015

Number of Days to Update: 82

Source: Department of Environmental Protection

Telephone: 850-245-8718 Last EDR Contact: 07/24/2015

Next Scheduled EDR Contact: 11/02/2015 Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands Location of open dumps on Indian land.

Date of Government Version: 12/31/1998 Date Data Arrived at EDR: 12/03/2007 Date Made Active in Reports: 01/24/2008

Number of Days to Update: 52

Source: Environmental Protection Agency

Telephone: 703-308-8245 Last EDR Contact: 05/01/2015

Next Scheduled EDR Contact: 08/17/2015 Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009 Date Data Arrived at EDR: 05/07/2009 Date Made Active in Reports: 09/21/2009 Number of Days to Update: 137 Source: EPA, Region 9 Telephone: 415-947-4219 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985 Date Data Arrived at EDR: 08/09/2004 Date Made Active in Reports: 09/17/2004 Number of Days to Update: 39 Source: Environmental Protection Agency Telephone: 800-424-9346 Last EDR Contact: 06/09/2004 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

#### Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 06/02/2015 Date Made Active in Reports: 09/16/2015 Number of Days to Update: 106 Source: Drug Enforcement Administration Telephone: 202-307-1000

Last EDR Contact: 08/31/2015

Next Scheduled EDR Contact: 12/14/2015 Data Release Frequency: No Update Planned

PRIORITYCLEANERS: Priority Ranking List

The Florida Legislature has established a state-funded program to cleanup properties that are contaminated as a result of the operations of a drycleaning facility.

Date of Government Version: 07/06/2015 Date Data Arrived at EDR: 08/18/2015 Date Made Active in Reports: 09/01/2015 Number of Days to Update: 14 Source: Department of Environmental Protection

Telephone: 850-245-8927 Last EDR Contact: 08/18/2015

Next Scheduled EDR Contact: 11/30/2015
Data Release Frequency: Varies

FL SITES: Sites List

This summary status report was developed from a number of lists including the Eckhardt list, the Moffit list, the EPA Hazardous Waste Sites list, EPA's Emergency & Remedial Response information System list (RCRA Section 3012) & existing department lists such as the obsolete uncontrolled Hazardous Waste Sites list. This list is no longer updated.

Date of Government Version: 12/31/1989 Date Data Arrived at EDR: 05/09/1994 Date Made Active in Reports: 08/04/1994 Number of Days to Update: 87

Source: Department of Environmental Protection

Telephone: 850-245-8705 Last EDR Contact: 03/24/1994 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/15/2015 Date Data Arrived at EDR: 06/02/2015 Date Made Active in Reports: 09/16/2015

Number of Days to Update: 106

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 08/31/2015

Next Scheduled EDR Contact: 12/14/2015 Data Release Frequency: Quarterly

#### Local Land Records

#### LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014 Date Data Arrived at EDR: 03/18/2014 Date Made Active in Reports: 04/24/2014

Number of Days to Update: 37

Source: Environmental Protection Agency

Telephone: 202-564-6023 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Varies

#### Records of Emergency Release Reports

#### HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/02/2015

Number of Days to Update: 68

Source: U.S. Department of Transportation

Telephone: 202-366-4555 Last EDR Contact: 06/26/2015

Next Scheduled EDR Contact: 10/12/2015 Data Release Frequency: Annually

#### SPILLS: Oil and Hazardous Materials Incidents

Statewide oil and hazardous materials inland incidents.

Date of Government Version: 07/13/2015 Date Data Arrived at EDR: 07/13/2015 Date Made Active in Reports: 07/17/2015

Number of Days to Update: 4

Source: Department of Environmental Protection

Telephone: 850-245-2010 Last EDR Contact: 07/13/2015

Next Scheduled EDR Contact: 10/28/2015 Data Release Frequency: Semi-Annually

# SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/10/2012 Date Data Arrived at EDR: 01/03/2013 Date Made Active in Reports: 03/04/2013

Number of Days to Update: 60

Source: FirstSearch Telephone: N/A

Last EDR Contact: 01/03/2013 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

# SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 09/01/2001 Date Data Arrived at EDR: 01/03/2013 Date Made Active in Reports: 03/06/2013 Number of Days to Update: 62

Source: FirstSearch Telephone: N/A

Last EDR Contact: 01/03/2013 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

#### Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/09/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/16/2015 Number of Days to Update: 82

Source: Environmental Protection Agency Telephone: (404) 562-8651 Last EDR Contact: 06/26/2015 Next Scheduled EDR Contact: 10/12/2015

Data Release Frequency: Varies

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 06/06/2014 Date Data Arrived at EDR: 09/10/2014 Date Made Active in Reports: 09/18/2014

Number of Days to Update: 8

Source: U.S. Army Corps of Engineers

Telephone: 202-528-4285 Last EDR Contact: 07/08/2015

Next Scheduled EDR Contact: 09/21/2015 Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 11/10/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 62

Source: USGS

Telephone: 888-275-8747 Last EDR Contact: 07/14/2015

Next Scheduled EDR Contact: 10/28/2015 Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States, Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 02/06/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 339

Source: U.S. Geological Survey Telephone: 888-275-8747 Last EDR Contact: 07/14/2015

Next Scheduled EDR Contact: 10/28/2015

Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011 Date Data Arrived at EDR: 03/09/2011 Date Made Active in Reports: 05/02/2011

Number of Days to Update: 54

Source: Environmental Protection Agency

Telephone: 615-532-8599 Last EDR Contact: 05/21/2015

Next Scheduled EDR Contact: 08/31/2015

Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 06/02/2015 Date Made Active in Reports: 09/16/2015

Number of Days to Update: 106

Source: Environmental Protection Agency

Telephone: 202-566-1917 Last EDR Contact: 08/12/2015

Next Scheduled EDR Contact: 11/30/2015 Data Release Frequency: Quarterly

#### EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013 Date Data Arrived at FDR: 03/21/2014 Date Made Active in Reports: 06/17/2014

Number of Days to Update: 88

Source: Environmental Protection Agency

Telephone: 617-520-3000 Last EDR Contact: 08/04/2015

Next Scheduled EDR Contact: 11/23/2015 Data Release Frequency: Quarterly

#### 2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013 Date Data Arrived at EDR: 03/03/2015 Date Made Active in Reports: 03/09/2015

Number of Days to Update: 6

Source: Environmental Protection Agency

Telephone: 703-308-4044 Last EDR Contact: 05/14/2015

Next Scheduled EDR Contact: 08/24/2015

Data Release Frequency: Varies

#### TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant

Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 01/15/2015 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 14

Source: EPA

Telephone: 202-260-5521 Last EDR Contact: 06/25/2015

Next Scheduled EDR Contact: 10/05/2015 Data Release Frequency: Every 4 Years

## TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 02/12/2015 Date Made Active in Reports: 06/02/2015

Number of Days to Update: 110

Source: EPA

Telephone: 202-566-0250 Last EDR Contact: 01/29/2015

Next Scheduled EDR Contact: 06/08/2015 Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009 Date Data Arrived at EDR: 12/10/2010 Date Made Active in Reports: 02/25/2011

Number of Days to Update: 77

Source: EPA

Telephone: 202-564-4203 Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013 Date Data Arrived at EDR: 12/12/2013 Date Made Active in Reports: 02/24/2014

Number of Days to Update: 74

Source: EPA

Telephone: 703-416-0223 Last EDR Contact: 06/12/2015

Next Scheduled EDR Contact: 09/21/2015 Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2015 Date Data Arrived at EDR: 02/13/2015 Date Made Active in Reports: 03/25/2015

Number of Days to Update: 40

Source: Environmental Protection Agency Telephone: 202-564-8600

Last EDR Contact: 07/22/2015

Next Scheduled EDR Contact: 11/09/2015

Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995 Date Data Arrived at EDR: 07/03/1995 Date Made Active in Reports: 08/07/1995

Number of Days to Update: 35

Source: EPA

Telephone: 202-564-4104 Last EDR Contact: 06/02/2008

Next Scheduled EDR Contact: 09/01/2008 Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013 Date Data Arrived at EDR: 10/17/2014 Date Made Active in Reports: 10/20/2014

Number of Days to Update: 3

Source: EPA

Telephone: 202-564-6023 Last EDR Contact: 05/14/2015

Next Scheduled EDR Contact: 08/24/2015 Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2014 Date Data Arrived at EDR: 10/15/2014 Date Made Active in Reports: 11/17/2014

Number of Days to Update: 33

Source: EPA

Telephone: 202-566-0500 Last EDR Contact: 07/17/2015

Next Scheduled EDR Contact: 10/28/2015 Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/23/2015 Date Data Arrived at EDR: 02/06/2015 Date Made Active in Reports: 03/09/2015

Number of Days to Update: 31

Source: Environmental Protection Agency

Telephone: 202-564-5088 Last EDR Contact: 07/09/2015

Next Scheduled EDR Contact: 10/28/2015 Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-566-1667 Last EDR Contact: 05/20/2015

Next Scheduled EDR Contact: 09/07/2015 Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA

Telephone: 202-566-1667 Last EDR Contact: 05/20/2015

Next Scheduled EDR Contact: 09/07/2015 Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/31/2015 Date Data Arrived at EDR: 04/09/2015 Date Made Active in Reports: 06/11/2015

Number of Days to Update: 63

Source: Nuclear Regulatory Commission

Telephone: 301-415-7169 Last EDR Contact: 06/04/2015

Next Scheduled EDR Contact: 09/21/2015 Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 08/07/2009 Date Made Active in Reports: 10/22/2009

Number of Days to Update: 76

Source: Department of Energy Telephone: 202-586-8719 Last EDR Contact: 07/13/2015

Next Scheduled EDR Contact: 10/28/2015

Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014 Date Data Arrived at EDR: 09/10/2014 Date Made Active in Reports: 10/20/2014

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: N/A

Last EDR Contact: 06/12/2015

Next Scheduled EDR Contact: 09/21/2015 Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011 Date Data Arrived at EDR: 10/19/2011 Date Made Active in Reports: 01/10/2012

Number of Days to Update: 83

Source: Environmental Protection Agency Telephone: 202-566-0517

Last EDR Contact: 07/31/2015

Next Scheduled EDR Contact: 11/09/2015

Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2015 Date Data Arrived at EDR: 07/09/2015 Date Made Active in Reports: 09/16/2015

Number of Days to Update: 69

Source: Environmental Protection Agency

Telephone: 202-343-9775 Last EDR Contact: 07/09/2015

Next Scheduled EDR Contact: 10/19/2015 Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2007

Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2008

Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012 Date Data Arrived at EDR: 08/07/2012 Date Made Active in Reports: 09/18/2012

Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety

Telephone: 202-366-4595 Last EDR Contact: 08/04/2015

Next Scheduled EDR Contact: 11/16/2015 Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 04/17/2015 Date Made Active in Reports: 06/02/2015

Number of Days to Update: 46

Source: Department of Justice, Consent Decree Library

Telephone: Varies

Last EDR Contact: 06/22/2015

Next Scheduled EDR Contact: 10/12/2015

Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 02/24/2015 Date Made Active in Reports: 09/30/2015

Number of Days to Update: 218

Source: EPA/NTIS Telephone: 800-424-9346 Last EDR Contact: 08/28/2015

Next Scheduled EDR Contact: 12/07/2015 Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 12/08/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 34

Source: USGS

Telephone: 202-208-3710 Last EDR Contact: 07/14/2015

Next Scheduled EDR Contact: 10/28/2015 Data Release Frequency: Semi-Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010 Date Data Arrived at EDR: 10/07/2011 Date Made Active in Reports: 03/01/2012

Number of Days to Update: 146

Source: Department of Energy Telephone: 505-845-0011 Last EDR Contact: 05/26/2015

Next Scheduled EDR Contact: 09/07/2015 Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014 Date Data Arrived at EDR: 11/26/2014 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 64

Source: Environmental Protection Agency

Telephone: 703-603-8787 Last EDR Contact: 07/07/2015

Next Scheduled EDR Contact: 10/19/2015 Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001 Date Data Arrived at EDR: 10/27/2010 Date Made Active in Reports: 12/02/2010 Number of Days to Update: 36

Source: American Journal of Public Health Telephone: 703-305-6451 Last EDR Contact: 12/02/2009 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 07/22/2015 Date Data Arrived at EDR: 07/24/2015 Date Made Active in Reports: 09/02/2015

Number of Days to Update: 40

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 06/22/2015

Next Scheduled EDR Contact: 10/05/2015 Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data A listing of minor source facilities.

> Date of Government Version: 07/22/2015 Date Data Arrived at EDR: 07/24/2015 Date Made Active in Reports: 09/02/2015

Number of Days to Update: 40

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 06/22/2015

Next Scheduled EDR Contact: 10/22/2015 Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/14/2015 Date Data Arrived at EDR: 06/03/2015 Date Made Active in Reports: 09/02/2015

Number of Days to Update: 91

Source: Department of Labor, Mine Safety and Health Administration

Telephone: 303-231-5959 Last EDR Contact: 09/01/2015

Next Scheduled EDR Contact: 12/14/2015 Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005 Date Data Arrived at EDR: 02/29/2008 Date Made Active in Reports: 04/18/2008

Number of Days to Update: 49

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 06/05/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011 Date Data Arrived at EDR: 06/08/2011 Date Made Active in Reports: 09/13/2011

Number of Days to Update: 97

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 06/05/2015

Next Scheduled EDR Contact: 09/14/2015

Data Release Frequency: Varies

## FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Source: EPA

Date of Government Version: 01/18/2015 Date Data Arrived at EDR: 02/27/2015 Date Made Active in Reports: 03/25/2015 Number of Days to Update: 26

Telephone: (404) 562-9900 Last EDR Contact: 06/10/2015

Next Scheduled EDR Contact: 09/21/2015 Data Release Frequency: Quarterly

#### AIRS: Permitted Facilities Listing

A listing of Air Resources Management permits.

Date of Government Version: 08/03/2015 Date Data Arrived at EDR: 08/04/2015 Date Made Active in Reports: 09/01/2015 Number of Days to Update: 28 Source: Department of Environmental Protection Telephone: 850-921-9558 Last EDR Contact: 07/31/2015 Next Scheduled EDR Contact: 11/16/2015

Data Release Frequency: Varies

#### CLEANUP SITES: DEP Cleanup Sites - Contamination Locator Map Listing

This listing includes the locations of waste cleanup sites from various programs. The source of the cleanup site data includes Hazardous Waste programs, Site Investigation Section, Compliance and Enforcement Tracking, Drycleaning State Funded Cleanup Program (possibly other state funded cleanup), Storage Tank Contamination Monitoring.

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 06/02/2015 Date Made Active in Reports: 07/01/2015 Number of Days to Update: 29 Source: Department of Environmental Protection

Telephone: 866-282-0787 Last EDR Contact: 06/02/2015

Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: Quarterly

#### DEDB: Ethylene Dibromide Database Results

Ethylene dibromide (EDB), a soil fumigant, that has been detected in drinking water wells. The amount found exceeds the maximum contaminant level as stated in Chapter 62-550 or 520. It is a potential threat to public health when present in drinking water.

Date of Government Version: 07/09/2015 Date Data Arrived at EDR: 07/10/2015 Date Made Active in Reports: 07/17/2015

Source: Department of Environmental Protection

Telephone: 850-245-8335 Last EDR Contact: 07/06/2015

Number of Days to Update: 7 Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: Varies

#### DRYCLEANERS: Drycleaning Facilities

Number of Days to Update: 9

The Drycleaners database, maintained by the Department of Environmental Protection, provides information about permitted dry cleaner facilities.

Date of Government Version: 07/02/2015 Date Data Arrived at EDR: 07/28/2015 Date Made Active in Reports: 08/06/2015

Source: Department of Environmental Protection

Telephone: 850-245-8927 Last EDR Contact: 07/28/2015

Next Scheduled EDR Contact: 11/09/2015 Data Release Frequency: Semi-Annually

# DWM CONTAM: DWM CONTAMINATED SITES

A listing of active or known sites. The listing includes sites that need cleanup but are not actively being working on because the agency currently does not have funding (primarily petroleum and drycleaning).

Date of Government Version: 03/31/2015 Date Data Arrived at EDR: 04/15/2015 Date Made Active in Reports: 05/06/2015

Number of Days to Update: 21

Source: Department of Environmental Protection

Telephone: 850-245-7503 Last EDR Contact: 07/13/2015

Next Scheduled EDR Contact: 10/28/2015 Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

A list of hazardous waste facilities required to provide financial assurance under RCRA.

Date of Government Version: 07/31/2015 Date Data Arrived at EDR: 08/03/2015 Date Made Active in Reports: 09/01/2015 Number of Days to Update: 29

Source: Department of Environmental Protection Telephone: 850-245-8793 Last EDR Contact: 07/31/2015 Next Scheduled EDR Contact: 11/16/2015 Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities.

Date of Government Version: 07/24/2015 Date Data Arrived at EDR: 08/03/2015 Date Made Active in Reports: 09/01/2015 Number of Days to Update: 29

Source: Department of Environmental Protection Telephone: 850-245-8743 Last EDR Contact: 07/31/2015 Next Scheduled EDR Contact: 11/16/2015 Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information Listing

A listing of financial assurance information for storage tanks sites.

Date of Government Version: 07/06/2015 Date Data Arrived at EDR: 08/04/2015 Date Made Active in Reports: 09/01/2015 Number of Days to Update: 28

Source: Department of Environmental Protection Telephone: 850-245-8853 Last EDR Contact: 08/04/2015 Next Scheduled EDR Contact: 11/16/2015

Data Release Frequency: Quarterly

FL Cattle Dip. Vats: Cattle Dipping Vats

From the 1910's through the 1950's, these vats were filled with an arsenic solution for the control and eradication of the cattle fever tick. Other pesticides, such as DDT, were also widely used. By State law, all cattle, horses, mules, goats, and other susceptible animals were required to be dipped every 14 days. Under certain circumstances, the arsenic and other pesticides remaining at the site may present an environmental or public health hazard.

Date of Government Version: 02/04/2005 Date Data Arrived at EDR: 06/29/2007 Date Made Active in Reports: 07/11/2007

Number of Days to Update: 12

Source: Department of Environmental Protection Telephone: 850-245-4444 Last EDR Contact: 07/10/2015

Next Scheduled EDR Contact: 10/28/2015 Data Release Frequency: No Update Planned

RESP PARTY: Responsible Party Sites Listing Open, inactive and closed responsible party sites

> Date of Government Version: 07/06/2015 Date Data Arrived at EDR: 07/08/2015 Date Made Active in Reports: 07/17/2015 Number of Days to Update: 9

Source: Department of Environmental Protection

Telephone: 850-245-8758 Last EDR Contact: 07/08/2015

Next Scheduled EDR Contact: 10/19/2015 Data Release Frequency: Quarterly

SITE INV SITES: Site Investigation Section Sites Listing

Statewide coverage of Site Investigation Section (SIS) sites. Site Investigation is a Section within the Bureau of Waste Cleanup, Division of Waste Management. SIS provides technical support to FDEP District Waste Cleanup Programs and conducts contamination assessments throughout the state.

Date of Government Version: 08/24/2015 Date Data Arrived at EDR: 08/26/2015 Date Made Active in Reports: 09/30/2015

Number of Days to Update: 35

Source: Department of Environmental Protection

Telephone: 850-245-8953 Last EDR Contact: 08/26/2015

Next Scheduled EDR Contact: 12/07/2015 Data Release Frequency: Quarterly

TIER 2: Tier 2 Facility Listing

A listing of facilities which store or manufacture hazardous materials that submit a chemical inventory report.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 06/19/2015 Date Made Active in Reports: 07/01/2015

Number of Days to Update: 12

Source: Department of Environmental Protection

Telephone: 850-413-9970 Last EDR Contact: 06/10/2015

Next Scheduled EDR Contact: 09/28/2015 Data Release Frequency: Varies

UIC: Underground Injection Wells Database Listing

A listing of Class I wells. Class I wells are used to inject hazardous waste, nonhazardous waste, or municipal waste below the lowermost USDW.

Date of Government Version: 07/27/2015 Date Data Arrived at EDR: 07/27/2015 Date Made Active in Reports: 08/10/2015

Number of Days to Update: 14

Source: Department of Environmental Protection

Telephone: 850-245-8655 Last EDR Contact: 07/24/2015

Next Scheduled EDR Contact: 11/09/2015

Data Release Frequency: Varies

WASTEWATER: Wastewater Facility Regulation Database

Domestic and industrial wastewater facilities.

Date of Government Version: 08/03/2015 Date Data Arrived at EDR: 08/11/2015 Date Made Active in Reports: 09/01/2015

Number of Days to Update: 21

Source: Department of Environmental Protection

Telephone: 850-245-8600 Last EDR Contact: 08/11/2015

Next Scheduled EDR Contact: 11/23/2015 Data Release Frequency: Quarterly

#### **EDR HIGH RISK HISTORICAL RECORDS**

#### **EDR Exclusive Records**

#### EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A

Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

# EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

**EDR RECOVERED GOVERNMENT ARCHIVES** 

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Floridia.

Date of Government Version: N/A Date Data Arrived at EDR: 07/01/2013 Date Made Active in Reports: 12/30/2013 Number of Days to Update: 182 Source: Department of Environmental Protection Telephone: N/A Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Floridia.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/10/2014
Number of Days to Update: 193

Source: Department of Environmental Protection Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Floridia.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: Department of Environmental Protection Telephone: N/A Last EDR Contact: 06/01/2012

Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

#### **COUNTY RECORDS**

#### ALACHUA COUNTY:

#### Facility List

List of all regulated facilities in Alachua County.

Date of Government Version: 04/01/2015 Date Data Arrived at EDR: 04/07/2015 Date Made Active in Reports: 04/10/2015

Number of Days to Update: 3

Source: Alachua County Environmental Protection Department

Telephone: 352-264-6800 Last EDR Contact: 06/22/2015

Next Scheduled EDR Contact: 10/12/2015 Data Release Frequency: Annually

#### BROWARD COUNTY:

#### Aboveground Storage Tanks

Aboveground storage tank locations in Broward County.

Date of Government Version: 06/04/2015 Date Data Arrived at EDR: 06/05/2015 Date Made Active in Reports: 06/30/2015

Number of Days to Update: 25

Source: Broward County Environmental Protection Department

Telephone: 954-818-7509 Last EDR Contact: 06/05/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Varies

#### Underground Storage Tanks

All known regulated storage tanks within Broward County, including those tanks that have been closed

Date of Government Version: 06/04/2015 Date Data Arrived at EDR: 06/05/2015 Date Made Active in Reports: 06/30/2015

Number of Days to Update: 25

Source: Broward County Environmental Protection Department

Telephone: 954-818-7509 Last EDR Contact: 06/05/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Annually

#### HILLSBOROUGH COUNTY:

#### Hillsborough County LF

Hillsborough county landfill sites.

Date of Government Version: 10/15/2014 Date Data Arrived at EDR: 10/16/2014 Date Made Active in Reports: 12/02/2014

Number of Days to Update: 47

Source: Hillsborough County Environmental Protection Commission

Telephone: 813-627-2600 Last EDR Contact: 07/13/2015

Next Scheduled EDR Contact: 10/28/2015

Data Release Frequency: Varies

## MIAMI-DADE COUNTY:

#### Air Permit Sites

Facilities that release or have a potential to release pollutants.

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 06/02/2015 Date Made Active in Reports: 07/01/2015

Number of Days to Update: 29

Source: Department of Environmental Resources Management

Telephone: 305-372-6755 Last EDR Contact: 06/02/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Semi-Annually

#### Marine Facilities Operating Permit

What is this permit used for? Miami-Dade County Ordinance 89-104 and Section 24-18 of the Code of Miami-Dade County require the following types of marine facilities to obtain annual operating permits from DERM: All recreational boat docking facilities with ten (10) or more boat slips, moorings, davit spaces, and vessel tie-up spaces.

All boat storage facilities contiguous to tidal waters in Miami-Dade County with ten (10) or more dry storage spaces including boatyards and boat manufacturing facilities.

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 06/02/2015 Date Made Active in Reports: 07/01/2015

Number of Days to Update: 29

Source: DERM

Telephone: 305-372-3576 Last EDR Contact: 06/02/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Quarterly

#### Maimi River Enforcement

The Miami River Enforcement database files were created for facilities and in some instances vessels that were inspected by a workgroup within the Department that was identified as the Miami River Enforcement Group. The files do not all necessarily reflect enforcement cases and some were created for locations that were permitted by other Sections within the Department.

Date of Government Version: 06/05/2013 Date Data Arrived at EDR: 06/06/2013 Date Made Active in Reports: 08/06/2013

Number of Days to Update: 61

Source: DERM

Telephone: 305-372-3576 Last EDR Contact: 06/01/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Quarterly

#### Hazardous Waste Sites

Sites with the potential to generate waste

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 06/02/2015 Date Made Active in Reports: 07/01/2015

Number of Days to Update: 29

Source: Dade County Department of Environmental Resources Management

Telephone: 305-372-6755 Last EDR Contact: 06/02/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Semi-Annually

#### Industrial Waste Permit Sites

Facilities that either generate more than 25,000 of wastewater per day to sanitary sewers or are pre-defined by

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 06/02/2015 Date Made Active in Reports: 07/01/2015

Number of Days to Update: 29

Source: Department of Environmental Resources Management

Telephone: 305-372-6700 Last EDR Contact: 06/02/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Semi-Annually

#### Enforcement Case Tracking System Sites

Enforcement cases monitored by the Dade County Department of Environmental Resources Management.

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 06/02/2015 Date Made Active in Reports: 07/01/2015

Number of Days to Update: 29

Source: Department of Environmental Resources Management

Telephone: 305-372-6755 Last EDR Contact: 06/02/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Semi-Annually

#### Fuel Spills Cases

DERM documents fuel spills of sites that are not in a state program.

Date of Government Version: 01/08/2009 Date Data Arrived at EDR: 01/13/2009 Date Made Active in Reports: 02/05/2009

Number of Days to Update: 23

Source: Department of Environmental Resources Management

Telephone: 305-372-6755 Last EDR Contact: 06/01/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Semi-Annually

#### Storage Tanks

A listing of aboveground and underground storage tank site locations.

Date of Government Version: 06/01/2015 Date Data Arrived at EDR: 06/02/2015 Date Made Active in Reports: 06/30/2015

Number of Days to Update: 28

Source: Department of Environmental Resource Management

Telephone: 305-372-6700 Last EDR Contact: 06/02/2015

Next Scheduled EDR Contact: 09/14/2015 Data Release Frequency: Semi-Annually

PALM BEACH COUNTY:

Palm Beach County LF

Palm Beach County Inventory of Solid Waste Sites.

Date of Government Version: 09/01/2011 Date Data Arrived at EDR: 09/20/2011 Date Made Active in Reports: 10/10/2011

Number of Days to Update: 20

Source: Palm Beach County Solid Waste Authority

Telephone: 561-640-4000 Last EDR Contact: 06/19/2015

Next Scheduled EDR Contact: 09/28/2015 Data Release Frequency: Varies

## OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013 Date Data Arrived at EDR: 08/19/2013 Date Made Active in Reports: 10/03/2013

Number of Days to Update: 45

Source: Department of Energy & Environmental Protection

Telephone: 860-424-3375 Last EDR Contact: 05/18/2015

Next Scheduled EDR Contact: 08/31/2015 Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 07/17/2015 Date Made Active in Reports: 08/12/2015

Number of Days to Update: 26

Source: Department of Environmental Protection

Telephone: N/A

Last EDR Contact: 07/13/2015

Next Scheduled EDR Contact: 10/28/2015 Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD

Date of Government Version: 08/01/2015 Date Data Arrived at EDR: 08/06/2015 Date Made Active in Reports: 08/24/2015

Number of Days to Update: 18

Source: Department of Environmental Conservation

Telephone: 518-402-8651 Last EDR Contact: 08/06/2015

Next Scheduled EDR Contact: 11/16/2015 Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 07/24/2015 Date Made Active in Reports: 08/18/2015

Number of Days to Update: 25

Source: Department of Environmental Protection

Telephone: 717-783-8990 Last EDR Contact: 07/20/2015

Next Scheduled EDR Contact: 11/02/2015 Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 06/19/2015 Date Made Active in Reports: 07/15/2015

Number of Days to Update: 26

Source: Department of Environmental Management

Telephone: 401-222-2797 Last EDR Contact: 05/26/2015

Next Scheduled EDR Contact: 09/07/2015 Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 03/19/2015

Date Made Active in Reports: 04/07/2015

Number of Days to Update: 19

Source: Department of Natural Resources

Telephone: N/A

Last EDR Contact: 06/11/2015

Next Scheduled EDR Contact: 09/28/2015 Data Release Frequency: Annually

#### Oil/Gas Pipelines

Source: PennWell Corporation Telephone: 281-546-1505

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation Telephone: 800-823-6277

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

#### AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

**Nursing Homes** 

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary

and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Department of Children & Families

Source: Provider Information Telephone: 850-488-4900

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory

Source: Department of Environmental Protection

Telephone: 850-245-8238

Current USGS 7.5 Minute Topographic Map Source: U.S. Geological Survey

## STREET AND ADDRESS INFORMATION

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Appendix D Property Appraiser's Legal Description

# **Property Data**

STRAP: 04-45-26-00-00001.0020 Folio ID: 10341904

## Owner Of Record

HOLES JARED F TR FOR LAND TRUST NUMBER 5018 2500 TAMIAMI TRL N STE 214 NAPLES FL 34103

#### Site Address

ACCESS UNDETERMINED FORT MYERS FL

### **Legal Description**

ALL SEC 4 LYING S OF HWY 82

## Classification / DOR Code

GRAZING LAND CLASS V / 64





Property Values	(2015 Tax Roll)
Just	117,950
Assessed	2,189
Portability Applied	0
Cap Assessed	2,189
Taxable	2,189
Cap Difference	0

Exemptions					
Homestead / Additional	0 / 0				
Widow / Widower	0 / 0				
Disability	0				
Wholly	0				
Senior	0				
Agriculture	115,761				

Attributes (See Appraisal Details below for current values)				
Land Units Of Measure	AC			
Units 🔒	23.59			
Frontage	0			
Depth	0			
Total Number of Buildings	0			
Total Bedrooms / Bathrooms	0/0			
Total Living Area	0			
1st Year Building on Tax Roll 😉	0			
Historic District	No			

# **Property Value History**

Tax Year	Just	Market Assessed	Capped Assessed	Taxable
1992	55,400	1,720	1,720	1,720
1993	138,500	1,610	1,610	1,610
1994	138,500	2,050	2,050	
1995	118,580	1,810	1,810	
1996	118,580	1,410	1,410	
1997	118,580			
1998	118,580	1,290	1,290	1,290
1999	119,580	1,100	1,100	1,100
2000	119,580	1,000	1,000	
2001	119,570	1,090	1,090	1,090
2002	178,650	1,360	1,360	
2003	178,650	1,630	1,630	
2004	210,520	1,750		1,750
2005	396,110	2,000	2,000	
2006	404,420	2,070	2,070	2,070
2007	1,385,000	1,730		
2008	1,800,500	2,240	2,240	
2009	554,000	2,410		
2010	277,000	2,386		2,386
2011	138,500	2,020	2,020	2,020
2012	138,500	2,386	2,386	
2013	138,500	2,312	2,312	2,312
2014	117,950	2,481	2,481	2,481
2015	117,950		2,189	

The **Just** value is the total parcel assessment (less any considerations for the cost of sale). This is the closest value to Fair Market Value we produce and is dated as of January 1st of the tax year in question (<u>F.A.C. 12D-1.002</u>).

The **Market Assessed** value is the total parcel assessment (less any considerations for the cost of sale) based upon the assessment standard. Most parcels are assessed based either upon the *Highest and Best Use* standard or the *Present Use* standard (<u>F.S. 193.011</u>). For *Agriculturally Classified* parcels (or parts thereof), only agricultural uses are considered in the assessment (<u>F.S. 193.461 (6) (a)</u>). The difference between the *Highest and Best Use/Present Use* and the *Agricultural Use* is often referred to as the *Agricultural Exemption*. (i.e. Market Assessed = Just - Agricultural Exemption)

The **Capped Assessed** value is the *Market Assessment* after any *Save Our Homes* or 10% Assessment Limitation cap is applied. This assessment cap is applied to all properties and limits year-to-year assessment increases to either the *Consumer Price Index* or 3%, whichever is lower for Homestead properties OR 10% for non-Homestead properties.

The **Taxable** value is the *Capped Assessment* after exemptions (*Homestead, etc.*) are applied to it. This is the value that most taxing authorities use to calculate a parcel's taxes.

(i.e.	Taxable =	Capped	Assessed -	Exemptions)
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	Taxing Author				
LEHIGH ACRES FIRE / 049					
Name / Code	Category	Mailing Address			
LEE CO GENERAL REVENUE / 044	County	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO ALL HAZARDS PROTECTION DIST / 101	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO LIBRARY DIST / 052	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO UNINCORPORATED MSTU / 020	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO HYACINTH CONTROL DIST / 051	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971			
LEE CO MOSQUITO CONTROL DIST / 053	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971			
WEST COAST INLAND NAVIGATION DIST / 098	Independent District	CHARLES W LISTOWSKI EXECUTIVE DIRECTOR 200 MIAMI AVE E VENICE FL 34285-2408			
PUBLIC SCHOOL - BY LOCAL BOARD / 012	- Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966			
PUBLIC SCHOOL - BY STATE LAW / 013	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966			
LEHIGH ACRES FIRE CONTROL & RESCUE DIST / 341	Voter Approved	JOHN R WAYNE, FIRE CHIEF MILLAGE CAP 3.0000 ATTM: SUSAN PLATAS 636 THOMAS SHERWIN AVE S LEHIGH ACRES, FL 33974			
SFWMD-DISTRICT-WIDE / 110	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406			
SFWMD-EVERGLADES CONSTRUCTION PROJECT / 084	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406			
SFWMD-OKEECHOBEE BASIN / 308	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH FL 33406			

Sales / Transactions					
Sale Price	Date	OR Number	Туре	Description	Vacant/Improved
				Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.	1 1 1
0.00	07/11/2013	2013000223352	11	There are 10 additional parcel(s) with this document (may have been split after the transaction date)  05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00003.0000 16-45-26-00-00001.0000 17-45-26-00-00001.0010 17-45-26-00-00001.0010 21-45-26-00-	V

				00001.0000	
10.00	05/21/2013	2013000163345	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00001.0000 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010	I
0.00	09/01/2009	2009000289789	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were pald.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00001.0000 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010	V
100.00	07/01/1994	2518/2367	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	٧
3,034,000.00	08/01/1981	1535/1480	02	Sales qualified but excluded from sales ratio analysis Qualified (Multiple STRAP # / 06-09I)	٧

	Lo	cation Information	on	
Township	Range	Section	Block	Lot
45	26E	04		
Municipality	Lati	tude	Longi	tude
Lee County Unincorporated	26.5	8581	-81.72	2357
		Links		
View Parce	el on Google Maps		View Parcel on GeoVi	ew

	Solid Waste (	Garbage) Ro	II Data	
Solid Waste District	Roll Type	Category	Unit / Area	Tax Amount
003 - Service Area 3	3 7.		0	0.00
	C	ollection Days		
Garbage	Recy	cling	Hortic	culture
Friday	Thur	sday	Thu	rsday

	Flood and St	orm Informat	ion		
Storm Surge Zone	Evacuation Zone	FI	ood Insurance [	FIRM Look-up ]	
Storm Surge Lone	Evacuation Zone	Community	Panel	Version	Date
D	D	125124	0475	F	8/28/2008

Appraisal Details								
	English transfer	316 . 1917	Land		THE RESERVE			
Land Tracts								
Use Code	Use Code Description	Depth	Frontage	Number of Units	Unit of Measure			
6400	Pasture, Native, Good	0	0	22.72	Acres			
6500	Pasture, Waste	0	0	4.98	Acres			

# Property Data STRAP: 05-45-26-00-00002.0010 Folio ID: 10343353

# Owner Of Record

HOLES JARED F TR FOR LAND TRUST NUMBER 5018 2500 TAMIAMI TRL N STE 214 NAPLES FL 34103

#### Site Address

ACCESS UNDETERMINED FORT MYERS FL

# **Legal Description**

E 1/2 OF SEC 5 LYING S OF HWY 82

## Classification / DOR Code

GRAZING LAND CLASS IV / 63



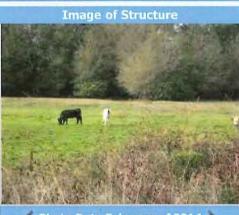


Photo Date February of 2014

Property Values (	2015 Tax Roll)
Just	479,650
Assessed	12,374
Portability Applied	0
Cap Assessed	12,374
Taxable	12,374
Cap Difference	0

Exemptions	
Homestead / Additional	0 / 0
Widow / Widower	0 / 0
Disability	0
Wholly	0
Senior	. 0
Agriculture	467,276

Land Units Of Measure 🕒	AC
Units 😉	95.93
Frontage	0
Depth	0
Total Number of Buildings	0
Total Bedrooms / Bathrooms	0/0
Total Living Area 😉	0
1st Year Building on Tax Roll 😉	0
Historic District	No

# **Property Value History**

Tax Year		Market Assessed	Capped Assessed	Taxable
1992	935,000	6,820	6,820	
1993	935,000	6,380	6,380	6,380
1994	935,000	8,140	8,140	
1995	935,000	10,520	10,520	10,520
1996	935,000	8,120	8,120	8,120
1997	880,000	3,920	3,920	3,920
1998	880,000	7,300	7,300	
1999	880,000	6,230	6,230	
2000	880,000	5,610	5,610	
2001	1,056,000	6,140	6,140	6,140
2002	1,320,000	7,720	7,720	7,720
2003	1,320,000		9,200	
2004	1,320,000	9,940	9,940	
2005	1,573,000	11,310	11,310	11,310
2006	1,606,000	11,730	11,730	
2007	5,500,000	9,830	9,830	9,830
2008	7,150,000	12,780	12,780	
2009	2,200,000	13,640	13,640	13,640
2010	1,100,000	13,620	13,620	13,620
2011	550,000	11,421	11,421	11,421
2012	550,000	13,529	13,529	13,529
2013	550,000			13,107
2014	479,650	14,061		
2015	479,650	12,374	12,374	

The **Just** value is the total parcel assessment (less any considerations for the cost of sale). This is the closest value to *Fair Market Value* we produce and is dated as of January 1st of the tax year in question (<u>F.A.C. 12D-1.002</u>).

The **Market Assessed** value is the total parcel assessment (less any considerations for the cost of sale) based upon the assessment standard. Most parcels are assessed based either upon the *Highest and Best Use* standard or the *Present Use* standard (<u>F.S. 193.011</u>). For *Agriculturally Classified* parcels (or parts thereof), only agricultural uses are considered in the assessment (<u>F.S. 193.461 (6) (a)</u>). The difference between the *Highest and Best Use/Present Use* and the *Agricultural Use* is often referred to as the *Agricultural Exemption*. (i.e. Market Assessed = Just - Agricultural Exemption)

The Capped Assessed value is the Market Assessment after any Save Our Homes or 10% Assessment Limitation cap is applied. This assessment cap is applied to all properties and limits year-to-year assessment increases to either the Consumer Price Index or 3%, whichever is lower for Homestead properties OR 10% for non-Homestead properties.

The **Taxable** value is the *Capped Assessment* after exemptions (*Homestead, etc.*) are applied to it. This is the value that most taxing authorities use to calculate a parcel's taxes. (i.e. Taxable = Capped Assessed - Exemptions)

Taxing Authorities  SOUTH TRAIL FIRE / 047					
Name / Code	Category	Mailing Address			
LEE CO GENERAL REVENUE / 044	County	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO ALL HAZARDS PROTECTION DIST / 101	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO LIBRARY DIST / 052	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO UNINCORPORATED MSTU / 020	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO HYACINTH CONTROL DIST / 051	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971			
LEE CO MOSQUITO CONTROL DIST / 053	Independent District .	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971			
SOUTH TRAIL FIRE DISTRICT / 085	Independent District	WILLIAM B LOMBARDO FIRE CHIEF 5531 HALIFAX AVE FORT MYERS FL 33912 MILLAGE CAP 2.5000			
WEST COAST INLAND NAVIGATION DIST / 098	Independent District	CHARLES W LISTOWSKI EXECUTIVE DIRECTOR 200 MIAMI AVE E VENICE FL 34285-2408			
PUBLIC SCHOOL - BY LOCAL BOARD / 012	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966			
PUBLIC SCHOOL - BY STATE LAW / 013	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966			
SFWMD-DISTRICT-WIDE / 110	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406			
SFWMD-EVERGLADES CONSTRUCTION PROJECT / 084	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406			
SFWMD-OKEECHOBEE BASIN / 308	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH FL 33406			

-				Sales / Transactions	
Sale Price	Date	OR Number	Туре	Description	Vacant/Improved
				Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.	
0.00	07/11/2013	2013000223352	11	There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00003.0000 16-45-26-00-00001.0000 17-45-26-00-00001.0010 17-45-26-00-00001.0010 21-45-26-00-00001.0000	V

10.00	05/21/2013	2013000163345	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00001.0000 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0000	I
0.00	09/01/2009	2009000289789	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00001.0000 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010	V
0.00	07/18/2009		11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.	V
100.00	07/01/1994	2518/2367	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	٧
8,034,000.00	08/01/1981	1535/1480	02	Sales qualified but excluded from sales ratio analysis Qualified (Multiple STRAP # / 06-09I)	V

	Lo	cation Information	on	
Township	Range	Section	Block	Lot
45	26E	05		
Municipality	Lati	tude	Longitude	
Lee County Unincorporated	26.5	8739	-81.73	3062
		Links		
View Parce	on Google Maps		View Parcel on GeoVi	ew

	Solid Waste (	(Garbage) Ro	II Data	
Solid Waste District	Roll Type	Category	Unit / Area	Tax Amount
003 - Service Area 3	-		0	0.00
	C	ollection Days		
Garbage	Recy	Recycling		culture
Friday	Thursday		Thu	rsday

Flood and Storm Information								
Share Surra Zana	Evacuation Zone	Flood Insurance [ FIRM Look-up ]						
Storm Surge Zone	Evacuation Zone	Community	Panel	Version	Date			
D	D	125124	0475	F	8/28/2008			

-		Apprais	al Details		
			Land		
		Lan	d Tracts		
Use Code	Use Code Description	Depth	Frontage	Number of Units	Unit of Measure
6300	Pasture, Native, Excellent	0	0	91.63	Acres

6400 Pasture, Native, Good 0 0 18.37 Acres

# **Property Data**

STRAP: 08-45-26-00-00001.0010 Folio ID: 10345310

#### Owner Of Record

HOLES JARED F TR FOR LAND TRUST NUMBER 5018 2500 TAMIAMI TRL N STE 214 NAPLES FL 34103

#### Site Address

ACCESS UNDETERMINED FORT MYERS FL

#### **Legal Description**

E 1/2 OF SEC 08 LESS N 1800 FT OF S 2300 FT OF W 605 FT LYING N OF DANIELS R/W OR2452/3246

## Classification / DOR Code

GRAZING LAND CLASS IV / 63



Pictometry Aerial Viewer ]



Property Values	(2015 Tax Roll)
Just	1,373,390
Assessed	86,109
Portability Applied	0
Cap Assessed	86,109
Taxable	86,109
Cap Difference	0

0 / 0
0 / 0
0
0
0
1,287,281

Attributes (See Appraisal Details below for curr	ent values)
Land Units Of Measure \\	AC
Units 😉	287.23
Frontage	0
Depth	0
Total Number of Buildings	0
Total Bedrooms / Bathrooms	0/0
Total Living Area 😉	0
1st Year Building on Tax Roll 🕕	0
Historic District	No

# **Property Value History**

Tax Year	Just	Market Assessed	Capped Assessed	Taxable
1992	1,973,860	37,000	37,000	
1993	1,973,860	32,530	32,530	
1994	1,950,310	39,240	39,240	
1995	2,060,010	41,590	41,590	41,590
1996	2,060,010	32,380		
1997	2,060,010	15,630	15,630	15,630
1998	2,060,010	28,800	28,800	
1999	2,060,010	24,330	24,330	
2000	2,060,010			
2001	2,467,320		23,920	
2002	2,738,860	30,130	30,130	
2003	2,738,860			
2004	2,738,860			
2005	2,793,170			
2006	2,874,630	45,800		
2007	13,600,460	38,520	38,520	
2008	17,673,560	89,040	89,040	
2009	5,454,270			
2010	2,738,860			
2011	1,373,390			
2012	1,373,390	94,070	94,070	
2013	1,373,390	91,018	91,018	
2014	1,373,390		97,737	97,737
2015	1,373,390			

The **Just** value is the total parcel assessment (less any considerations for the cost of sale). This is the closest value to Fair Market Value we produce and is dated as of January 1st of the tax year in question (E.A.C. 12D-1.002).

The **Market Assessed** value is the total parcel assessment (less any considerations for the cost of sale) based upon the assessment standard. Most parcels are assessed based either upon the *Highest and Best Use* standard or the *Present Use* standard (<u>F.S. 193.011</u>). For *Agriculturally Classified* parcels (or parts thereof), only agricultural uses are considered in the assessment (<u>F.S. 193.461 (6) (a)</u>). The difference between the *Highest and Best Use/Present Use* and the *Agricultural Use* is often referred to as the *Agricultural Exemption*. (i.e. Market Assessed = Just - Agricultural Exemption)

The Capped Assessed value is the Market Assessment after any Save Our Homes or 10% Assessment Limitation cap is applied. This assessment cap is applied to all properties and limits year-to-year assessment increases to either the Consumer Price Index or 3%, whichever is lower for Homestead properties OR 10% for non-Homestead properties.

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	Taxing Authori SOUTH TRAIL FIRE /	
Name / Code	Category	Mailing Address
LEE CO GENERAL REVENUE / 044	County	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO ALL HAZARDS PROTECTION DIST / 101	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO LIBRARY DIST / 052	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO UNINCORPORATED MSTU / 020	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO HYACINTH CONTROL DIST / 051	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971
LEE CO MOSQUITO CONTROL DIST / 053	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971
SOUTH TRAIL FIRE DISTRICT / 085	Independent District	WILLIAM B LOMBARDO FIRE CHIEF 5531 HALIFAX AVE FORT MYERS FL 33912 MILLAGE CAP 2.5000
WEST COAST INLAND NAVIGATION DIST / 098	Independent District	CHARLES W LISTOWSKI EXECUTIVE DIRECTOR 200 MIAMI AVE E VENICE FL 34285-2408
PUBLIC SCHOOL - BY LOCAL BOARD / 012	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966
PUBLIC SCHOOL - BY STATE LAW / 013	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966
SFWMD-DISTRICT-WIDE / 110	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406
SFWMD-EVERGLADES CONSTRUCTION PROJECT / 084	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406
SFWMD-OKEECHOBEE BASIN / 308	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH FL 33406

-	Sales / Transactions					
Sale Price	Date	OR Number	Туре	Description	Vacant/Improve	
				Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.		
0.00	07/11/2013	2013000223352	11	There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00003.0000 16-45-26-00-00001.0000 17-45-26-00-00001.0010 17-45-26-00-00001.0010 21-45-26-00-00001.0000	Ÿ.	

10.00	05/21/2013	2013000163345	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00001.0000 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0000	I
0.00	09/01/2009	2009000289789	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0010 17-45-2	v
100.00	07/01/1994	2518/2367	04	O0001.0000  Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	V
,034,000.00	08/01/1981	1535/1480	02	Sales qualified but excluded from sales ratio analysis Qualified (Multiple STRAP # / 06-09I)	V

Parcel Numbering History						
Prior STRAP	Prior Folio ID	Renumber Reason	Renumber Date			
08-45-26-00-00001.0030	10556460	Split (From another Parcel)	01/31/2011			

	Lo	cation Information	on	
Township	Range	Section	Block	Lot
45	26E	08		
Municipality	Lati	tude	Longi	tude
Lee County Unincorporated	26.5	7702	-81.73	8056
		Links		
View Parce	el on Google Maps		View Parcel on GeoVi	ew

	Solid Waste (	(Garbage) Ro	II Data	
Solid Waste District	Roll Type	Category	Unit / Area	Tax Amount
003 - Service Area 3	- 12		0	0.00
	C	ollection Days		
Garbage	Recy	cling	Horti	culture
Friday	Thur	sday	Thu	rsday

-	Flood and St	orm Informat	ion		
Chause Course Zone	Formula Tona	FI	ood Insurance [	FIRM Look-up ]	
Storm Surge Zone	Evacuation Zone	Community	Panel	Version	Date
D	D	125124	0475	F	8/28/2008

		Apprais	sal Details		
			Land		
		Lan	d Tracts		
Use Code	Use Code Description	Depth	Frontage	Number of Units	Unit of Measure

6010	Pasture, Improved, Good	0	0	115.06	Acres
6300	Pasture, Native, Excellent	0	0	149.31	Acres
6400	Pasture, Native, Good	0	0	7.17	Acres
6500	Pasture, Waste	0	0	15.69	Acres

# **Property Data**

STRAP: 09-45-26-00-00001.0000 Folio ID: 10345548

#### Owner Of Record

HOLES JARED F TR FOR LAND TRUST NUMBER 5018 2500 TAMIAMI TRL N STE 214 NAPLES FL 34103

#### Site Address

ACCESS UNDETERMINED FORT MYERS FL

# **Legal Description**

PORT LYING IN NWLY PART OF SEC 09 N OF DANIELS

#### Classification / DOR Code

GRAZING LAND CLASS V / 64



[ Pictometry Aerial Viewer ]



		f 2014

Property Values (	2015 Tax Roll)
Just	707,050
Assessed	37,391
Portability Applied	0
Cap Assessed	37,391
Taxable	37,391
Cap Difference	0

Exemptions	
Homestead / Additional	0 / 0
Widow / Widower	0 / 0
Disability	0
Wholly	0
Senior	0
Agriculture	669,659

Attributes (See Appraisal Details below for curr	ent values)
Land Units Of Measure 3	AC
Units 😉	239.49
Frontage	0
Depth	0
Total Number of Buildings	0
Total Bedrooms / Bathrooms	0/0
Total Living Area 😉	0
1st Year Building on Tax Roll 🕒	0
Historic District	No

# **Property Value History**

Tax Year	Just	Market Assessed	Capped Assessed	Taxable
1992	1,058,200	95,310	95,310	95,310
1993	2,776,200	89,720	89,720	
1994	2,630,150	96,950	96,950	
1995	2,285,800		78,550	
1996	2,285,800	61,260	61,260	
1997	2,285,800	29,850	29,850	29,850
1998	2,285,800	54,260	54,260	
1999	2,285,800		46,030	
2000	2,285,800			
2001	2,285,800			
2002	3,410,670			
2003	3,410,670			
2004	4,449,000			
2005	4,535,530			
2006	4,665,320			
2007	14,183,400			
2008	20,673,000			
2009	8,775,400			
2010	4,449,000			
2011	707,050			
2012	707,050			
2013	707,050			
2014	707,050			
2015	707,050			

The Just value is the total parcel assessment (less any considerations for the cost of sale). This is the closest value to Fair Market Value we produce and is dated as of January 1st of the tax year in question (F.A.C. 12D-1.002).

The **Market Assessed** value is the total parcel assessment (less any considerations for the cost of sale) based upon the assessment standard. Most parcels are assessed based either upon the *Highest and Best Use* standard or the *Present Use* standard (<u>F.S. 193.011</u>). For *Agriculturally Classified* parcels (or parts thereof), only agricultural uses are considered in the assessment (<u>F.S. 193.461 (6) (a)</u>). The difference between the *Highest and Best Use/Present Use* and the *Agricultural Use* is often referred to as the *Agricultural Exemption*. (i.e. Market Assessed = Just - Agricultural Exemption)

The **Capped Assessed** value is the *Market Assessment* after any *Save Our Homes* or 10% *Assessment Limitation* cap is applied. This assessment cap is applied to all properties and limits year-to-year assessment increases to either the *Consumer Price Index* or 3%, whichever is lower for Homestead properties OR 10% for non-Homestead properties.

The **Taxable** value is the *Capped Assessment* after exemptions (*Homestead, etc.*) are applied to it. This is the value that most taxing authorities use to calculate a parcel's taxes. (i.e. Taxable = Capped Assessed - Exemptions)

	Taxing Author					
LEHIGH ACRES FIRE / 049						
Name / Code	Category	Mailing Address				
LEE CO GENERAL REVENUE / 044	County	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398				
LEE CO ALL HAZARDS PROTECTION DIST / 101	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398				
LEE CO LIBRARY DIST / 052	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398				
LEE CO UNINCORPORATED MSTU / 020	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398				
LEE CO HYACINTH CONTROL DIST / 051	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971				
LEE CO MOSQUITO CONTROL DIST / 053	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971				
WEST COAST INLAND NAVIGATION DIST / 098	Independent District	CHARLES W LISTOWSKI EXECUTIVE DIRECTOR 200 MIAMI AVE E VENICE FL 34285-2408				
PUBLIC SCHOOL - BY LOCAL BOARD / 012	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966				
PUBLIC SCHOOL - BY STATE LAW / 013	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966				
LEHIGH ACRES FIRE CONTROL & RESCUE DIST / 341	Voter Approved	JOHN R WAYNE, FIRE CHIEF MILLAGE CAP 3.0000 ATTN: SUSAN PLATAS 636 THOMAS SHERWIN AVE S LEHIGH ACRES, FL 33974				
SFWMD-DISTRICT-WIDE / 110	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406				
SFWMD-EVERGLADES CONSTRUCTION PROJECT / 084	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406				
FWMD-OKEECHOBEE BASIN / 308	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH FL 33406				

Sales / Transactions						
Sale Price	Date	te OR Number Type Description		Vacant/Improved		
				Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.		
0.00	07/11/2013	2013000223352	11	There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00003.0000 16-45-26-00-00001.0000 17-45-26-00-00001.0010	V	

				17-45-26-00-00001.0020 20-45-26-00-00001.0010 21-45-26-00-00001.0000	
10.00	05/21/2013	2013000163345	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date) 04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00- 00001.0030 09-45-26-00-00003.0000 16-45-26-00-00001.0000 17-45-26-00-00001.0010 17-45-26-00-00001.0020 20-45-26-00-00001.0010 21-45-26-00-00001.0000	I
0.00	09/01/2009	2009000289789	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date) 04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010	V
100.00	07/01/1994	2518/2367	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	V
100.00	03/01/1993	2384/2092	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	٧

Parcel Numbering History						
Prior STRAP	Prior Folio ID	Renumber Reason	Renumber Date			
09-45-26-00-00001.0000	10345548	Combined (With another parcel-Delete Occurs)				
09-45-26-00-00003.0000	10556452	Split (From another Parcel)	01/28/2011			

-	Lo	cation Information	on	
Township	Range	Section	Block	Lot
45	26E	09		
Municipality	Lati	tude	Longit	ude
Lee County Unincorporated	26.5	7791	-81.72	047
		Links		
View Parce	on Google Maps		View Parcel on GeoVie	w

	Solid Waste (	Garbage) Ro	II Data	
Solid Waste District	Roll Type	Category	Unit / Area	Tax Amount
003 - Service Area 3			0	0.00
	C	ollection Days		
Garbage	Recy	cling	Horti	culture
Friday	Thur	sday	Thu	irsday

	Flood and St	orm Informat	ion		
Storm Surge Zone	Evacuation Zone	FI	ood Insurance (	FIRM Look-up ]	
	Evacuation Zone	Community	Panel	Version	Date
D	D	125124	0475	F	8/28/2008

Appraisal Details	
Land	
Land Tracts	

Use Code	Use Code Description	Depth	Frontage	Number of Units	Unit of Measure
6100	Pasture, Semi-Improved, Excellent	0	0	116.89	Acres
6410	Pasture, Native, Poor	0	0	122.60	Acres

# **Property Data**

STRAP: 16-45-26-00-00001.0000 Folio ID: 10351013

## **Owner Of Record**

HOLES JARED F TR FOR LAND TRUST NUMBER 5018 2500 TAMIAMI TRL N STE 214 NAPLES FL 34103

#### Site Address

DANIELS PKWY FORT MYERS FL 33913

# **Legal Description**

ALL OF SEC 16 TWN 45 RGE 26

## Classification / DOR Code

GRAZING LAND CLASS V / 64

Cap Difference





Property Values (	2015 Tax Roll)
Just	2,665,090
Assessed	102,243
Portability Applied	0
Cap Assessed	102,243
Taxable	102,243

Exemptions			
Homestead / Additional	0 / 0		
Widow / Widower	0 / 0		
Disability	0		
Wholly	0		
Senior	0		
Agriculture	2,562,847		

Attributes (See Appraisal Details below for curr	ent values)
Land Units Of Measure 🔒	AC
Units ()	645.84
Frontage	0
Depth	0
Total Number of Buildings	0
Total Bedrooms / Bathrooms	0/0
Total Living Area 😉	0
1st Year Building on Tax Roll 😃	0
Historic District	No

# **Property Value History**

Tax Year	Just	Market Assessed	Capped Assessed	Taxable
1992	1,268,980	84,560	84,560	84,560
1993	3,164,870	74,320	74,320	
1994	3,164,870	91,270	91,270	
1995	2,659,250	79,270		
1996	2,659,250			
1997	2,659,250			
1998	2,659,250	55,280	55,280	55,280
1999	2,659,250			
2000	2,659,250	42,270		
2001	2,659,250			
2002	3,964,590	57,830	57,830	57,830
2003	3,964,580		69,360	69,360
2004	3,964,580			
2005	4,918,470			
2006	5,169,500			
2007	7,679,750	73,900	73,900	73,900
2008	15,210,500	105,080	105,080	
2009	3,412,330	112,620	112,620	
2010	3,412,325			
2011	2,665,090			
2012	2,665,090			
2013	2,665,090			108,156
2014	2,665,090			
2015	2,665,090			

The **Just** value is the total parcel assessment (less any considerations for the cost of sale). This is the closest value to *Fair Market Value* we produce and is dated as of January 1st of the tax year in question (<u>F.A.C. 12D-1.002</u>).

The **Market Assessed** value is the total parcel assessment (less any considerations for the cost of sale) based upon the assessment standard. Most parcels are assessed based either upon the *Highest and Best Use* standard or the *Present Use* standard (<u>F.S. 193.011</u>). For *Agriculturally Classified* parcels (or parts thereof), only agricultural uses are considered in the assessment (<u>F.S. 193.461 (6) (a)</u>). The difference between the *Highest and Best Use/Present Use* and the *Agricultural Use* is often referred to as the *Agricultural Exemption*. (i.e. Market Assessed = Just - Agricultural Exemption)

The Capped Assessed value is the Market Assessment after any Save Our Homes or 10% Assessment Limitation cap is applied. This assessment cap is applied to all properties and limits year-to-year assessment increases to either the Consumer Price Index or 3%, whichever is lower for Homestead properties OR 10% for non-Homestead properties.

The **Taxable** value is the *Capped Assessment* after exemptions (*Homestead, etc.*) are applied to it. This is the value that most taxing authorities use to calculate a parcel's taxes. (i.e. Taxable = Capped Assessed - Exemptions)

	Taxing Author	orities
	LEHIGH ACRES FI	RE / 049
Name / Code	Category	Mailing Address
LEE CO GENERAL REVENUE / 044	County	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO ALL HAZARDS PROTECTION DIST / 101	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO LIBRARY DIST / 052	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO UNINCORPORATED MSTU / 020	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398
LEE CO HYACINTH CONTROL DIST / 051	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971
LEE CO MOSQUITO CONTROL DIST / 053	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971
WEST COAST INLAND NAVIGATION DIST / 098	Independent District	CHARLES W LISTOWSKI EXECUTIVE DIRECTOR 200 MIAMI AVE E VENICE FL 34285-2408
PUBLIC SCHOOL - BY LOCAL BOARD / 012	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966
PUBLIC SCHOOL - BY STATE LAW / 013	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966
LEHIGH ACRES FIRE CONTROL & RESCUE DIST / 341	Voter Approved	JOHN R WAYNE, FIRE CHIEF MILLAGE CAP 3.0000 ATTN: SUSAN PLATAS 636 THOMAS SHERWIN AVE S LEHIGH ACRES, FL 33974
SFWMD-DISTRICT-WIDE / 110	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406
SFWMD-EVERGLADES CONSTRUCTION PROJECT / 084	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406
SFWMD-OKEECHOBEE BASIN / 308	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH FL 33406

Sales / Transactions						
Sale Price	Date	OR Number	Туре	Description	Vacant/Improved	
				Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.		
0.00	07/11/2013	2013000223352	11	There are 10 additional parcel(s) with this document (may have been split after the transaction date) $ 04-45-26-00-00001.0020  05-45-26-00-00002.0010  08-45-26-00-00001.0010  08-45-26-00-00001.0030  09-45-26-00-00001.0000  17-45-26-00-00001.0010 $	V	

				17-45-26-00-00001.0020 20-45-26-00-00001.0010 21-45-26-00-00001.0000	
10.00	05/21/2013	2013000163345	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0000	I
0.00	09/01/2009	2009000289789	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0010 17-45-26-00-00001.0000	V
100.00	07/01/1994	2518/2367	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	٧
100.00	03/01/1993	2384/2092	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	V

Parcel Numbering History								
Prior STRAP	Prior Folio ID	Renumber Reason	Renumber Date					
16-45-26-00-00001.0000	10351013	Combined (With another parcel-Delete Occurs)						

	Lo	cation Information	on		
Township	Range	Section	Block	Lot	
45	26E	16			
Municipality	Lati	tude	Longitude		
Lee County Unincorporated	26.5	6237	-81.71802		
		Links			
View Parce	el on Google Maps		View Parcel on GeoVie	ew	

	Solid Waste (	(Garbage) Ro	II Data	
Solid Waste District	Roll Type	Category	Unit / Area	Tax Amount
003 - Service Area 3	*		0	0.00
	C	ollection Days		
Garbage	Recycling		Horti	culture
Wednesday	Tue	sday	Tue	esday

	Flood and St	orm Informat	ion		
Starra Sarra Zarra	Formation Tona	FI	ood Insurance [	FIRM Look-up ]	
Storm Surge Zone	Evacuation Zone	Community	Panel	Version	Date
D	D	125124	0475	F	8/28/2008

Appraisal Details								
		Land						
		Land Tra	icts					
Use Code	Use Code Description	Depth	Frontage	Number of Units	Unit of Measure			

6100	Pasture, Semi-Improved, Excellent	0	0	238.73	Acres
6010	Pasture, Improved, Good	0	0	23,05	Acres
6300	Pasture, Native, Excellent	0	0	24.20	Acres
6400	Pasture, Native, Good	0	0	227.12	Acres
6500	Pasture, Waste	0	0	132.74	Acres

# **Property Data**

STRAP: 17-45-26-00-00001.0010 Folio ID: 10351015

#### Owner Of Record

HOLES JARED F TR FOR LAND TRUST NUMBER 5018 2500 TAMIAMI TRL N STE 214 NAPLES FL 34103

#### Site Address

DANIELS PKWY FORT MYERS FL 33913

#### **Legal Description**

E 1/2 OF SEC 17 LYING S OF RD R/W DESC IN OR 2452 PG 3246

#### Classification / DOR Code

GRAZING LAND CLASS II / 61



[ Pictometry Aerial Viewer ]



Photo Date February of 2014 >

Property Values	(2015 Tax Roll)
Just	1,211,040
Assessed	62,100
Portability Applied	0
Cap Assessed	62,100
Taxable	62,100
Cap Difference	0

Exemptions	
Homestead / Additional	0 / 0
Widow / Widower	0 / 0
Disability	0
Wholly	0
Senior	0
Agriculture	1,148,940

Attributes (See Appraisal Details below for curr	ent values
Land Units Of Measure 🕒	AC
Units 😉	254.28
Frontage	0
Depth	0
Total Number of Buildings	0
Total Bedrooms / Bathrooms	0/0
Total Living Area 🕒	0
1st Year Building on Tax Roll 🕒	0
Historic District	No

# **Property Value History**

Tax Year	Just	Market Assessed	Capped Assessed	Taxable
1992	2,302,500	34,180	34,180	
1993	2,400,000	31,060	31,060	31,060
1994	2,280,600	35,020	35,020	
1995	1,888,010	41,200	41,200	
1996	1,888,010			
1997	1,888,010	15,840		15,840
1998	1,888,010	28,810		
1999	1,888,010	24,250		
2000	1,888,000	21,990	21,990	
2001	1,888,000	23,940	23,940	
2002	1,888,010	30,080	30,080	
2003	2,474,730	36,080		
2004	2,474,740	38,840	38,840	
2005	2,521,660	44,160		
2006	2,592,070	45,700		
2007	3,648,190		38,430	
2008	7,168,530		49,850	
2009	1,653,310	53,460	53,460	
2010	1,653,315			
2011	1,211,040	56,995	56,995	
2012	1,211,040	67,871	67,871	
2013	1,211,040			
2014	1,211,040		70,520	
2015	1,211,040	62,100	62,100	

The **Just** value is the total parcel assessment (less any considerations for the cost of sale). This is the closest value to *Fair Market Value* we produce and is dated as of January 1st of the tax year in question (<u>F.A.C. 12D-1.002</u>).

The **Market Assessed** value is the total parcel assessment (less any considerations for the cost of sale) based upon the assessment standard. Most parcels are assessed based either upon the *Highest and Best Use* standard or the *Present Use* standard (*F.S. 193.011*). For *Agriculturally Classified* parcels (or parts thereof), only agricultural uses are considered in the assessment (*F.S. 193.461 (6) (a)*). The difference between the *Highest and Best Use/Present Use* and the *Agricultural Use* is often referred to as the *Agricultural Exemption*. (i.e. Market Assessed = Just - Agricultural Exemption)

The **Capped Assessed** value is the *Market Assessment* after any *Save Our Homes* or 10% Assessment Limitation cap is applied. This assessment cap is applied to all properties and limits year-to-year assessment increases to either the *Consumer Price Index* or 3%, whichever is lower for Homestead properties OR 10% for non-Homestead properties.

The **Taxable** value is the *Capped Assessment* after exemptions (*Homestead, etc.*) are applied to it. This is the value that most taxing authorities use to calculate a parcel's taxes. (i.e. Taxable = Capped Assessed - Exemptions)

Taxing Authorities					
	SOUTH TRAIL FIRE /	047			
Name / Code	Category	Mailing Address			
LEE CO GENERAL REVENUE / 044	County	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO ALL HAZARDS PROTECTION DIST / 101	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO LIBRARY DIST / 052	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO UNINCORPORATED MSTU / 020	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398			
LEE CO HYACINTH CONTROL DIST / 051	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971			
LEE CO MOSQUITO CONTROL DIST / 053	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971			
SOUTH TRAIL FIRE DISTRICT / 085	Independent District	WILLIAM B LOMBARDO FIRE CHIEF 5531 HALIFAX AVE FORT MYERS FL 33912 MILLAGE CAP 2.5000			
WEST COAST INLAND NAVIGATION DIST / 098	Independent District	CHARLES W LISTOWSKI EXECUTIVE DIRECTOR 200 MIAMI AVE E VENICE FL 34285-2408			
PUBLIC SCHOOL - BY LOCAL BOARD / 012	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966			
PUBLIC SCHOOL - BY STATE LAW / 013	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966			
SFWMD-DISTRICT-WIDE / 110	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406			
SFWMD-EVERGLADES CONSTRUCTION PROJECT / 084	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406			
SFWMD-OKEECHOBEE BASIN / 308	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH FL 33406			

Sales / Transactions					
Sale Price	Date	OR Number	Туре	Description	Vacant/Improved
				Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.	
0.00	07/11/2013	2013000223352	11	There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00003.0000 16-45-26-00-00001.0000 17-45-26-00-00001.0020 20-45-26-00-00001.0010 21-45-26-00-00001.0000	V

10.00	05/21/2013	2013000163345	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00- 00001.0030 09-45-26-00-00001.0000 09-45-26-00-00003.0000 16-45-26-00-00001.0000 17-45-26-00-00001.0020 20-45-26-00-00001.0010 21-45-26-00-00001.0000	I
0.00	09/01/2009	2009000289789	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0010 16-45-26-00-00001.0000 17-45-26-00-00001.0000 20-45-26-00-00001.0000 12-45-26-00-00001.0000	v
100.00	07/01/1994	2518/2367	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	٧
100.00	03/01/1993	2384/2092	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	٧

Parcel Numbering History						
Prior STRAP	Prior Folio ID	Renumber Reason	Renumber Date			
17-45-26-00-00001.0010	10351015	Combined (With another parcel-Delete Occurs)				
17-45-26-00-00001.0020	10556699	Split (From another Parcel)	03/08/2011			

Location Information					
Township	Range	Section	Block	Lot	
45	26E	17			
Municipality	Lati	tude	Longit	tude	
Lee County Unincorporated	26.5	6229	-81.7	301	
		Links			
View Parce	on Google Maps		View Parcel on GeoVie	ew	

	Solid Waste (Gar	bage) Roll Data	
Solid Waste District	Roll Type	Category Unit / Are	a Tax Amount
003 - Service Area 3	2	0	0.00
	Collection	n Days	
Garbage	Recycling		Horticulture
Wednesday	Tuesday		Tuesday

	Flood and St	orm Informat	ion		
Sharm Surga Zana	Evacuation Zone	Flood Insurance [ FIRM Look-up ]			
Storm Surge Zone	Evacuation Zone	Community	Panel	Version	Date
D	D	125124	0475	F	8/28/2008

	4	Appraisal I	Details		
		Land			
		Land Tra	icts		
Use Code	Use Code Description	Depth	Frontage	Number of Units	Unit of Measure

6100	Pasture, Semi-Improved, Excellent	0	0	234.00	Acres
6400	Pasture, Native, Good	0	0	18.69	Acres
6500	Pasture, Waste	0	0	1.59	Acres

## **Property Data**

STRAP: 17-45-26-00-00001.0020 Folio ID: 10556699

#### Owner Of Record

HOLES JARED F TR FOR LAND TRUST NUMBER 5018 2500 TAMIAMI TRL N STE 214 NAPLES FL 34103

#### Site Address

12999 DANIELS PKWY FORT MYERS FL 33913

#### **Legal Description**

E 1/2 OF SEC 17 LYING N OF RD R/W DESC IN OR 2452 PG 3246

#### Classification / DOR Code

GRAZING LAND CLASS III / 62





Property Values (2	2015 Tax Roll)
Just	260,800
Assessed	8,867
Portability Applied	0
Cap Assessed	8,867
Taxable	8,867
Cap Difference	. 0

Exemptions				
Homestead / Additional	0 / 0			
Widow / Widower	0 / 0			
Disability	0			
Wholly	0			
Senior	0			
Agriculture	251,933			

Attributes (See Appraisal Details below for curre	ent values)
Land Units Of Measure 🕒	AC
Units 😃	52.16
Frontage	0
Depth	0
Total Number of Buildings	0
Total Bedrooms / Bathrooms	0/0
Total Living Area 🕒	0
1st Year Building on Tax Roll 🕒	0
Historic District	No

# **Property Value History**

Tax Year	Just	Market Assessed	Capped Assessed	Taxable
2011	260,800	8,189	8,189	8,189
2012	260,800	9,702	9,702	9,702
2013	260,800	9,389	9,389	9,389
2014	260,800	10,067	10,067	10,067
2015	260,800	8,867	8,867	8,867

The **Just** value is the total parcel assessment (less any considerations for the cost of sale). This is the closest value to *Fair Market Value* we produce and is dated as of January 1st of the tax year in question (F.A.C. 12D-1.002).

The **Market Assessed** value is the total parcel assessment (less any considerations for the cost of sale) based upon the assessment standard. Most parcels are assessed based either upon the *Highest and Best Use* standard or the *Present Use* standard (<u>F.S. 193.011</u>). For *Agriculturally Classified* parcels (or parts thereof), only agricultural uses are considered in the assessment (<u>F.S. 193.461 (6) (a)</u>). The difference between the *Highest and Best Use/Present Use* and the *Agricultural Use* is often referred to as the *Agricultural Exemption*.

(i.e. Market Assessed = Just - Agricultural Exemption)

The Capped Assessed value is the Market Assessment after any Save Our Homes or 10% Assessment Limitation cap is applied. This assessment cap is applied to all properties and limits year-to-year assessment increases to either the Consumer Price Index or 3%, whichever is lower for Homestead properties OR 10% for non-Homestead properties.

The **Taxable** value is the *Capped Assessment* after exemptions (*Homestead, etc.*) are applied to it. This is the value that most taxing authorities use to calculate a parcel's taxes.

(i.e. Taxable = Capped Assessed - Exemptions)

Taxing Authorities  SOUTH TRAIL FIRE / 047						
Name / Code	Category	Mailing Address				
LEE CO GENERAL REVENUE / 044	County	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398				
LEE CO ALL HAZARDS PROTECTION DIST / 101	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398				
LEE CO LIBRARY DIST / 052	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398				
LEE CO UNINCORPORATED MSTU / 020	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398				
LEE CO HYACINTH CONTROL DIST / 051	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971				
LEE CO MOSQUITO CONTROL DIST / 053	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971				
SOUTH TRAIL FIRE DISTRICT / 085	Independent District	WILLIAM B LOMBARDO FIRE CHIEF 5531 HALIFAX AVE FORT MYERS FL 33912 MILLAGE CAP 2.5000				
WEST COAST INLAND NAVIGATION DIST / 098	Independent District	CHARLES W LISTOWSKI EXECUTIVE DIRECTOR 200 MIAMI AVE E VENICE FL 34285-2408				
PUBLIC SCHOOL - BY LOCAL BOARD / 012	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966				
PUBLIC SCHOOL - BY STATE LAW / 013	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966				
SFWMD-DISTRICT-WIDE / 110	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406				
SFWMD-EVERGLADES CONSTRUCTION PROJECT / 084	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406				
SFWMD-OKEECHOBEE BASIN / 308	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH FL 33406				

Sales / Transactions					
Sale Price	Date	OR Number	Туре	Description	Vacant/Improved
0.00	07/11/2013	2013000223352	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00001.0000 16-45-26-00-00001.0000 17-45-26-00-00001.0010 20-45-26-00-00001.0010 21-45-26-00-00001.0000	V
10.00	05/21/2013	2013000163345	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0000 16-45-26-00-00001.0000 17-45-26-00-00001.0010 20-45-26-00-00001.0010 21-45-26-00-00001.0000	I
0.00	09/01/2009	2009000289789	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-	V

				$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
100.00	07/01/1994	2518/2367	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	٧
100.00	03/01/1993	2384/2092	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	٧

Parcel Numbering History							
Prior STRAP	Prior Folio ID	Renumber Reason	Renumber Date				
17-45-26-00-00001.0010	10351015	Split (From another Parcel)	03/08/2011				

-	Lo	cation Information	on	
Township	Range	Section	Block	Lot
45	26E	17		
Municipality	Lati	tude	Longi	tude
Lee County Unincorporated	26.5	6665	-81.73	3126
		Links		
View Parce	el on Google Maps		View Parcel on GeoVi	ew

	Solid Waste (	Garbage) Ro	II Data	
Solid Waste District	Roll Type	Category	Unit / Area	Tax Amount
003 - Service Area 3	2		0	0.00
	C	ollection Days		
Garbage	Recycling		Horti	culture
Friday	Thursday		Thu	rsday

	Flood and St	orm Informat	ion		
Storm Surge Zone	Evacuation Zone	FI	ood Insurance (	[FIRM Look-up]	
Storm Surge Zone	Evacuation Zone	Community	Panel	Version	Date
D	D	125124	0475	F	8/28/2008

		Appraisa	l Details					
		Lar	nd					
	Land Tracts							
Use Code	Use Code Description	Depth	Frontage	Number of Units	Unit of Measure			
6200	Pasture, Semi-Improved, Poor	0	0	52.16	Acres			

# **Property Data**

STRAP: 21-45-26-00-00001.0000 Folio ID: 10351188

#### Owner Of Record

HOLES JARED F TR FOR LAND TRUST NUMBER 5018 2500 TAMIAMI TRL N STE 214 NAPLES FL 34103

#### Site Address

ACCESS UNDETERMINED FORT MYERS FL

#### Legal Description

ALL OF SEC 21 TWN 45 RGE 26

#### Classification / DOR Code

GRAZING LAND CLASS VI / 65





Property Values (	2015 Tax Roll)
Just	1,772,600
Assessed	64,957
Portability Applied	0
Cap Assessed	64,957
Taxable	64,957
Cap Difference	0

Exemptions					
Homestead / Additional	0 / 0				
Widow / Widower	0 / 0				
Disability	0				
Wholly	0				
Senior	0				
Agriculture	1,707,643				

Attributes (See Appraisal Details below for curr	ent values)
Land Units Of Measure 🕒	AC
Units 😃	645.60
Frontage	0
Depth	0
Total Number of Buildings	0
Total Bedrooms / Bathrooms	0/0
Total Living Area 😃	0
1st Year Building on Tax Roll 🔮	0
Historic District	No

# **Property Value History**

Tax Year	Just	Market Assessed	Capped Assessed	Taxable
1992	1,280,000	57,390	57,390	57,390
1993	3,000,800	51,490	51,490	
1994	3,000,800	63,270	63,270	
1995	1,767,000			
1996	1,767,000			
1997	1,767,010			
1998	1,767,000			35,010
1999	1,767,000			
2000	1,767,010			
2001	1,767,000			
2002	2,465,440			
2003	2,465,440			
2004	2,465,440			
2005	3,163,870			
2006	3,244,460			
2007	4,453,300			
2008	8,482,760	66,750		
2009	2,169,950	71,470		
2010	2,169,945	68,522		
2011	1,772,600	59,874		59,874
2012	1,772,600	71,045		
2013	1,772,600	68,798		68,798
2014	1,772,600	73,759		
2015	1,772,600			

The **Just** value is the total parcel assessment (less any considerations for the cost of sale). This is the closest value to *Fair Market Value* we produce and is dated as of January 1st of the tax year in question (<u>F.A.C. 12D-1.002</u>).

The **Market Assessed** value is the total parcel assessment (less any considerations for the cost of sale) based upon the assessment standard. Most parcels are assessed based either upon the *Highest and Best Use* standard or the *Present Use* standard (*F.S. 193.011*). For *Agriculturally Classified* parcels (or parts thereof), only agricultural uses are considered in the assessment (*F.S. 193.461 (6) (a)*). The difference between the *Highest and Best Use/Present Use* and the *Agricultural Use* is often referred to as the *Agricultural Exemption*. (i.e. Market Assessed = Just - Agricultural Exemption)

The **Capped Assessed** value is the *Market Assessment* after any *Save Our Homes* or 10% Assessment Limitation cap is applied. This assessment cap is applied to all properties and limits year-to-year assessment increases to either the *Consumer Price Index* or 3%, whichever is lower for Homestead properties OR 10% for non-Homestead properties.

The **Taxable** value is the *Capped Assessment* after exemptions (*Homestead, etc.*) are applied to it. This is the value that most taxing authorities use to calculate a parcel's taxes.

(i.e. Taxable = Capped Assessed - Exemptions)

	Taxing Autho	orities					
LEHIGH ACRES FIRE / 049							
Name / Code	Category	Mailing Address					
LEE CO GENERAL REVENUE / 044	County	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398					
LEE CO ALL HAZARDS PROTECTION DIST / 101	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398					
LEE CO LIBRARY DIST / 052	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398					
LEE CO UNINCORPORATED MSTU / 020	Dependent District	LEE COUNTY BUDGET SERVICES PO BOX 398 FORT MYERS FL 33902-0398					
LEE CO HYACINTH CONTROL DIST / 051	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971					
LEE CO MOSQUITO CONTROL DIST / 053	Independent District	RUSSELL BAKER 15191 HOMESTEAD RD LEHIGH ACRES FL 33971					
WEST COAST INLAND NAVIGATION DIST / 098	Independent District	CHARLES W LISTOWSKI EXECUTIVE DIRECTOR 200 MIAMI AVE E VENICE FL 34285-2408					
PUBLIC SCHOOL - BY LOCAL BOARD / 012	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966					
PUBLIC SCHOOL - BY STATE LAW / 013	Public Schools	AMI DESAMOURS BUDGET DEPARTMENT 2855 COLONIAL BLVD FORT MYERS FL 33966					
LEHIGH ACRES FIRE CONTROL & RESCUE DIST / 341	Voter Approved	JOHN R WAYNE, FIRE CHIEF MILLAGE CAP 3.0000 ATTN: SUSAN PLATAS 636 THOMAS SHERWIN AVE S LEHIGH ACRES, FL 33974					
SFWMD-DISTRICT-WIDE / 110	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406					
SFWMD-EVERGLADES CONSTRUCTION PROJECT / 084	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH, FL 33406					
SFWMD-OKEECHOBEE BASIN / 308	Water District	MICHELLE QUIGLEY 3301 GUN CLUB RD WEST PALM BEACH FL 33406					

Sales / Transactions						
Sale Price	Date	OR Number	Туре	Description	Vacant/Improved	
				Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.		
0.00	07/11/2013	2013000223352	11	There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 09-45-26-00-00003.0000 16-45-26-00-00001.0000 17-45-26-00-00001.0010 17-45-26-00-00001.0020 20-45-26-00-	٧	

				Sales qualified but excluded from sales ratio analysis	
100.00	07/01/1994	2518/2367	04	Sales disqualified as a result of examination of the deed Disqualified (Multiple STRAP # - 01,03,04,07)	V
0.00	09/01/2009	2009000289789	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 17-45-26-00-00001.0000 17-45-26-00-00001.0000 17-45-26-00-00001.0010	٧
10.00	05/21/2013	2013000163345	11	Sales disqualified as a result of examination of the deed Corrective deed, quit claim deed, or tax deed; Deed bearing Florida Documentary Stamp at the minimum rate prescribed under Chapter 201, F.S.; Transfer of ownership where no doc stamps were paid.  There are 10 additional parcel(s) with this document (may have been split after the transaction date)  04-45-26-00-00001.0020 05-45-26-00-00002.0010 08-45-26-00-00001.0010 08-45-26-00-00001.0030 09-45-26-00-00001.0000 17-45-26-00-00001.0000 17-45-26-00-00001.0020 20-45-26-00-00001.0010	I

	Lo	cation Information	on		
Township	Range	Section	Block	Lot	
45	26E	21			
Municipality	Lati	tude	Longitude		
Lee County Unincorporated 26.54773		4773	-81.71	1774	
		Links			
View Parce	el on Google Maps		View Parcel on GeoView	ew	

	Solid Waste (	(Garbage) Ro	II Data	
Solid Waste District	Roll Type	Category	Unit / Area	Tax Amount
003 - Service Area 3			0	0.00
	C	ollection Days		
Garbage	Recycling		Hortic	culture
Wednesday	Tuesday		Tue	esday

	Flood and St	orm Informat	ion		
Storm Surge Zone	Evacuation Zone	Flood Insurance [ FIRM Look-up ]			
	Lvacuation Lone	Community	Panel	Version	Date
D	D	125124	0475	F	8/28/2008

	Ap	praisal	Details					
Balance .		Land						
Land Tracts								
Use Code	Use Code Description	Depth	Frontage	Number of Units	Unit of Measure			
6100	Pasture, Semi-Improved, Excellent	0	0	105.79	Acres			
6010	Pasture, Improved, Good	0	0	14.51	Acres			
6300	Pasture, Native, Excellent	0	0	61.56	Acres			

Lee County Property Appraiser - Online Parcel Inquiry

6400	Pasture, Native, Good	0	0	139.25	Acres
6500	Pasture, Waste	0	0	324.49	Acres

# Appendix E Selected Supporting Documents



Aerial Gunner Training

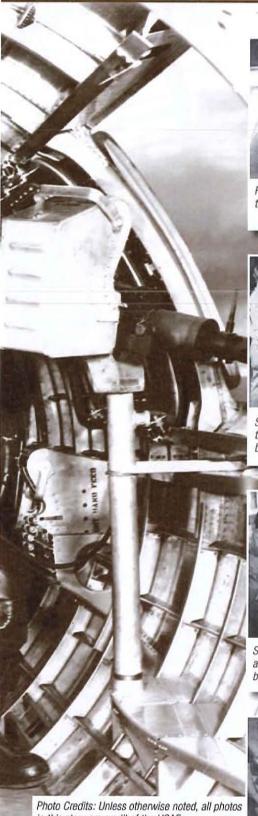


Photo Credits: Unless otherwise noted, all photos in this story are credit of the USAF.

By: Kelsey McMillan



Future gunners review the inner workings of the Browning .30 caliber machine gun.



Students are being timed as they strip and then reassemble .50 caliber machine guns blindfolded.



Students are trained in disassembling and reassembling their machine guns blindfolded.



If the student can reassemble their guns blindfolded, they will completely understand its inner workings.

As captivating as are the combat stories of America's World War II aerial gunners, so too is the wartime history of the training program that produced them. Some of the earliest training methods devised in 1941 were crude and laughable, and hardly effectual. But ongoing efforts to improve the program led to the development of ingenious ideas, complex theories, hi-tech innovations, and fascinating failures.

The U.S. Army Air Force's plans for a flexible gunnery training program were progressing at a leisurely pace during the latter months of 1941. Construction of three gunnery schools was nearing completion and the first instructor class had graduated. But overnight, the declarations of war against Germany and Japan created an urgent need for large scale training. There were enormous obstacles to meeting such a demand. Training men for the unique physical and mental demands of being an aerial gunner was very complex. America had no experience to draw on, and only a handful of newly trained instructors were available. There were not enough planes, equipment and ordnance to fight the war, let alone enough to supply the schools. Nevertheless the first Air Force flexible gunnery classes were in session just days after Pearl Harbor.

Las Vegas Army Airfield, the first of the new flexible gunnery schools began accepting its first students in December 1941. Two more schools at Harlingen Airfield, Texas, and Tyndall Airfield in Panama City, Florida also accepted their first students in December 1941. Buckingham Airfield, Ft Myers, Florida was home for the Central Gunnery Instructors School, a facility dedicated to training aerial gunnery instructors; its first class arrived in September 1942. Classes commenced in early 1943 at two more new schools located at Kingman, Arizona and Laredo, Texas. The last school to open -Yuma, Arizona - began training in late 1943. In May 1944, instructor training was moved from Buckingham to Laredo, and it became a focal point for research and



development, tackling the theoretical and practical problems which hampered improved efficiency in training.

#### A Call to Arms

Intensive recruitment for the fledgling program began almost immediately after the December 7th attack. Over the next few months, thousands of enlisted men at USAAF bases all over America would assemble in their post theaters to hear a talk by some visiting NCO with a lot of hash marks. John Cromer, a top turret gunner from the 381st Bomb Group, will never forget the recruiter that visited Sheppard Field when he was a 32-year-old aircraft mechanic. "The man was a spellbinder," John recalls, "a military pitchman with superb talents. I listened in hypnotic fascination as he described the adventurous life of an aerial gunner. Carried away by his fiery enthusiasm, I could picture myself holding off a swarm of Japanese Zeros!"

#### In the Classroom: Armaments and Ordnance

Flexible gunnery students would spend all but the last week of school in the classroom and shooting ranges on the ground. Initially the training lasted four weeks; then it was extended to five weeks and finally six weeks. In that first week they were overwhelmed by a blitz of data about machine guns and ordnance which they would be required to memorize. They learned proper maintenance and cleaning - how to tear down and reassemble the guns; how to load drums and ammunition belts. For weeks



their lives revolved around disassembling and reassembling their machine guns, according to two sets of procedures. The one known as "detail stripping" involved dismantling every single removable piece. The second, "field stripping," involved disassembling the machine gun only to the point where a given malfunction could be fixed, and then it was reassembled. These exercises were repeated over and over until mastered. The trainees practiced clearing jams quickly as if their lives depended on it, because it did if a gun jammed at 28,000 feet with an enemy pilot bearing in for the kill.

The trainee also had to achieve proficiency at stripping his gun while blindfolded and wearing gloves. The reason for wearing gloves was obvious; it was frigidly cold at bombing altitudes — as much as 60 degrees below zero over Europe. If the gunner touched his machine gun with bare skin it would freeze to the metal. But why blindfolded? It's difficult to look

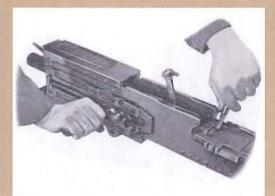


Image from an Army Air Force training manual to teach students the inner workings of the Browning .50 caliber machine gun.



This original color postcard from Tyndall Field, Florida shows a Captain receiving instruction in the reassembly of a .50 caliber machine gun.

straight down and see what you're doing while zipped up to the neck in a bulky flight suit, with goggles and an oxygen mask covering his face. Bouncing around in turbulent air doesn't make it any easier to see what you're doing. Better to keep your eyes on the skies too so you can watch for bogies.

One of the requirements to graduate was to perform a blindfolded detail strip, and then reassemble the gun with a change in the direction of the ammo feed (from right to left or left to right) while the gunnery instructor observed with a stopwatch. Milt Zack, a bombardier/navigator with the 11<sup>th</sup> Air Force remembers his final exam in the blindfolded detail strip. "I very meticulously set aside each section in a little pile in order on the bench to make it easier to reassemble. Then along came the instructor and just as meticulously mixed everything together. Well, it took awhile but I did manage to get it back together, and I guess it was OK because I passed."

Ordnance classes addressed the different types of ammunition, how they worked, their uses, and how to tell them apart. Armor-piercing, semi armor-piercing, ball, tracer, incendiary and dummy - each had unique markings on the head of the cartridge and color coding on the tip of the projectile. Ordnance study went on after hours too, according to George Underwood, 310th Bomb Group, 12th Air Force. "Each night after shooting most of the day we loaded ammunition into belts, then loaded the belts into cans that fit the turrets which we shot the next day. Each box of 350

rounds weighed 100 pounds and those 50s had voracious appetites firing 750 rounds per minute."

#### More Classes - Mathematical Theories

After mastering the machine gun and ammo, the trainees learned boresighting and harmonization - oversimplified, that means lining up the gunsight so that it correctly aims where the gun fires. The next step was the complex physics of air-to-air gunnery. The students learned how gunsights compensated for the many forces which caused a bullet to deviate from a straight line, such as gravity, air resistance, drift, and the movement of the gun platform (the aircraft). In the still air of a ground range, the gunners found a projectile was predictably pulled down by gravity and held back by air density. The same forces act on a bullet fired from a moving platform, but bullets do curious things when fired from a plane in flight. Unless fired dead ahead or dead astern from the bomber, bullets do not go where aimed. First, the slipstream causes them to drift sideways until air resistance straightens them out; then they lag behind the plane. Shots fired 90 degrees right, or 90 degrees left of the direction the plane is flying behave very differently because of a bullet's clockwise rotation. Projectiles fired to the right side of the plane tend to dig into that wall of air, and they will have dropped several feet at a range of 1000 yards. Bullets fired to the left side tend to float on the wall of air resistance, and will drop only inches at a range of 1000 yards. Rounds shot straight up from the plane drift right; fired straight down, the



Poorman Flexible Gunnery Range, 1944



Aircraft recognition is vital to gunners. Knowing an aircrafts size will help with judging its range.



The Skeet range. Gunnery students learned how to 'lead' a target with shotguns before moving up to machine guns.



bullet drifts to the left.

Deflection, one of the most important words a gunner would learn, was explained by instructors as, "The amount you must aim away from the attacking fighter to compensate for its movement and your plane's movement. The term may have been new to the men, but the meaning was not. Any of the young men who had played sports or had a newspaper route as a boy understood it. An illustration of a kid on a bike throwing a newspaper several feet before he reaches the porch appeared in the manual. Deflection was measured in rads (short for radius). A rad was the distance between each of the concentric rings on a gunsight.

Initially, the gunner had to learn how to compute deflection in his head to accurately aim a flexible machine gun at a moving target. Mercifully, that changed after the invention of the computing gunsight – a precision electrical and mechanical device that performed all the calculations. During 1942 the student had to become familiar with as many as ten different types of gunsights that were in use!

Gunsights were essential, but there were fundamentals to successful aiming which, rather like a golf swing, could be mastered only through practice, practice, practice. Those fundamentals were range estimation, line of motion, and smooth tracking. Students practiced estimating the range, or distance to the target, so that they would not begin firing too soon or too late. Line of motion was the imaginary straight line of the attacking plane's path as visualized by the gunner. The importance of smooth tracking, keeping the eyes on

the target and moving the gun in a smooth continuous flow, could not be over-emphasized. The trainees were instructed to practice with any opportunity by tracking every target whether in or out of range.

There were rules relating to gun bursts, or rather the rate of fire. The student was instructed not to fire until the enemy reached a range of 600 yards or closer – beyond that, accuracy degraded. At that range, only a few very short bursts were called for. As the attacking plane reached 300 yards or closer, this was the time for the gunner to pour it on. A steady rate of fire in combat wasted the limited supply of ammunition and did not increase the chances of scoring hits. It also overheated the gun barrels - a dangerous condition. The high temperatures that resulted from sustained firing could ruin the rifling, distort the shape of the barrels; or worse, it could cause the round in the chamber to fire without the trigger being depressed. The trainees were cautioned to always keep the weapon cleared during breaks in firing, and pointed in a safe direction.

Enemy fighters had many advantages over the bomber gunners; they were faster, more agile, and had 20MM cannons with greater range than machine gun bullets. They were also expert at denying gunners an easy shot. They knew better than to attack bomber formations in a straight line. Students were trained to expect an attack from oblique angles and turns, known as pursuit curves. This gave the gunner mere seconds to draw a bead on them. There was some predictability to these pursuit curves and the trainees were taught how to use



Linking machine gun cartridges for gunnery training.



Students practice range estimation on an approaching AT-6 trainer using wooden machine guns and ring sights.



this. However, in combat the gunner soon learned that his enemy knew very well how to stay out of his crosshairs. Early in the war the American bombers were most vulnerable in the nose, so the enemy often attacked head-on at maximum closing speeds. But when the noses became more heavily armed, the enemy shocked the bomber formations by diving right through the middle of them instead.

If the gunnery student had harbored any illusions about knocking down dozens of "Kraut" or "Nip" planes, his introduction to these mind-boggling math and physics studies dispelled that notion.

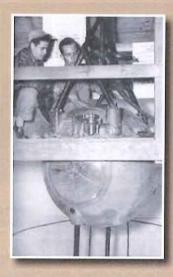
#### Still in the Classroom - Turrets

Gun turrets were an even more complicated business. Instruction in the operation, maintenance, and repair of electrically-powered and hydraulically-powered turrets must have made the men's heads spin. Turret management included boresighting and mounting guns, mounting and adjusting sights, loading ammunition, checking the operation of all clutches, switches, fire interrupters, interphone and oxygen connections, and timing solenoids for firing. Much of the manipulation of switches and connections had to be performed blindfolded in a final exam. If the turret malfunctioned, the bomber's defenses were weakened. If the turret door or opening could not be aligned with the opening or escape hatch, the man inside had to know how to fix it; or else he could forget about escape in an emergency.

In the first year the gunnery schools operated, the students did not know to what type bomber, or to which gun position they would be assigned until they graduated and went to combat crew school. Consequently, they were expected to be proficient with each type of turret in use



Sgt. C.W. Maxwell teaches students the finer points of anticipating an enemy's attack curve.





Students learn the fundamentals on operating power turrets such as this Martin upper turret used on the B-24.



at the time. Initially, there were only a few different types of bomber turrets, so this policy posed no serious problems at the schools (aside from the fact there were never enough of them). Over the course of the war, however, as more types of turrets were introduced for dedicated use on the different types of bombers, it became a serious problem. There were the Sperry upper and ball turrets, the Consolidated tail turret, the Bendix upper, lower, and chin turrets, the Martin upper turret and the Emerson nose turret. Training time was too short, and the students couldn't possibly retain all that knowledge. The solution seemed to be specialization at the different schools. In mid 1943 Laredo and Harlingen were designated B-24 schools and trained only in turrets installed on the Liberator. Las Vegas and Kingman became B-17 schools, while Tyndall trained its gunners for the B-26 and B-34. Buckingham also trained for the B-26 and 24, but also had responsibility for light and dive bomber turrets. The problems were not completely ironed out as the graduates were sometimes assigned to a different aircraft type at combat school. This issue was addressed in 1944 when Laredo switched back to training students on all types of turrets in use in 1944.

## Ready on the Firing Line

With so much classroom instruction, the students may have begun to wonder if you got to shoot guns at gunnery school. Finally they had their chance. There were four basic phases of target shooting and each was progressively more



difficult. Initially they would fire from stationary positions at fixed targets and then moving targets. After a few weeks of working through these phases the students advanced to firing at moving targets from moving platforms, first on the



Waist gun trainer



BB gun trainers. These BB machine guns are used to knock down rows of fast moving airplane silhouettes.



Students learning how use the ring sight on this Browning .30 caliber machine gun.

ground, and then air-to-air target shooting in a plane.

Training methods were in a constant state of flux throughout the war, and many varieties of ground ranges were used at each of the schools at different times. The students might start out shooting .22 rifles at targets on a conveyor belt, much like a carnival attraction. To introduce students to machine gun firing, some schools rigged small machine guns with high pressure air hoses to fire BBs. Then they graduated to shotguns on the skeet range. Shooting at the clay targets flung from various angles and heights were a good introduction to the tracking and leading a moving target. Firing shotguns all day left their arms feeling battered from the shoulder to the elbow. A 93rd Bomb Group gunner remembers, "We learned to shoot right-handed, left-handed and any other way imaginable. I had both shoulders stuffed with towels, they were so sore and black and blue."

Machine gun firing would begin on a fixed target range with the guns mounted on tripods. Here students got a chance to apply what they learned about field stripping and malfunction repair. Before students arrived, instructors would set up one or more of the machine guns to "run away" when fired. The instructors might create misalignments or even install defective parts, so once the trigger was pulled, the student would be very surprised to find the gun wouldn't stop firing! If a trainee panicked and forgot to simply lift the cover to stop a runaway, it could be very embarrassing with everyone watching; especially the instructor. The student would then have to diagnose and repair the malfunction.



At one time or another, most of the schools had a skeet range tower, a multi-level wooden structure with platforms at 10,20 and 30 feet, from which the gunners shot at clay targets. The purpose of shooting from the varying heights was to simulate the high and low angles of the aircraft gun positions relative to enemy aircraft.



Students then advance up to the Browning .50 caliber machine gun range.



Shotguns mounted on moving (and bouncing) trucks helped students develop their skills shooting at moving targets.



Using shotguns mounted on a moving platform (a Dodge WC-3), students develope their skills at shooting at a moving target.



An early method employing moving targets and a moving gun platform, known as the Moving Base Range, involved firing at clay targets with a 12 gauge shotgun mounted on the back of a flatbed truck as it drove through a skeet course at 25 mph. The truck maneuvered through the course tripping switches on the ground which hurled clay targets from the skeet houses. Or the targets might be flung by assistants in the skeet houses when the truck passed ground markers. The exercise was effective in demonstrating the physical forces of moving targets and projectiles that the students learned about in class.

Fred Huston, a bombardier with the first cadre of aviation cadets to train at Laredo, was not at all fond of this exercise. "The gunner had to try and hit the bird and stay on the truck at the same time. The scores turned in reflected the difficulties. It seemed that each time you fired, the truck either hit a bump or a hole and you got all of the considerable kick in either the jaw or the ribs. You might be able to knock down a few targets but you never knew where the gunstock was going to belt you next."

Training methods were steadily improving and becoming more sophisticated from lessons learned in combat. On the Moving Target Range one exercise involved shooting gun cameras from the skeet tower, or from turrets mounted atop GI trucks, at aircraft making low-level passes. In another truckturret exercise, the trainees fired at moving ground targets. One type of target was a large sheet of canvas stretched on a square frame, mounted on poles extending from a Jeep,

or from a small wagon resembling a railroad worker's car. The wagon or Jeep moved along railroad tracks behind an earthen bunker with the target extending above the berm. Each gunner's projectiles were tipped with a different color paint. Projectiles striking the target left traces of paint which the instructors counted to score the hits of each gunner.

Fred Huston describes an activity with the Jeep which was not according to the syllabus. "The moving target was mounted on a Jeep that followed a track past the gunners, then around a 180 turn behind an earthen bunker, another 180 and past the gunners again. There was a point, just as the Jeep made its turn to go behind the bunker that the machine itself could be hit if one were shot full of luck. As befits those with nothing better to do, we all tried to hit the Jeep at this point. The damage an armor-piercing .50 can do to a Jeep engine is marvelous to behold and the rage of the people running the range even more spectacular. In later months we may never have been able to hit an airplane but we were deadly when it came to hitting target Jeeps."

#### **Simulators**

Some of the earliest synthetic training devices seem crude and silly by today's technology. A prime example was a "paper doll" contraption that one instructor devised to initiate students in tracking targets. A long roller of wrapping paper with the shapes of airplanes cut out of it was wound onto two movie projector reels. A strong lamp cast shadows of the cutouts on a wall as the paper rolled behind the



B-24 tail turret trainers mounted on trucks provide the student with the basic feel of what it will be like to operate the turret in the real aircraft.



Color postcard from Tyndall Field Gunnery School shows Martin turrets mounted on trucks with an airplane mockup mounted on a jeep. The jeep is hooked to a track system.

gunner and he aimed his gunsight at the silhouettes. Another very basic technique involved directing a hand-operated spotlight through simple patterns painted on a concave surface as the student tracked the beam from a turret.

Training eventually got more hi-tech with the development of ingenious simulators, or synthetic trainers, as they were then called. The first one - the Hunt Trainer - was created to teach range estimation. The Hunt consisted of an array of mirrors through which the gunner viewed airplane models and attempted to judge their distances from his gun as the instructor moved them relative to the gunner's position. The use of the scale model planes also enabled the student to practice aircraft identification at the same time. The Hunt was a vast improvement over the wrapping paper contraption, yet still inexpensive and easy to construct.

Next came the Jam Handy, an even more complex and realistic simulator using two synchronized movie projectors and sound effects of real engine noise and machine gun fire. It was portable and easily set up, and cost just \$2,000. One projector ran actual combat film footage of fighter approaches, attacks, and breakaways, while the other projector cast a spotlight in the shape of a ring sight showing the correct point of aim. (Initially the ring sight was visible on the screen constantly; later it could be

turned on and off at will by the gunner or the instructor.) The gunner sat behind a mock .30 caliber machine gun with an optic sight. When fired a dot of light projected on the screen showing the student's point of aim. If the student fired at his target within the correct range and lead, he was rewarded with the sound of real gunfire; otherwise an annoying bell would ring. The Jam Handy enabled the student to practice coordinating everything he had learned in the classroom and on the range about aircraft recognition, range estimation, tracking, line of motion, lead, and gun burst.

The Waller Trainer was the most sophisticated of the synthetic devices, surpassing even the Jam Handy realism. The Waller required its own unique, spherical-shaped building and cost \$58,000 each. Up to four gunners could be trained at the same time, either in turrets or single gun positions. Five movie projectors simultaneously showed aircraft diving at the gunners to simulate attacks from different angles on a large panoramic screen. The students aimed Mark IX Gunsights and fired dummy guns, sending electrical impulses to record their marksmanship. When the gunner scored a hit, he would hear a gunshot sound effect; but if he missed the sound was disappointingly different.

The Jam Handy and Waller were not only effective in teaching the students how to lead a moving target, the men found them a great deal of fun. One veteran remembered "the feeling of being a part of a Buck Rogers movie while training on the Waller." There was another favorable aspect to the Jam Handy and the Waller. The sensitive equipment



The Jam Handy trainer used images projected onto a screen. The student aimed his .50 cal. MG at the images using an optical sight.



The Waller trainer used five motion picture projectors operating together and helped teach gunnery students the correct aim point for a moving target.



The Waller trainer from the gunnery students perspective.



required constant cool temperatures and were housed in air conditioned buildings – usually the only ones on the base. And since all of the schools were located in areas with equatorial climates, what a luxurious treat those training sessions must have been in summertime!

# **Waller Trainer**

Motion picture engineer Fred Waller was a prodigious inventor, holding patents on numerous inventions, including water skis, a wind direction and velocity indicator, and a still camera for taking 360 degree pictures. While working at the Paramount studios he discovered that a three-dimensional sense of realism could be achieved with a wide curved screen that included the viewer's peripheral vision. His experiments in projecting multiple images on the uniquely shaped screen led to the development of the Waller Gunnery Trainer. After the war, his process evolved into the spectacular, giant-screen, Hollywood productions known as "Cinerama". For this invention, Waller received an Oscar in 1954.

### Recognizing Friend or Foe

Learning to fire and maintain machine guns and turrets was only part of becoming an aerial gunner. It was critical that gunners were proficient in split second identification of both enemy and friendly aircraft. "If you can't do it, you are potentially as dangerous as an enemy gunner," according to Byron Lane, bombardier with the 392<sup>nd</sup> Bomb Group. "All it takes is one mistake to shoot down one of your own planes or assume an enemy plane is one of your own and get shot down yourself," he said. Consequently, students could expect intensive study of aircraft identification and recognition.

Students received manuals that pictured the silhouettes of every aircraft in operation – both enemy and ally – and instructors pointed out the variations in prominent features such as the number of engines, wing position, tail assembly, canopy, and more. Since the future gunners didn't know to which combat theater they would be assigned, they had to know them all – German, Japanese, Italian, Russian, British, and American – all 27 of them. Using 3-D models and cards with silhouettes, students were called on to compare and contrast the features of aircraft until identification was automatic.

Then came the flash drills. Images were projected onto a screen at brief internals, from three seconds to 1/10<sup>th</sup> of a second, depending upon the experience level of the class. Allied aircraft were interspersed between the Axis planes. The students had to become expert at instantly recognizing the type and number of aircraft flashed on the screen.



Aircraft identification was critical. Many allied and axis aircraft looked alike from a distance.



Aircraft recognition class made use of many training aids including black painted wood models. Today, these models are highly prized collectables.

Instructors knew these classes could get boring, so the slides occasionally contained a pinup girl to keep minds from wandering. Or the trainers might turn the process into contests to keep things lively. Enthusiasm for learning rose whenever gambling pots or bragging rights were at stake. The pride and confidence of the future gunners soared as they saw their proficiency increase. Said John Cromer of the exercises, "In time we came to recognize an aircraft at a distance the same way we recognized a Ford or Chevrolet without conscious thought."

To pass the final exam in this segment usually required the correct recognition of around 100 aircraft as they were projected on a screen for 1/25th of a second.

Other activities which made the training more interesting included competitions with other gunnery school trainees. The best-qualified students and instructors from each of the schools would periodically meet for two-day competitions. Winners earned awards and expert qualification badges.

#### **Extreme Conditions**

Being an aerial gunner wasn't only about shooting guns and hitting targets. The gunners had to be tested in, and trained for, working in the ever present dangers of high altitude flying. The extreme changes in altitude and temperature associated with high altitude combat produced a unique physical strain not experienced in other types of combat. Some men could function in these conditions and some could not. The safest and most practical method

of testing a man's fitness for high altitude duty was on the ground in an altitude chamber.

The Army Air Force Altitude Training Program was established expressly for this purpose, and each of the seven gunnery schools had its own unit. Students were instructed in the use of oxygen masks and equipment and briefed on what to expect. Then they entered a decompression chamber that simulated the high altitude conditions they would experience in combat, up to 38,000 feet. Bombing missions usually lasted six to eight hours, but were sometimes even longer, especially in the Pacific theater. So it was essential that the aerial gunners were able to endure low-pressure conditions for long periods, and withstand the radical fluctuations in pressure. (They would also have to endure the gale force of icy sub-zero winds which blasted through the gaps in the gun turrets and the open fuselage windows, but that would come later.) Although there was sufficient oxygen up to about 16,000 feet, the crew was required to go on O, when flying above 10,000 feet. At 21,000 feet a man would lose consciousness, but not die. Above 25,000 feet the oxygen level was too thin to sustain life - at that altitude oxygen starvation of the blood and tissues can result in death in just minutes.

In the chamber exercises, the men were instructed to remove their  $O_2$  masks when the pressure in the chamber equaled an altitude that would induce hypoxia. This was done to determine each man's baseline reaction, and to assess his ability to recognize symptoms of hypoxia and



By 1943, gunnery schools started competing with each other. Here are members from Harlingen, Texas, and Kingman, Arizona meeting for a competition in September, 1943.



The Low Pressure Chamber took student gunners to the bombers operating altitudes without ever leaving the ground.



get back on oxygen quickly. An individual's reaction to loss of sufficient oxygen can vary based on several factors including inherent tolerance, physical fitness, emotionality, and acclimatization. Typically a person can expect his first reaction to the onset of hypoxia to be the same each time he is subjected to oxygen deficits.

#### Symptoms of Hypoxia

Early physiological symptoms of hypoxia include changes in respiration, pulse rate, and blood pressure, quickly followed by fatigue, drowsiness, dizziness, headache, and shortness of breath. Mental capacities become impaired resulting in poor judgment, irrational thinking, slowed reaction times, unreliable calculations, and faulty memory. In subsequent stages, the victim may feel uninhibited (rather like being intoxicated) euphoric, overconfident, pugnacious or morose. Soon to follow are insensitivity to pain and discomfort, and possibly hearing impairment. In only minutes the victim lapses into unconsciousness and dies.

It was drilled into them that it was critical to get back on oxygen immediately before worse symptoms overwhelmed them. They also learned to be vigilant for signs of hypoxia in their crew mates. Each crew member was connected to an intercom in the bomber and every 10 minutes or so, a designated member of the crew (usually the pilot or copilot) would call for an "Okay" from each man to ensure he was still connected to the ship's oxygen system.

#### Other Physiological Troubles

Other physical reactions, ranging from minor to painful to dangerous, could arise from prolonged exposure to extremely low pressure. Susceptible individuals had to be weeded out on the ground where these problems could be dealt with more quickly and safely. They included hearing fatigue, inflammation of the middle ear, sinusitis, toothaches, gastro-intestinal cramps, and embolism - a potentially fatal condition more commonly known as the "bends." The bends cause pain, paralysis, breathing difficulty and often collapse. Minor reactions to the changes in pressure included aching joints and inner ear discomfort. Air-sickness was a common occurrence, but it was treatable with medication and did not keep anyone from flying if they were able to perform their jobs.

Sinusitis was a serious matter, as recalled by Ken Jones, 389th Bomb Group pilot. "Decreased pressure at altitude raised hell with your sinuses if your head was plugged up with a head cold. The headache was humongous. Sometimes we had to abort a mission because a crewman was screaming his head off about extreme pressure in his sinuses."

Another head cold sufferer had very peculiar reactions to low pressure, as described by another 389th pilot, George Goehring. "One day I came up with a cold and because I was an eager beaver, I did not go on sick call. After a couple of days it got worse. I took off and climbed to 20,000 feet and joined the formation and we flew our usual four hours. On







let down, I tried to clear my ears by holding my nose and blowing, but nothing happened. My head hurt and I was all set to go on sick call. As I was climbing out of the bomb bay, I tried to clear my ears again and suddenly a steady stream of yellow fluid came running out of my nose all over my flying suit. I could not stop it. Finally it stopped by itself and, low and behold, I felt like a new man. My head cleared and my cold was gone, but my flight suit was a mess."

#### Maintain an Even Strain

Psychological reactions to prolonged high altitude were just as critical as physiological reactions. The decompression chamber was close quarters, and just knowing they couldn't exit immediately caused some men to panic when locked in. Some felt claustrophobic just wearing the O<sub>2</sub> mask. It may seem a trivial matter but wearing uncomfortable, hard rubber masks for long periods of time required adaptation and mental discipline. Long hours of breathing the oxygen mix were tiring and caused chapped lips and sore throats; not to mention nicotine withdrawal for smokers. The masks had an unpleasant odor which wasn't improved any after the men had spent hours sweating into them. One gunner described it "like a cold clammy hand over your face." That sweaty rubber smell usually lingered in the nostrils hours after pulling the masks off.

The masks also irritated a man's skin. One gunner explained that failure to shave closely enough meant "the face mask rubbed against your stubble and it was gonna hurt". A close shave was important not just for comfort, but to insure a tight seal against the face. There was another problem with the masks which students would not discover until they began flying at high altitudes in combat crew training. The condensation from a man's respiration at altitude would freeze and ice would accumulate in his air hose. Occasional gentle squeezes up and down the hose were necessary to break up the ice and prevent it cutting off the O<sub>2</sub> flow.

Some gunnery schools employed a curious low-tech test to determine a trainee's suitability for flying long missions in cramped gun turrets with no basic comforts. The test involved locking the trainee is a small room with absolutely no light, no food, no water, and no sanitary facility for several hours. The test subject was given no instruction and told nothing about why he was there, or how long he would remain. If the trainee lasted several hours in this state of deprivation without panicking or suffering other emotional distress, he passed the test.

Anyone who could not handle these simulations was a potential danger to himself and other crew members in combat and obviously could not be allowed to fly.

# O<sub>2</sub> Mechanical Training

In addition to learning about the physiology of high altitude, it was also necessary that students learn to operate and maintain all the oxygen equipment aboard an airplane. Every station on a bomber had regulators into which the

# **Passing Gas**

The Allies had no plans to initiate chemical weapons attacks on its enemies but had to be prepared to defend themselves against such attacks. Gunnery students were instructed on how to recognize an attack by the odor, the appearance, or the immediate effect of a variety of chemical agents. They were instructed how to protect themselves during and after an attack, and basic first aid measures for exposure or contamination by each known chemical weapons agents. Also addressed was proper care and maintenance of the gas masks and protective clothing they would be assigned upon arrival overseas.

Exercises included drills in the gas block house using non-lethal gases. The main purpose of gas mask drills was to learn the strict step-by-step procedure for correctly donning the mask. Careful adjustment was emphasized over great speed. Students would enter the block house wearing gas masks. Tear gas would be released into the room and the students were ordered to remove their masks and experience its effects. Then they were ordered to don their masks according to the procedures they had just learned. Surely the least enjoyable of training exercises, but one that could not fail to make an impression on the students.



crew member plugged his oxygen hose. The early oxygen systems required manual adjustment relative to the altitude. It was later replaced by improved systems which adjusted automatically. There were also portable  $\rm O_2$  canisters attached to bulkheads throughout the plane called a "walk-around bottle". It was often needed in emergencies, so crew members needed to know how to operate them without thinking.

#### Off We Go

Upon completion of their preliminary ground training, the gunners finally got a chance to fly.

Odell Dobson, ball gunner with the 392<sup>nd</sup> describes how the air-to-air mission worked. "The pilot was in the front seat (of the AF6 Texan) and the gunner stood up in the back. The gunner wore a parachute harness and a gunner's belt came up from the floor of the aircraft and hooked on to the harness so that you wouldn't fall out if the pilot turned it upside down, and sometimes he would. I drew a mean pilot."

From the back seat, the gunner shot at a long sleeve tethered to a 60-foot steel cable extending from behind the tow plane as it led him through several phases of position firing.

Harold Weiss, a navigator who trained at Harlingen, provides more details about the tow target mission, and shares his embarrassing experience. "We had the tips of the .50 caliber bullets dyed with eight different colors - a different color for each student. When the bullet went through the 'gunny sack' banner, the color would rub off on the hole

and when the B-26 dropped the banner off back at base, they could count each student's holes, and give him a score. One day we were firing out of the right waist window. I got the bright idea of leading the banner a little and slowly sweeping the banner with that .50 caliber machine gun as I fired. That way I would fill that thing with bullet holes. I started to fire and what do you know, that banner drops away from the B-26 and goes straight down in the Gulf. The instructor was standing right behind me and he was mad! He shouted, 'What did you do? One of your projectiles cut that steel cable and now there will be no scores for anyone today!' Inside I felt kinda good. I shot a sleeve off a tow plane - it was the only thing I shot down during WWII! I'm kinda proud about that."

John Cromer's first time in the back of a Texan was almost his last. "All the way to the firing range I struggled feverishly with the safety belt. It was so tight I couldn't budge it, and was a foot and a half too short for me to stand up in the cockpit to fire...so it boiled down to working without a safety belt, as risky as that would be. I was leaning out over the gun when the aircraft pitched violently downward and I was thrown up and almost out of the open cockpit. I could feel myself going overboard. I reached down frantically but was too high by that time to grab anything. At the last second one foot caught a projecting edge down below, and it was enough, but just barely, to make the difference. At that low altitude I wouldn't have had time to find the rip cord of the parachute."



The big day has finally arrived. Students select .30 caliber machine guns for use in the training aircraft.



Student gunners gather for their preflight instructions prior to training flights in these North American AT-6 Texan aircraft.



Gunnery student getting ready for action. This color post card came from the Army Air Force Gunnery School at Tyndall Field, Florida.

Shortages of aircraft for training in the first year of the war left the schools to make do with whatever they could get their hands on. Among the types used to tow targets were the AT-6, BT-13 and Lockheed Hudson bomber. Later as warweary planes were retired from combat, the B-25, B-26 and B-34 bombers were popular for this duty. By late 1943 battle weary Liberators, Fortresses, and Marauders were retired from combat and returned to the U.S. This allowed the students to train in the type of aircraft they would ultimately be flying in combat. Gun cameras were beginning to be available to the schools in the summer of 1943, and turret and waist window guns were outfitted with them. A number of "friendly" bombers would fly in formation with students manning turrets and waist positions with gun cameras. As "enemy" fighter planes flew pursuit curves on the formation, the students tried to zero in with deadly aim, and also avoid shooting the friendlies.

Dale Bethell recalled, "It was somewhat humiliating when we reviewed the film of firing at 'enemy' AT-6s from B-17s with cameras attached to the .50 calibers. Too often in the cross hairs were "friendly" B-17s and not 'enemies'. It would have been fun firing .50 caliber machine guns from friendly B-17s with cameras mounted on the sights except many of us got air sick...the air in late afternoon in Arizona was rough as we fired at ground targets at low altitude. Not only did we endure the air sickness but the clean up after landing did not remove the squeamishness of our stomachs."

The gun camera mission more closely simulated real

combat conditions than any other training experience. Its only drawback was that a gunner's film had to be processed before it could be reviewed and evaluated. Gunners returning from combat reported that the towed-target exercises presented anything but the kind of target gunners encountered in combat. It was also counter-productive because it taught them to lead incorrectly. In April 1944, officials agreed that the gun camera mission should supplant air-to-air firing at tow targets; unfortunately, there were not yet sufficient numbers of aircraft, equipment and related personnel to accomplish this. In the meantime gun camera missions were flown as frequently as possible, and attempts were made to improve the tow target mission.

Air to ground gunnery practice was accomplished with both simple and elaborate target models. Examples included dummy airfields, flat, wooden cutouts resembling battleships, and fake troop billets with wooden jeeps and storage depots. For air-ground target practice at the Harlingen and the Florida schools, the gunners would strafe 20-foot square wooden rafts floating in the Gulf of Mexico at low altitudes.

To assist the gunnery students with their accuracy (or so it was initially thought) tracers were interspersed with the regular ammunition at a rate of 1 in 10. The chemically treated brass tips of these shells burned brightly when fired, causing them to light up like fireflies on their path to the target. To best demonstrate use of the tracers to correct aim, a firing practice session was held at night. In combat, however, the tracer proved disadvantageous. The base of a



Color postcard of an AT-6 Texan assigned to the Army Air Force Gunnery School at Tyndall Field, Florida.



Rear gunner manning his Browning .30 caliber machine gun in what appears to be a U.S. Navy Scout Plane. Note early type U.S. insignia.



# Blinkin' Code!

When they volunteered for combat, the would-be gunners never expected they'd have to learn Morse Code, just like a radio operator.

Why? The Aldis lamp enabled communication in conditions of radio silence and low visibility and darkness between ships, and between ground control and ships. When bombers attempted to join their group formation in early morning darkness or fog, an Aldis operator would flash the bomb group call sign from the tail turret of the group's assembly ship. Tail Gunner, Edwin Hays of the 95th Bomb Group talks about his duties with Aldis lamp.

"We used to take off in the dark, in foggy, overcast conditions and were up as high as ten, twelve, fifteen thousand feet before we broke out of the clouds. One of my duties was to stay in that tail turret and blink an Aldis lamp, which is just a glorified flashlight. But it gave out a signal so that a plane approaching from the rear and wouldn't run into you. I used to do that sometimes for maybe an hour until my fingers were sore from squeezing that trigger. But let me tell you, that light kept blinking. One of the greatest feelings in the world was to break out of that fog and come up into the sunlight. It was a very risky and hair-raising experience to assemble in bad weather."



tracer round was hollow in order to contain the chemical which caused the flare. As the chemical burned out in flight, the weight and balance of the round changed, causing it to fly in a slightly different path from the other rounds in the belt. Consequently, instead of helping the gunner to improve the accuracy of his aim, just the opposite resulted. Use of the tracer was discontinued after the first year of the war.

#### **Operation Pinball**

In spring 1942 Major Cameron D. Fairchild, the synthetic training aids officer at Harlingen, was determined to develop an effective training method that would overcome the deficiencies of methods in use at that time. The idea he conceived was innovative, and in theory, it seemed destined to outshine all other training methods for realism. Experiments were begun in June 1942. Here's how it worked. Trainees would fire frangible ammunition with modified machine guns from their bombers at target planes flying mock attacks. The frangible projectile, made from a combination of lead and Bakelite, shattered into small pieces when it struck a specially armored and equipped target plane. The Bell P-63 Kingcobra (or RP-63; R standing for restricted from combat) was chosen because its head-on appearance resembled the Messerschmitt Bf 109, and it was fairly comparable in performance. The Kingcobra target plane was equipped with microphone-like sensors attached to the inside of the armor. These radio-sonic devices were designed to pick up the vibrations caused by the impact of the frangible bullet.



Night gunnery training included the use of tracers rounds.

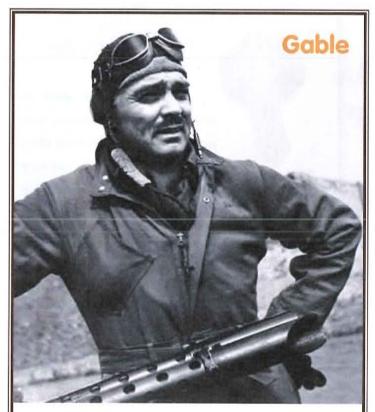
The sensors would conduct an electric current to a counting meter in the cockpit, registering number of hits, and also flashing a red light on the prop spinner to signal the student had scored. Thus the Pinball nickname.

It took years to develop and was not introduced at training schools until February 1945. Although the schools were enthusiastic about the realism of the Pinball exercises, it was plagued with many glitches and never fulfilled its promise. Few student gunners reported seeing the light flash. The ballistic characteristics of the frangible bullet differed greatly from conventional ammunition: one-third the powder, two-thirds the weight, and one-half the speed. Consequently, the gunsights required adjustments and aircraft speeds had to be reduced thirty percent.

The projectile was also too delicate for the muzzle velocity of the .50 caliber machine gun, necessitating the use of the .30 caliber instead. The .30 caliber Browning machine gun was used in all bombers early in the war, but they were discarded in favor of the .50 calibers prior to 1943. The target airplane proved too delicate as well. The belly of the P-63s was inadequately armored and the projectiles easily pierced it (despite being told not to fire at unarmored sections, the trainees found this temptation irresistible too). Add to which the coolant radiators were easily damaged by particles of bullets entering through the air scoops. Firing frangible ammunition also caused excessive build-up of carbon in the machine guns, which caused frequent malfunctions. When the war ended, so did the Pinball program.



Red light in the prop spinner of this Bell P-63 would light up to show the student he had scored a hit.



In October 1942, Hollywood actor Clark Gable reported to Tyndall for aerial gunnery training.

Gable did well in all his classes at Tyndall but one – he had difficulty with blinker code. Like most other students, he spent long hours struggling to memorize the code. Many of those hours were after lights out in the barracks' latrine with others who were worried about passing the test. Somehow a rumor spread that Gable was at Harlingen and the persistent queries from newcomers and starry-eyed females, "So where's Gable?" apparently led to the installation of a sign declaring, "NO! Clark Gable is not in Harlingen!"





#### B-29 Gunners - The Cream of the Crop

The complex armament of the B-29 Superfortress-known as Central Fire Control Equipment (CFCE) - consisted of five turrets connected by a central General Electric computer, all of which were controllable by any one of five gunners. One gunner could operate up to three turrets at once, and fire the guns from two turrets simultaneously. Even more remarkable, the gunner no longer had to instantly perform all those complex calculations in his head – ballistics, deflection, air resistance, etc. - the computer did it all for him!

As early as 1942 training methods for the advanced gunnery system of the B-29 Very Heavy Bomber were in development. But the first training course did not begin until March 1943 when the Power Operated Gun Turret School (POGTS) was opened at Lowry Army Air Field in Denver, Colorado. (It was re-designated the Remote Control Turret Mechanic Course in mid 1944.) All B-29 gunners went through normal AAF aerial gunnery schools; followed by a comprehensive course in the electronic and mechanical design, maintenance, and operation of the CFCE system. Some of the conventional gunnery training methods required modification for B-29 trainees. On the ground, the Waller trainer was adapted for use with remote gun turrets. For air-to-air exercises, a handful of B-24s were converted. Designated the RB-24L, these special Liberators had an elongated, square-cut nose window with a chin turret below, and turrets in the tail, top and belly.

Because of the complexity of CFCE, Training Command officials realized that only exceptionally well-qualified enlisted men could be selected for the Lowry school – only the cream of the crop were eligible. The course was 16 weeks, initially; but was extended to 18 weeks in mid 1944, and again to 20 weeks less than a year later. The difficulty of the course was evidenced by the wash-out rate - 18 percent as compared to the 12 percent rate at the conventional gunnery schools.



# Graduation – One Step Closer to Winning the War

At the end of the sixth week, ceremonies were held to honor the graduating gunners and welcome the incoming students, gathered together at the post recreation hall. The graduates received diplomas and the coveted silver wings of the U.S. Army Air Force. Privates, Techs, and Corporals received promotions to the rank of sergeant, an incentive offered to encourage volunteerism. The graduates also received the arms qualifications badges they had earned, based on their test scores: Expert Aerial Gunner, Aerial



Some Waller trainers were specially equipped to train B-29 Superfortress gunners.



These student gunners are being trained in the use of the gun turrets used on the Boeing B-29 Superfortress at Lowry Army Air Field, near Denver, Colorado.

Sharpshooter, or Aerial Marksman.

Upon graduation from gunnery school the new aerial gunners were sent to combat crew training school. Here they would meet the other gunners and officers of their new crew, and spend three months flying practice missions and maintaining their gunnery skills at peak levels.

#### A Postscript

Planners of the strategic bombing campaign believed the concentrated firepower of hundreds, and thousands, of machine guns would render a bomber formation invincible to enemy fighter attack. This turned out to be a costly miscalculation. Much of what the aerial gunners had been taught in the schools in the first two years was, for the most part, experimental and ineffectual in preparation for combat. The early gunners who survived felt their real training came in action, "on-the-job". Only when enough veterans returned from overseas to share their experiences as instructors did training improve.

The total number of officers and men who graduated from gunnery schools during the war - more than 297,000 - was larger than that of any other Air Force specialty except aircraft maintenance. Aerial gunners fought in all theaters, firing over 227 million rounds of ammunition on more than one million combat sorties, destroying in excess of 15,000 enemy aircraft. After the war, most of America's bomber inventory was declared obsolete and scrapped. Of those seven Army Airfields that produced gunners, only one

remains an active Air Force base today. But the job title of Aerial Gunner would endure and fill a vital need in military operations up to the end of the 20th century. The sacrifices made by those men and their contributions to the Allied victory must never be forgotten. They had an extraordinarily difficult, demanding, and hazardous job, and they were all volunteers.

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The RB-24L.
One of a hand
full of Liberators
equipped with
B-29 turrets
and firecontrol system
and used to
train gunners
destined for the
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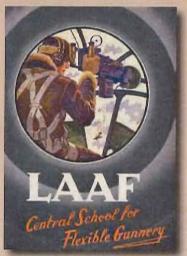
















# Phase 1 Cultural Resource Survey of the Wild Turkey Strand Preserve Trailhead and Trail System, Lee County, Florida



# Phase 1 Cultural Resource Survey for the Wild Turkey Strand Preserve Trailhead and Trail System, Lee County, Florida

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#### INTRODUCTION

Suncoast Archaeological Consultants, Inc. completed a Phase 1 archaeological and historical survey for the proposed Wild Turkey Preserve trailhead and trail system located to the south of SR 82 in the vicinity of its intersection with Rod & Gun Club Road (Figure 1). This project was conducted for Lee County Parks and Recreation's Conservation 20/20 program with the purpose of assessing the impact of trail and trailhead construction and use on and in the vicinity of previously recorded site 8LL2411 and any possible unrecorded cultural resources. As part of this project, site 8LL2411, as well as any additional archaeological or historical resources identified within the project area, will be assessed as to their eligibility for listing on the National Register of Historic Places (NRHP). Suggestions will also be made regarding appropriate measures for preservation of historic cultural resources within the project area, while incorporating public access to these sites.

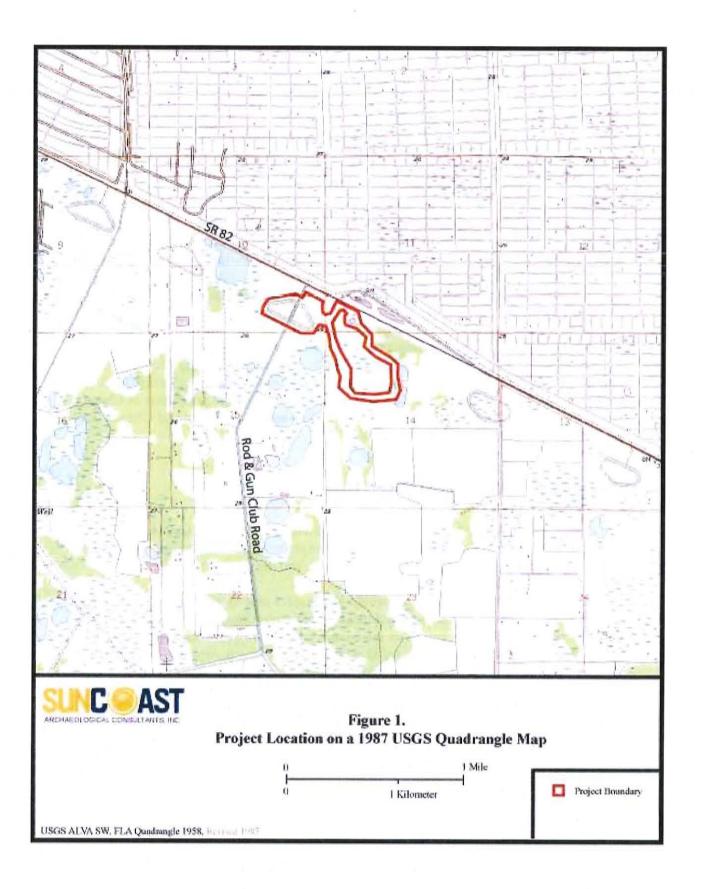
The Principal Investigator for this project is listed on the Register of Professional Archaeologists (RPA) and meets the qualifications put forth within the Secretary of the Interior's "Standards and Guidelines for Archaeological and Historic Preservation (36 CFR Part 61). This survey was conducted in accordance with the provisions of Chapter 267 and 373, Florida Statues, Florida's Coastal Management Program and Chapter 1A-46, Florida Administrative Code.

# PROJECT AREA DESCRIPTION

The project area is located to the south of SR 82 within portions of Sections 10, 11, 14 and 15 of Township 45 South, Range 26 East. The study area contains approximately 80 acres which includes the proposed trailhead location and the proposed trail system.

One of the more distinctive features within the project area is the location of a large, somewhat oval shaped, earthen embankment. This embankment is part of previously recorded site 8LL2411, also known as the Gunnery Range #5 site, which functioned as a World War II training facility associated with the Buckingham Army Airfield Flexible Gunnery School. This site will be discussed in detail later in this report.

The proposed trailhead is located to the northeast of the embankment feature and the proposed trail system includes an approximately 1.6 mile corridor that forms a loop to the east and southeast of the earthwork. The summit of the embankment itself may be utilized as a possible pedestrian and equestrian trail; therefore, the entire earthen embankment was included in the project area.



A large portion of the project area evidenced a moderate amount of upper horizon subsurface disturbance resulting from the recent removal of melaleuca trees (Figure 2). Melaleuca is an invasive plant species in South Florida; prior to removal, large forests of melaleuca grew within and surrounding the project area.

Rod and Gun Club Road, which intersects SR 82 directly north of the project area runs south through the western portion of the subject property, bisecting the 8LL2411 earthen embankment. The land surrounding the project area to the south, west and east consists primarily of either pastureland or undeveloped flatwoods. To the north (north of SR 82) is relatively dense residential development associated with the planned community of Lehigh Acres.

# Environment

The project area is located along the western end of a physiographic providence known as the Immokalee Rise. This providence consists of a low sandy rise that separates the lowlands of the Caloosahatchee Valley to the north and the Big Cypress and Corkscrew Swamps to the south. While the providence has a maximum elevation of nearly 40 feet above mean sea level (amsl), its topography is relatively flat. Prior to modern land-clearing the terrain was dominated by slash pine flatwoods and dry prairies which were interspersed by numerous wet prairies, solution ponds and cypress sloughs. Drainage within the providence was generally slow resulting from its near featureless landscape, with small sloughs and underground percolation moving runoff water toward the lower terrain of neighboring providences to the north, south and east.



Figure 2. Melaleuca removal within the project area.

Prior to the more recent dominance of invasive species the environment within the project area was likely typical of that found within much of the Immokalee Rise providence. The northern portion of the project area and much of the proposed loop trail were likely located within a slash pine flatwoods environment. The trail follows a ring of flatwoods that surrounds a small wet prairie. Soils within the flatwood portion of the project area consist of poorly drained Oldsmar, Valkaria, Immokalee and Malabar fine sands (USDA 1984). Slash pine flatwoods are commonly dominated by slash pine, dense saw palmetto, staggerbush, gallberry, ground oak and wire grass. This environment is maintained by frequent fire episodes, which prevents the growth and eventual dominance of hardwood tree species.

The wet prairie within the center of the trail loop likely overflowed to the south, cutting through the southern segment of the proposed trail. Within this portion of the project area soils are listed as very poorly drained, consisting of Valkaria and Malabar depressional sands (USDA 1984). Wet Prairies are typically characterized by treeless expanses supporting a dense growth of water tolerant grass and rushes, such as beaksedges, spikerush, starrush whitetop and muhlygrass. This environment is commonly covered in a thin (1 to 4 inches) layer of standing water for between 3 to 6 months of the year.

Directly west of the proposed trail loop and south of the 8LL2411 earthworks is a moderate size solution hole that is bounded by bald cypress. Solution holes are found throughout this region. They are formed in relatively low areas where hundreds of years of water collection have slowly eroded the shallow limestone horizon that covers much of eastern Lee County. This erosion forms a bowl-shaped depression that fills with water from subsurface percolation and from run-off. Vegetation surrounding the solution holes consists of water tolerant species such as bald cypress, red maple, water hickory, red bay and an assortment of succulent wetland plants.

More recently, much of the natural vegetation of the project area and surrounding region has been replaced by invasive non-native species such as meleleauca and Brazilian pepper. Not long before the field visit for this project, a large meleleauca forest which dominated the northern and eastern portions of the proposed loop trail were cut back. Brazilian pepper growth was observed along disturbed soils within the northern half of the subject property and adjacent to the wetland prairie in the southern segment of the proposed trail loop.

As with much of the region, elevations across the property are relatively flat, with natural variations generally between 1 and 3 feet between the low wet prairie and the more elevated slash pine flatwoods. Generally these elevations ranged between 27 and 30 feet amsl.

# REGIONAL PREHISTORY AND HISTORY

# **Prehistory**

The project area is located within a prehistoric culture area known as the Caloosahatchee region (Milanich 1994; Milanich and Fairbanks 1980). The Caloosahatchee region is defined through a distinct post 500 B.C. ceramic tradition as compared to neighboring regions. This ceramic tradition has primarily been recorded within sites along the coast, near the mouth of the Caloosahatchee River in San Carlos Bay, Pine Island Sound, and Estero Bay. Inland portions of this region have experienced more cultural mixing with neighboring culture area traditions. These include influences from cultural developments within the Circum-Glades and Okeechobee Basin culture areas.

It should be noted before proceeding to a brief summary of all three culture areas, that while these regions have been recently defined as distinct in regard to ceramic traditions and thus inferences of separate cultural trajectories have been made, it is becoming increasingly clear that populations within all three culture areas were intricately connected within a complex economic and possible political system throughout much of prehistory. Other similarities may have existed including social frameworks and belief systems. Despite their differences in settlement patterns due to environmental adaptations and slight differences in material culture, all three groups together are distinct from central and north Florida native populations, appearing more similar to each other.

A brief summary of the prehistory in the region is presented below, including a look at native populations prior to 500 B.C. within the Paleoindian and Archaic periods.

#### Paleoindian Period (12000 to 8000 B.C.)

Evidence of human occupation of the Florida peninsula began during the Paleoindian period around 10,000 to 12,000 B.C. Lower sea levels due to expansive polar ice caps would have produced a much dryer environment then is seen today across much of the region (Milliman and Emery 1968). The Everglades and Big Cypress areas would have been a relatively dry inland savannah landscape, with the Pleistocene shoreline being located nearly 100 miles out from the modern day Gulf Coast shoreline.

There is evidence that now extinct megafauna once roamed the state. While it is believed that the earliest inhabitants of Florida likely hunted such extinct beasts, there is yet any evidence that such activities occurred south of Lake Okeechobee. In fact, not one confirmed Paleoindian site has been discovered in the region, with the closest of such being discovered in Sarasota and St. Lucie Counties.

The lack of archaeological evidence for Paleoindian occupation in south Florida may be a result of rising sea levels since Pleistocene Era. During this period, the majority of the freshwater sources were likely located within lower terrain closer to the historic

shoreline. It is possible that potential Paleoindian sites in south Florida have been flooded by these rising water levels.

#### Archaic Period (8,000 to 500 B.C.)

The end of the Paleoindian period is marked by rather elevated environmental and climatic changes, with warmer seasons and less arid conditions a wider variety of environmental habitats began to emerge. The megafauna of the previous period began to move closer to extinction and human populations reacted to these changes by shifting their subsistence strategies (Milanich 1994). Early Archaic people began to exploit more diverse resources including small game, marine and freshwater resources. People began to live in larger groups, to use a greater diversity of tools, and to inhabit more of peninsular Florida.

A staple of the Archaic tool-kit, and the most common find at Archaic period sites throughout much of the Florida peninsula is the chert biface and chert biface production debitage. However, in south Florida only a few chert tools have been encountered. This is likely due to the absence of natural sources of this raw material in the region. The few examples of human modified chert were found as completed tools with no associated production material. It is therefore, surmised that such objects were not produced in south Florida but instead were brought into the region from the north. Instead, the south Florida Archaic utilized marine shell and bone materials for many of the functions their contemporaries to the north used chert (Carr 1981).

As with the rest of the state, the Archaic period in south Florida was characterized by an increased reliance on shellfish and marine resources on the coast and smaller game such as turtles, snakes, and rabbits in the interior. The discovery of fish vertibra and bone fish hooks at both coastal and interior wetland sites indicates the heavy reliance on the exploitation of fish resources.

Some of the most noted Archaic sites in this region come from the western portion of south Florida. These include the West Bay site in Collier County and the Brighton Complex in eastern Glades County. Numerous Archaic period sites have also been discovered within Brevard County.

During the latter portion of the Archaic period ceramic technology was devised and the production of fiber tempered ceramic vessels became a fairly frequent activity for populations across peninsular Florida. There are examples of early fiber tempered ceramics in south Florida, but thus far such evidence is sparse with the majority of such finds coming from Marco Island located along coastal Collier County. The only evidence of fiber tempered ceramics from the eastern portion of the south Florida region have been found at the Honey Hill and the 202<sup>nd</sup> Street sites in Dade County and the Markham Park site in Broward County (Carr 2002).

#### Post 500 B.C. South Florida Prehistory (500 B.C. to A.D. 1750)

Caloosahatchee Culture Area (Coastal Calusa)

The Caloosahatchee River bisects this region as it extends from just south of where the Peace River empties into Charlotte Harbor south to the Naples area and east up the river valley. The vast majority of information regarding the Caloosahatchee region comes from excavations along the coast. Such excavations have been centered on the extensive shell middens and shell mounds that are located on most every coastal and barrier island (Marquardt 1992). Spanish explorers to this region recorded a large chiefdom society with a capital believed to be located at Mound Key in Estero Bay.

This coastal environment is one of the richest inland marine environments in Florida with numerous oyster beds and plentiful marine and waterfowl life. Marine resource extraction and coastal shell midden sites also extend up the Caloosahatchee River into its tidally influenced lower portion to approximately Beautiful Island, near the present day crossing of Interstate 75.

Caloosahatchee ceramics consist of mainly sand-tempered plain and laminated sand-tempered wares. By approximately A.D. 700 there is a dramatic increase in the occurrence of Belle Glade Plain pottery (Widmer 1988). During later periods, a few hundred years prior to European contact, St. Johns Plain and St. Johns Check-Stamped ceramics make their first appearance in the area. St. John associated ceramics appear in numerous assemblages during late prehistory, not only across south Florida but throughout the Florida peninsula. Safety Harbor ceramics also appear within coastal Caloosahatchee region sites at this time.

Generally, the Caloosahatchee culture area is defined through a human coastal adaptation. It is likely, that with additional research the geographic definition of the Caloosahatchee region will be reduced to the coast, with middle and upper portions of the Caloosahatchee River being placed within the Okeechobee Basin culture area, associated with the Belle Glade tradition. More to this point and a discussion of the Belle Glade culture is presented below.

Glades Culture Area (Circum-Glades Tradition)

The Glades region is relatively large and environmentally diverse, including most of south Florida from the Ten Thousand Islands to the coast of Palm Beach, south to Homestead and the Florida Bay and north to sawgrass regions of Hendry and Palm Beach Counties. This area includes the Everglades, Big Cypress, northern Keys, and Atlantic Coastal Ridge. Populations within the Glades region are considered to have continued many of the lifeways common during the Archaic period, based on similarities in their artifact assemblages and settlement patterns (Goggin 1949).

Glades populations commonly settled along the coastline, adjacent to coastal marshes and creek and river mouths. Such sites consist of large shell middens with a variety of marine

life remains including bivalves such as oyster, whelk, and scallop shells also inshore fish and marine turtle species; all of which were important parts of the coastal Glades subsistence base (Milanich 1994). The abundance of possible subsistence resources between the marine and inshore ecosystems would have provided the means to support a rather large population base along these coastal locations.

Settlements in the Glades region have also been identified within interior locations in the Everglades and Big Cypress areas. Numerous sites have been identified on small, slightly elevated tree islands within these regions (Milanich 1994). Tree islands represent one of the few year round dry areas within this vast wet ecosystem. Archaeologically, such sites are typically identified through dense deposits of freshwater turtle, snake, and fish remains. The contents of these middens demonstrate a heavy reliance on aquatic resources and a successful adaptation to wetland environments. Because of the general inundated nature of the entire Glades region, canoe travel would have been an extremely important mode of transportation.

Ceramics associated with early populations within the Glades region typically consists of sand-tempered plain wares with minor amounts of Sanibel Incised, Cane Patch Incised, Fort Drum Incised, and Fort Drum Punctated. Through time more none local ceramics appear in the region including St. Johns Check-Stamped and Safety Harbor ceramics. However, generally, the sand-tempered plain wares remain the most dominate type throughout the nearly 2000 years of the Glades Tradition.

### Okeechobee Basin Culture Area (Belle Glade Tradition)

The Okeechobee Basin culture area includes the land within the Kissimmee River drainage and the region surrounding Lake Okeechobee. This includes the Kissimmee Valley, Lake Istokpoga region, Fisheating Creek drainage area, and lake side areas in Hendry, Palm Beach, and St. Lucie Counties. Belle Glade tradition is marked by the appearance of Belle Glade Plain. Like Glades Plain, Belle Glade Plain is a sand-tempered ceramic, however, it is distinguished through numerous horizontal scrape marks on its exterior surface created by the smoothing of the nearly dry paste which drags exposed sand temper particles across the exterior.

Belle Glade sites are most commonly found along major river or creek courses or within more elevated (better soil drainage) areas adjacent to major lakes such as Lake Okeechobee, Lake Kissimmee, or Lake Istokpoga. None ceramic material found at these sites are very similar to that found within interior Glades tradition sites to the south, including dense freshwater fish and turtle middens.

The region is famous for the unique earthworks associated with Belle Glade occupation. Such earthworks include ponds, canals, linear and annular embankments, and raised geometric shaped mounds (Milanich 1994). Some of the larger sites associated with this tradition are the Fort Center site located along Fisheating Creek in eastern Glades County, the Ortona site to the north of the Caloosahatchee River, and Belle Glade site along the southeastern shore of Lake Okeechobee.

Many researchers have identified the Belle Glade tradition as an inland manifestation of the Caloosahatchee culture area and the coastal Calusa that extended along the upper portion of the Caloosahatchee River and up the Kissimmee Valley. Similarities in the two regions cultural chronology and the appearance of Belle Glade ceramics within later (post A.D. 700) coastal Caloosahatchee sites suggest these close ties (Widmer 1988).

# History

The first official European visit to Florida was by Ponce de Leon in 1513. His arrival heralded in numerous other Spanish explorers all with an eye for wealth as opposed to settlement. Spain desired to control the harbors off the mouth of the Caloosahatchee River and within the Charlotte Harbor region. However, a strong native population in this coastal providence was already well established. In 1521 Ponce de Leon returned to Florida and attempted to establish a colony on Pine Island, but faced stiff native resistance and was fatally wounded in the attempt. The colony failed as a result. During the late 1560s Hernando Menendez entered the Charlotte Harbor region and met with the Calusa Indians under Chief Carlos. He established a garrison at San Anton on Mound Key south of the Caloosahatchee River mouth. However, disturbances to the shaky alliance between Carlos and the Spanish erupted and the garrison was disbanded. After Ponce de Leon and Hernando Menendez there is no evidence that any Spanish or other European expeditions were ever led into the Charlotte Harbor region with ideas of the establishment of military forts or civilian settlements during the 17<sup>th</sup> century.

During the 18<sup>th</sup> century Cuban fishermen made their way to the coastal area and established commercial fishing outposts. These outposts employed native populations. Mullet, grouper, whelks, and a variety of other marine resources were shipped to Cuban markets from Charlotte Harbor.

The Seminoles prospered in the central and north Florida interiors raising cattle and growing their traditional crops of beans, squash, and tobacco (Fairbanks 1973). The Spanish and Seminole generally maintained good relations, mainly through separation. When the British acquired Florida in 1763 a complex trade relationship was established between the Seminole and the new European governance. The Seminole provided animal pelts for shipment back to Europe and produce, livestock and game for the subsistence of British settlements along the coasts. The British in turn provided the Seminole with non-local good such as metal and iron pots, hatchets, blankets, guns, and a variety of other common European articles. At this time most of the Florida Seminole population was residing from north/central Florida north, with southwest Florida being used as seasonal hunting grounds.

After the American Revolutionary War in 1783, the Spanish regained control of Florida. They continued to permit British trading agencies to operate in the region and encouraged British settlers to remain. However, the second Spanish claim over Florida was weak, as political and financial troubles in Europe left little interest or ability in aiding the small Spanish settlements.

During the War of 1812, the British were accused of fighting a proxy engagement against the newly established American government via Creek Indians in Alabama and Georgia. The arms, ammunition, and encouragement for these Creek assaults were believed to be supplied by British trading companies in Florida. Andrew Jackson, the general of southern military operations in America, lead numerous raids into the north Florida panhandle and peninsula, destroying British trading posts and Seminole and Creek settlements and driving the native populations further south into the north/central portion of the Florida peninsula.

Due to Spain's lack of control over Florida's borders and their preoccupation with combating the Napoleonic War in Europe, they ceded Florida to the United States in 1819 with the official turnover occurring in 1821. With the acquisition of Florida, American southern planters flooded into the northern portion of the state to take advantage of free land claims and unspoiled farmlands. With this new influx of white settlers into the interior regions of Florida hostilities between the new arrivals and the Seminole began to occur. The Americans had no interest in trading with the Seminole as the British did, but instead simply wanted the best lands, which until then were occupied by the native populations.

As hostilities grew, the United States Army was deployed to protect American citizens and to hunt down aggressive Seminole warriors. Over time, the Seminole populations were pushed further south into their former hunting ground in the central and southern Florida. In 1823 a treaty (the Treaty of Moultrie Creek) was signed which set up a reservation land south of Ocala, which Seminoles could occupy unhindered by white encroachment. However, many white settlers saw this reservation boundary as soft and moved into Seminole lands. Equally, poor agricultural lands within the reservation hindered the subsistence capabilities of the natives and starvation was rampant. Because of these circumstances, tensions again began to mount. Aggressions by the Seminoles and counter actions by the American Military began what was to be known as the Second Seminole War. The war lasted between 1835 and 1842, with the military constructing numerous forts and roads across the peninsula. It was during this period that Col. Persifer F. Smith led a military regiment southwest from Fort Basinger (located on the Kissimmee River) to the mouth of the Caloosahatchee River. Col. Smith established three small fortifications in the region that were used as bases for raids into the Big Cypress and Everglades to capture or kill Seminoles.

At the close of the war the U.S. military action had removed many Seminole to reservation lands in what was to become Oklahoma or had pushed the remaining populations deep into the Big Cypress and Everglades regions of south Florida.

In an attempt to establish more American settlement within peninsular Florida, the Armed Occupation Act of 1842 enabled any male 18 or older to claim title to 160 acres of land by erecting a habitable building, cultivating at least five acres of land, and living on it for five years (Covington 1961). This initiative had more of an effect within north and central Florida as opposed to the southwestern coast. The threat of native hostility

was still high in this region. Non-native settlements were generally composed of isolated Cuban fishing hamlets scattered along the numerous islands within Charlotte Harbor and its estuaries. There are no recorded non-military American settlements within interior southwest Florida at this time.

During the 1850s an effort was made to survey lands within the Big Cypress and Everglades. Because isolated pockets of Seminole populations were still present in the region these survey crews were accompanied by US military. In 1855, a survey crew and military escort encountered a small farm owned by one of the paramount Seminole elders of the period, Billy Bowlegs. The American expedition maliciously destroyed much of Bowlegs' banana crop. In retaliation Bowlegs and forty Seminole warriors attacked a small US military patrol lead by First Lieutenant George Hartsuff. Other Seminole also responded, including isolated attacks along the Caloosahatchee River and east along the Miami River. Attacks even occurred as far north as the Sarasota and Tampa region. The US Military quickly organized to counter these aggressions and placed bounties on all male Seminoles. Bounty hunters and militia men flooded the southwest Florida region searching the swamps and hammocks for Seminole villages. By March 15, 1858 Billy Bowlegs band and numerous other Seminole groups surrendered to the United States and agreed to be relocated to western reservations.

With the easing of Seminole tensions the cattle industry in west/central and southwestern Florida was able to flourish. Cattle were herded up twice a year and run to Punta Rassa, located just south of the Caloosahatchee River mouth. There they were loaded on schooners and shipped to Cuba. In 1860, one of the largest cattle barons of Florida, Jacob Summerlin, partnered with cattle shipper James McKay to build a cattle loading dock to the north of the Caloosahatchee, in the vicinity of Key Point. The following year Florida seceded from the United States following South Carolina and Mississippi, resulting in the Civil War.

During the war few actions ever came to the interior regions of central and south Florida. However, the economy of these regions was severely hindered as the Federal Navy imposed blockades of the Florida coast including the mouth of Boca Grande Pass and the southern entrance to San Carlos Bay. These blockades hindered cattle shipments. Summerlin and McKay moved their docking operations from Key Point to Charlotte Harbor Town, located on the north side of the Peace River mouth well out of sight of the federal boats. However, Cuba was not the only market for cattle during this time. The Confederate Army was writing contracts paying eight dollars a head for cattle delivered to north/central Florida. Between supplying the Confederate Army and the rising beef prices in Cuba, the Civil War period sustained a healthy cattle industry in southwestern Florida.

Even with the vibrancy of the cattle industry, very few settlers made the Lee County region their home. In fact, it was not until the 1880s that the region's population began to grow significantly. During this period the state of Florida was facing financial crisis. As a result the state began shopping around for buyers to purchase large tracts of state owned land. One such buyer was Hamilton Disston, a wealthy industrialist from Pennsylvania.

In 1881 Disston purchased 4 million acres in south Florida for 25 cents an acre and entered into a land reclamation contract which provided him ownership of half of all the swampland outside of his purchase that he drained and made arable. Much of the land within present day Lee County was part of the Disston contract. The initial dredging of the Caloosahatchee River began as a Disston operation.

Disston formed the Disston Land Company and began selling off much of his Florida holdings by the middle part of the 1880s. Many of these buyers were northern land speculators who purchased large amount of land in the Lee County region and began an aggressive advertising campaign in northern cities promoting the region as a paradise and began publicizing the healing effects of its warm climate. Such promotions were highly effective, even drawing Henry Ford and Thomas Edison to construct winter retreats in the Fort Myers area.

In 1885, Fort Myers was officially incorporated and recorded a population of 349, most of which, however, were likely seasonal residents. In 1887, Lee County was formed out of a portion of Monroe County and named for the Civil War general Robert E. Lee. While many new inhabitants moved to the growing Fort Myers area, the county as a whole remained relatively sparsely populated. The primary economic driver consisted of agriculture, particularly citrus and cattle.

Until the early 1920s the only efficient way to get to Lee County or Fort Myers was via boat (Figure 3), equally, this was the only way to transport agricultural goods produced in the region to northern markets. A rail line was constructed to Punta Gorda in 1886, however, roads between this Peace River town and Fort Myers were poor. This all changed in 1926 when the Seaboard Air Line extended a line from Tampa to Fort Myers and the following year the Atlantic Coast Line extended from its termination in Punta Gorda to the Caloosahatchee region. With the railroad established farmers were able to

quickly and less expensively get their products to northern markets and individuals curious about the "paradise" of Fort Myers could more easily visit. Thus, began the tourist industry in Lee County.

While the railroad was important for providing easy access to the region, it paled in comparison when compared to construction the of Tamiami Trail in 1928. The road is currently known as US 41. This roadway connected Tampa with Miami via Fort Myers. With the growing



Figure 3. ACL steamship in San Carlos Bay, 1906

popularity of the car in the first part of the 20<sup>th</sup> century families were able to visit Lee County for as little as a long weekend. It was during this time that construction began on hotels along Fort Myers Beach.

During the first part of the 20<sup>th</sup> century much of the development within the Fort Myers area oriented toward the growing tourist industry and the even larger phenomena of the seasonal resident. This all changed at the beginning of the 1940s with the outbreak of World War II. The federal government, with aid and assistance from local and state authorities, acquired the small Fort Myers airport (Paige Field) and large tracks of land within the interior of Lee County which became Buckingham Army Air Field (Figure 4). During the war more than 70,000 servicemen and their families were stationed in the Fort Myers area. With this influx of population came a rapid expansion of city and county infrastructure and commerce. After the war, many of the servicemen stationed in the region remained, making Lee County their home.

Throughout the second half of the 20<sup>th</sup> century Lee County has grown rapidly with much of its development geared toward seasonal residents and tourism. The recreational fishing industry within Charlotte Harbor and Pine Island Sound has also played a key role in the region's tourism appeal.

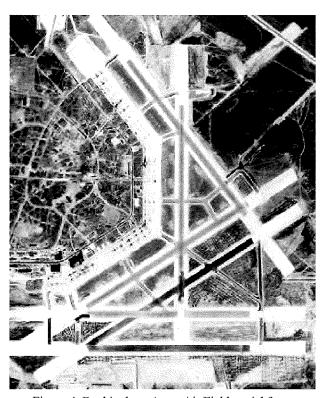


Figure 4. Buckingham Army Air Field, aerial from 1945.

By the end of the 20<sup>th</sup> century there were just under a half million residents of Lee County. Throughout much of the past century populations in the county were concentrated within the Fort Myers area with areas away from the Caloosahatchee River being dominated by agriculture and undrained wetlands. However, within the last 20 years residential development has rapidly increased in these outlying locations, with one of the largest examples being Lehigh Acres located within the eastern portion of the county. This rapid growth within Lee County has been interrupted in the past year as a result of a depressed housing market and a global economic recession, however, it is likely that the future of the region is still bright for the same reasons that spurred its initial growth.

# History of the Buckingham Flexible Gunnery Training School

In the spring of 1942 the City of Fort Myers and Lee County allocated public lands and acquired private lands for lease to the Federal Government for use as a wartime base. Initially the offering consisted of 6,500 acres, which was leased for 1 dollar a year. At the time, the lease acreage consisted primarily of pastureland and pine flatwoods interspersed with wetlands. While on paper the lease agreement appears to be a windfall for the Federal Government, the resulting economic benefits of the base to Fort Myers (then a town of 10,000) and Lee County were immeasurable (Grismer 1982).

In early May of 1942 a temporary base headquarters office was established in a storefront in downtown Fort Myers, base construction began toward the end of the month. The first Base Commander was Colonel Delmar T. Spivey, a former Commandant of the Air War College at the Maxwell Air Force Base in Alabama (Thole 1996). The new base was named the Buckingham Army Air Field. Subsequent negotiations with local and state officials expanded the base lease acreage and established three auxiliary sites, including crash boat stations at Fort Myers and Marco Island and a submarine base in Naples.

Col. Spivey was issued 10 million dollars to build a flexible gunnery training school as part of the Buckingham base. The gunnery school was to be used to train enlisted personnel to man the 30 and 50 caliber gun turrets of the B-24 and B-17 bombers. During the early stages of World War II U.S. fighter planes were not fitted with large enough fuel tanks to provide the escort range the bombers required to enter deep into Europe on bombing runs; therefore, the bombers only defense against enemy fighters were their gun turrets located within the nose, tail, belly, top, and sides of the planes. At the start of the war the military had only a handful of individuals trained in the operation of electric turrets and there was no established training schedule or combat curriculum for such operations. Therefore, each base was given latitude to make their own training regimen and to develop a curriculum for flexible gunnery tactics.

Base construction was a hurried affair, with just under 3,000 servicemen and private contractors working 10 hour days 7 days a week. It was never the intention of the military to develop Buckingham Army Air Field into a permanent base, but instead, its use-life was only planned for the length of the war (Freeman 2006). Therefore, many of the buildings and other construction projects associated with the base were not built to stand the test of time. Many structures were simple wood frames covered by tarpaper. Formal base activation was on July 5, 1942, although base construction projects continued until November of that year. The flexible gunnery training began on September 5, 1942 with the first class completing their training in mid-October (Thole 1996).

Col. Spivey requested transfers for some of the few trained aerial gunnery servicemen who at the time were based at Tyndall Field in Panama City, Florida. This group became Spivey's first group of flexible gunnery instructors. Together, Spivey and his team developed a training schedule and operational curriculum for the development of

experienced flexible gunnery cadets. The Spivey training schedule consisted of a five week course.

The first week consisted of classroom education on the functional properties of the 30 and 50 caliber machine guns. Each student was expected to assembly master the disassembly of these weapons taught and was how troubleshoot possible weapon malfunctions (Figure 5). The students were also taught the art of leading a target using 12 gauge shotguns to shoot clay pigeons on the trap and skeet ranges (Thole 1996).

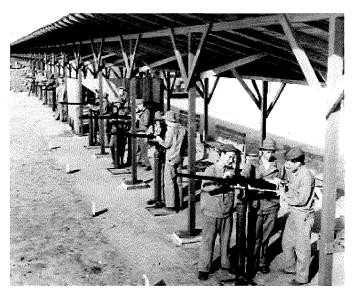


Figure 5. 1945 photo of trainees learning 50 caliber repair and maintenance at a Buckingham Air Field firing range.

In the second week of training the trainee was instructed in the art of determining the range and speed of moving objects while observing from a non-stationary position and the effect this movement had on targeting. This was accomplished by having trainees shoot 12 gauge shotguns at clay pigeons from the back of a moving jeep. The trainee was also instructed in the identification of enemy planes and tips for quickly distinguishing enemy planes from ally planes (Thole 1996).

During the third week of training trainees were expected to improve on their targeting skills by shooting 22 caliber rifles at moving plane shaped targets placed on a conveyor belt. Instruction was also provided in the operation and maintenance of electric turrets. The trainee was also expected to master the identification of both enemy and ally ships and submarines from aerial images (Thole 1996).

During the fourth week trainees were given the opportunity to fire the 30 and 50 caliber machine guns. They fired at large targets towed by jeeps while operating the guns from either the waist gun position or from within electric turrets while moving at 25 to 30 miles per hour in the back of a jeep or truck (Figure 6). The trainees were also taught how to use the blinker code that allowed bombers to communicate while maintaining radio silence (Thole 1996).

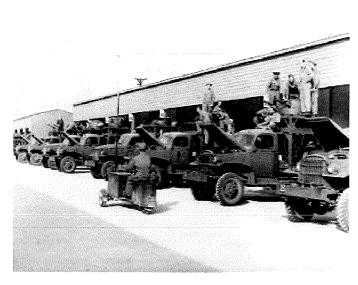


Figure 6. Gun turrets mounted to the backs of trucks, 1945 photo from the Buckingham Air Field.

The fifth and final week of training included actually flight time, with the trainee boarding B-17s for from which they would get live practice at targeting a large windsock towed by a target plane. Each trainee's bullet tips were marked in different color paint so the hits could be scored (Thole 1996).

This original training schedule went through numerous modifications as more funding and newer technology was developed. One of the most significant of these changes was the inclusion of simulator training. Through a system of movie projections and electric

sensors the trainee was able to practice targeting moving aircraft in a more real world setting. The Buckingham field is known to have had at least two such simulators on base by the end of the war.

In 1943 the Army Air Force established a Central Instructors School at Buckingham Field. The school was headed by Lt. Colonel Daniel W. Jenkins a graduate of the British Royal Air Force's gunnery training course and a highly experienced gunner from some of the early bomber activity on the European front. The Central Instructors School consisted of a four week course that focused primarily on instruction tactics for training flexible gunners (Thule 1996). All instructors for the U.S. Army's six flexible gunnery schools across the nation had to complete the Buckingham Central Instructor's School four week course.

At the beginning of the war the Buckingham Flexible Gunnery School suffered from a general lack of experienced instructors and a lack of funding and training equipment. This was also the period when the demand for trained flexible gunners was at its highest point. The survival rate for a gunner at the beginning of the war was just over 50%. Because of its dangerous nature, enlistment into the flexible gunnery program was on a volunteer basis. During its initial years large numbers of non-specialist servicemen signed up, including Army cooks, radio operators and mechanics. As the war went on and ally forces won control over the European skies the demand for additional flexible gunners waned and the Army Air Force lifted its volunteer requirement and began training all aviation specialists in flexible gunnery.

At the close of the war in 1945 the Buckingham Flexible Gunnery School had graduated over 50,000 gunners (Thule 1996). As intended, the close of the war also meant the deactivation of the Buckingham Army Air Field. The facilities at the base served as temporary classrooms for Edison College until 1947, at which point the federal government initiated the complete dismantling of the base with buildings, utility infrastructure and all other base components being auctioned off to the public and removed from the property (Grismer 1982).

Today the runways of the base are used as a private airstrip known as Buckingham Field. Outside of these features, very little remains of the original base. A few concrete foundations and earthen features are all that remain. Residential development associated with East Fort Myers and Lehigh Acres has been built over much of the former base location.

# BACKGROUND RESEARCH

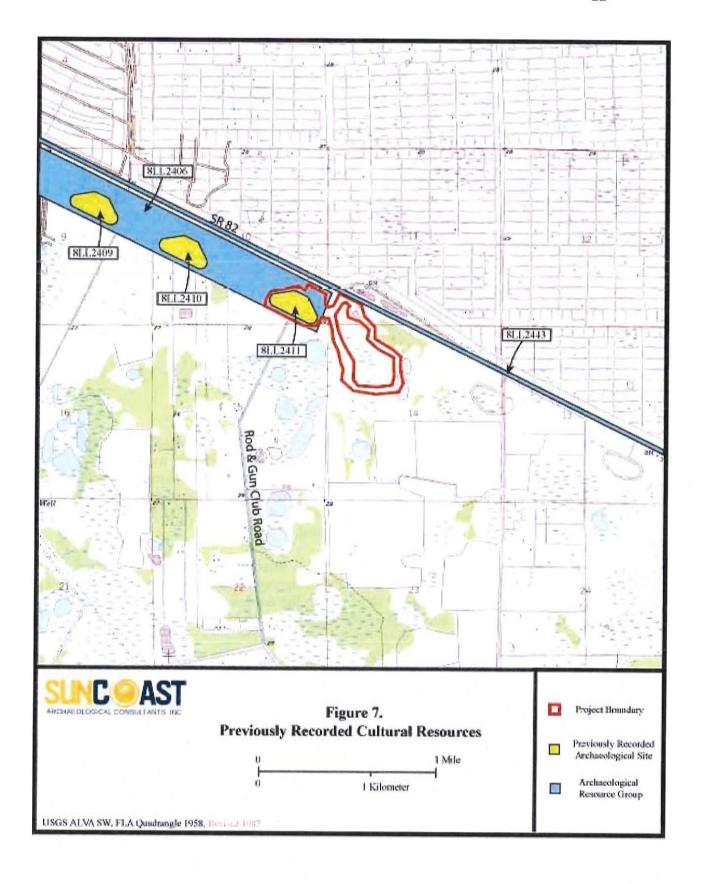
# **Previously Recorded Resources**

8LL2406, Buckingham Gunnery Range Resource Group

Located within the northeastern portion of the project area is the Gunnery Range #5 site (8LL2411). This site was individually recorded in November of 2006 as one of five gunnery range sites (8LL2407 to 8LL2411) associated with Buckingham Army Air Field, located to the south of SR 82 (Janus 2006). These five gunnery ranges were together recorded as the Buckingham Gunnery Range historic resource group (8LL2406), of the ranges, the Gunnery Range #5 site is the eastern most (Figure 7).

All five individual gunnery ranges were recorded through the location of earthen embankments, shaped in plan-view almost as coat-hangers with the long end base located along their southwestern side and the short end to the northeast. These embankments were recorded as measuring almost 2 to 6 feet high and 10 to 15 feet wide (Janus 2006). These ranges were used for training Buckingham flexible gunnery trainees in the operation of 30 and 50 caliber machine guns when firing on moving targets.

The gunnery range sites were recorded during a Phase 1 survey of the 2,880 acre Bennett property (Survey #s 12431 and 13639), which is located to the south of SR 82 along both the east and west sides of Daniels Road. Only three of the five ranges are located within the Bennett property, with Gunnery Ranges #4 and #5 located to the east. While all five ranges were individually recorded with the FMSF during the 2006 survey, only Gunnery Ranges #1 to #3 were physically inspected, while ranges #4 and #5 were observed from public right-of-ways since they were located outside of the Survey 12431 and 13639 project areas.



All ranges recorded during the 2006 project were identified as consisting of relatively uniform size and construction. All were identified as being built through earthen fill that was excavated from the inside and outside portions of the embankment to create a raised platform nearly 6 feet high. Occasionally, a concrete slab track with a raised central curb was observed running parallel to the outside edge of the southern Historical evidence embankment. indicates that these tracks were used as a guide for specially modified jeeps towing firing range targets. The jeep itself would be safely hidden behind the earthen embankment while the target would be elevated above the embankment (Figure 8).

The State Historic Preservation Officer (SHPO) has evaluated all five individual gunnery ranges (8LL2407 to 8LL2411) as well as the Buckingham Gunnery Range resource group (8LL2406) as being



Figure 8. Target jeep on a concrete track behind an earthen embankment, photo taken at Buckingham Army Air Field in 1945.

potentially eligible for listing on the NRHP. However, it was determined that through Survey #13639 enough information regarding the gunnery ranges was recorded to "effectively mitigate against any adverse effect" development of the Bennett property may have on the ranges (DHR Letter Dec. 19, 2006 [2006-4055B]).

#### 8LL2443, SR 82 Resource Group

The SR 82 corridor was first established in 1942 as a military road to access the Buckingham Army Air Field gunnery ranges. At this time, the road was restricted to military use only. The road served its military function until 1945 when the air field was officially decommissioned. In 1950 the State of Florida took over the maintenance of the road and opened it up to the public. Shortly after the state took control of the road a project began to extend the corridor to Immokalee. This road corridor has been recorded as a historic transportation resource group (8LL2443) due to its association with the Buckingham Army Air Field. The SHPO has determined that 8LL2443 is not eligible for listing on the NRHP.

#### Additional Cultural Resources

Outside of the Buckingham Gunnery Ranges, no additional archaeological or historical resources have been recorded within a 2.5 mile radius of the project area. This absence of cultural resources in the region is not due to a lack of professional archaeological and historical surveys. In fact, over the past 20 years a number of large acreage properties have been surveyed in this portion of Lee County, including the 2,880 acre Bennett property, the 600 acre Alico Estates property (Survey #5237), the 4,280 acre Gateway DRI property (Survey #1018), and the 2,940 acre Mirror Lakes Development property (Survey #2257). Of these four surveys, covering over 10,000 acres in this portion of Lee County, only one prehistoric archaeological site was recorded (8LL743) and the Buckingham Gunnery Ranges are the only historic resources identified.

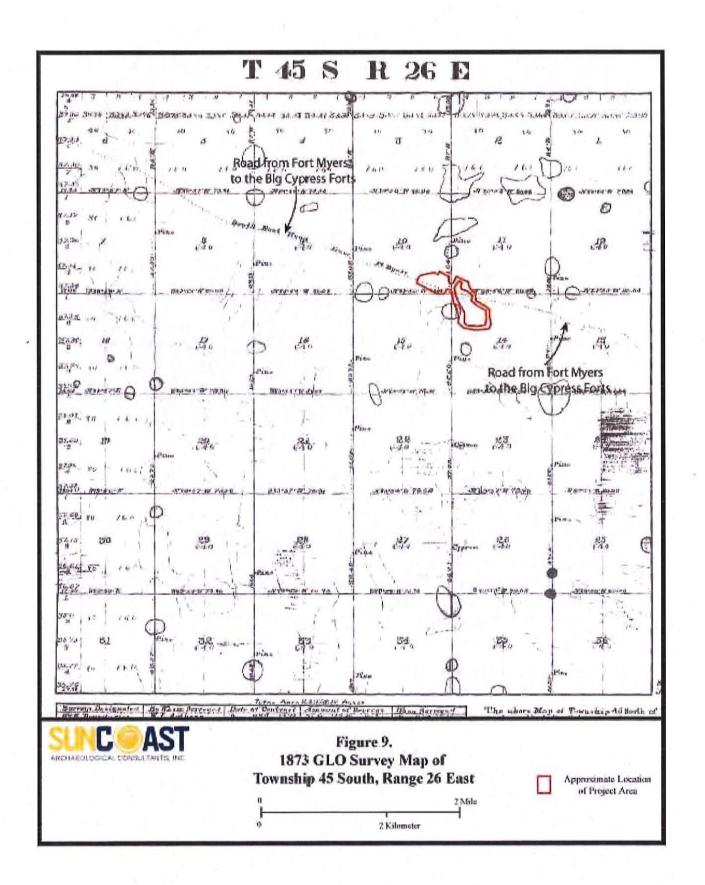
This absence of prehistoric and historic cultural resources in this portion of the county is expected. In fact, the almost non-existent historic occupation of this region is specifically why it was chosen as an ideal location for the construction of a military base in the first half of the 20<sup>th</sup> century. Equally, it has been concluded by many archaeologists that prehistoric habitation in southwest Florida was typically centered around the resource rich coastal estuaries, major river courses, and the large wetland systems associated with the Big Cypress and Everglades. The pine flatwoods are believed to have been sparsely inhabited.

# **Historic Map Review**

An 1873 General Land Office (GLO) survey map for Township 45 South, Range 26 East was reviewed for evidence of historic land use during the later half of the 19<sup>th</sup> century (Figure 9). This map shows a road crossing through the Township from the northwest corner and exiting along the edge of Section 15 in the east. The road is labeled "Southeast Road from Ft. Myers". The map indicates that the road likely crossed through the northern portion of the project area, likely bisecting the current location of the Gunnery Range #5 earthworks and crossing through portions of the northern segment of the proposed loop trail.

This road is the main route connecting Fort Myers with the Big Cypress Seminole War forts. The earliest of these forts was Fort Keais, established in 1838, located near Lake Trafford in the Immokalee region. Later, during the 1850 other forts were added to the Big Cypress area, including Fort Doane, Fort Simon Drum and Fort Shackleford. The road was likely first plotted and used during the early 1850s when a heavy military presence moved into the area during the Third Seminole War. Prior to this time, Fort Keais was likely accessed via a road heading south from Fort Denaud, which was located along the Caloosahatchee River. While called a road on the 1873 map, this route was possibly no more than a well established trail, wide enough to accommodate a horse drawn carriage.

This road, as well as the entire Third Seminole War military road and fort network is also shown on the 1859 Monroe County Surveyor General Map (Figure 10).



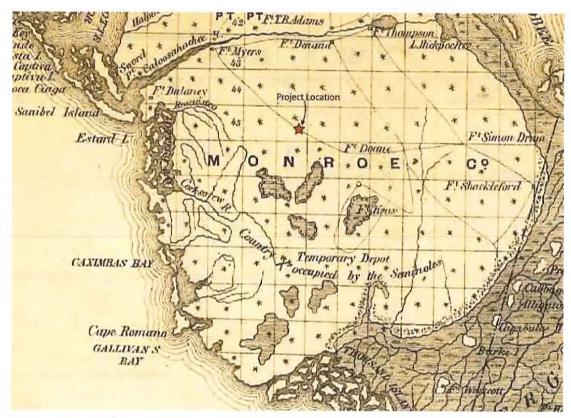


Figure 10. 1859 Surveyor General Map of a portion of Monroe County.

Additional maps of the region were also reviewed, including the 1863 Johnson & Ward map, an 1874 Columbus Drew map, 1893 George F. Crum map, the 1900 Mast, Crowell & Kirkpatrick map, the 1910 Hammond map, the 1920 US Railroad Administration map, and the 1932 USGS map. Outside of the military road that crosses through the project area (the latest map this road is shown on is the 1873 GLO) no other cultural features are depicted on any historic maps of the region within or in the vicinity of the project area. In fact, the late 19<sup>th</sup> and early 20<sup>th</sup> century maps indicate that the eastern portion of Lee County was generally uninhabited throughout this period. It is not until the construction of the Buckingham Army Air Field in 1942 that significant human activity in this area is evidenced.

# **Historic Aerial Review**

Historic aerial photographs of the project area dating to 1944, 1953, 1958 and 1970 were reviewed. The 1944 aerial shows the Buckingham gunnery ranges during their peak operational period (Figure 11). The aerial profile of these ranges signature as coat-hanger shaped embankments spaced approximately a quarter mile apart along the south side of what is now SR 82. During this time the SR 82 corridor was not a public road; instead it was maintained and utilized strictly by Buckingham Army Air Field. A short access road leads to each embankment from the main road corridor. All five embankments which

make up the Buckingham Gunnery Range resource group appear to be of the exact same dimensions and design.

The 1944 aerial also shows five additional embankments to the east of the one located within the project area. Their shape, however, appears to be inversed from those associated with 8LL2406, with the base of the coat-hanger shape along the north side, closer to the current SR 82 corridor, and the diagonal sides and rounded apex to the south.

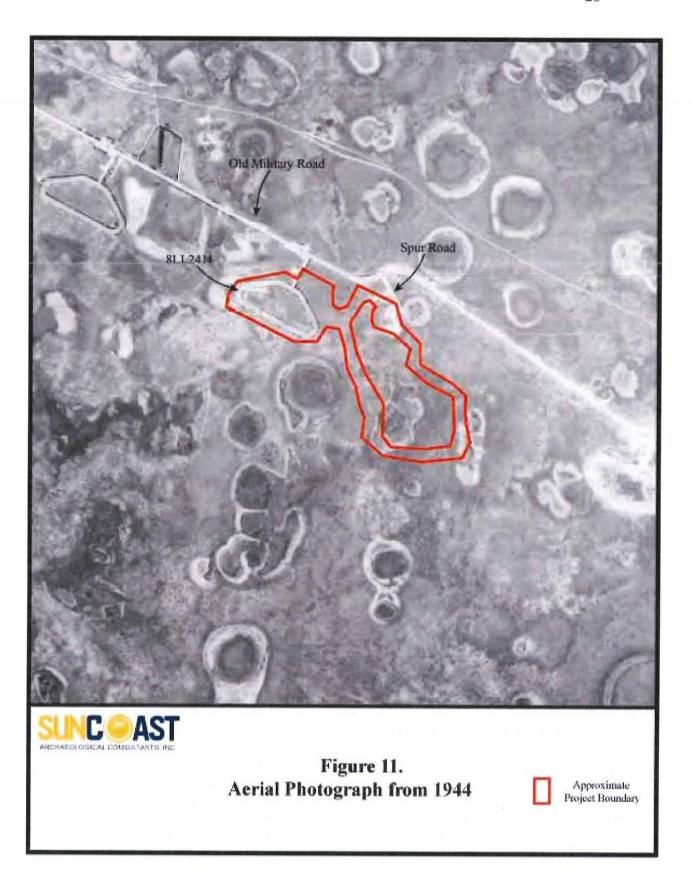
Within the project area, in addition to the embankment and its associated access road, the 1944 aerial shows a small spur road leading into the project area along the northern end of the proposed loop tail. At this location the former military road corridor of SR 82 curves north before turning back to its original southeast/northwest route. At this curve the spur road runs south-southeast. The spur road is not long, terminating perhaps a couple hundred meters from the main military road. At its termination there appear to be two small cleared areas where the natural vegetation has been removed. Additionally, a small road leads west-southwest from the central portion of the spur, also terminating within a short distance.

Outside of the earthen gunnery range embankment and associated access road and the small spur road and associated clearings, no additional cultural features are depicted within the project area on the 1944 aerial. The natural landscape of the rest of the property appears to be typical of southwest Florida flatwoods, with sparse pine growth and what appears to be a dense understory vegetation surrounding numerous oval and circular shaped wetland depressions. The small depressional wetland currently located within the center of the proposed loop trail route appears to have contained a rather dense tree stand, perhaps consisting of cypress.

The 1953 aerial show no new additions to the existing cultural features observed on the 1944 aerial; however, the 1958 aerial shows the addition of Rod & Gun Club Road, which utilized the existing gunnery range access road and continued south-southwest bisecting the gunnery range earthworks (Figure 12). This evidence indicates that Rod & Gun Club Road was constructed sometime between 1953 and 1958.

The 1953 and 1958 aerials provide some additional clues as to the nature of the spur road and associated cleared areas observed on the 1944 aerial. These aerials show the spur road leading to the back side of what appear to be two rectangular shaped cleared areas. Both cleared areas are located directly southeast of a corresponding square shaped flooded depression, both obviously man-made. No structures were observed on these aerials in association with these features.

The 1970 aerial of the region shows that by this time SR 82 had been slightly realigned and improved (Figure 13). The curve of the former military road adjacent to the spur road leading into the project area had been straightened, cutting through the middle of the spur road and cutting through the northern half of the northern most square depressional pond. Additionally, this aerial shows a linear corridor running from the eastern edge of



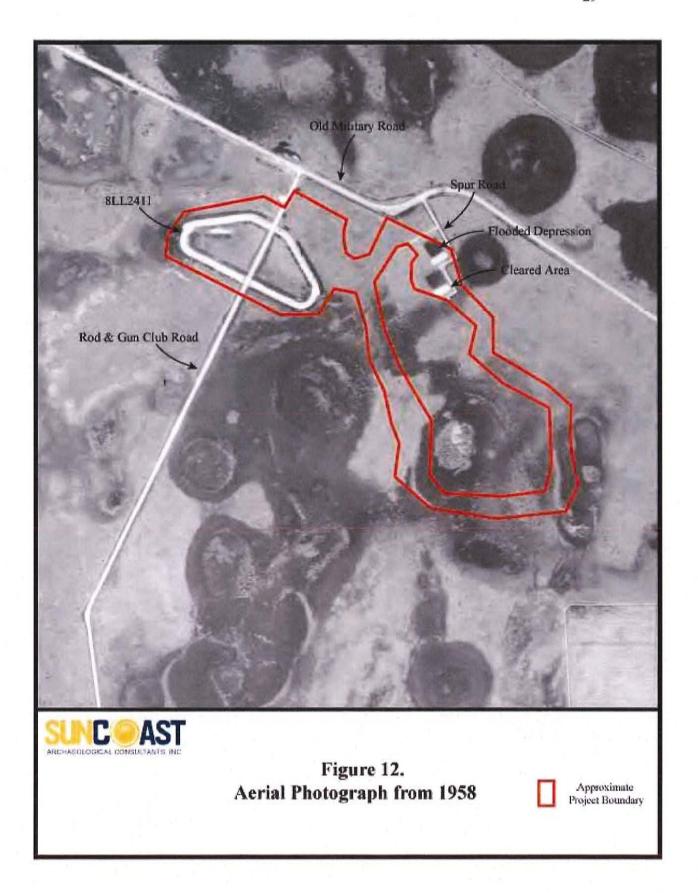






Figure 13. Aerial Photograph from 1970



the 8LL2411 gunnery range embankment and heading south into a large wetland almost 1.5 miles south of the southern edge of the project area. During the field survey it was discovered that this linear feature is an agricultural drainage ditch. It is not historic.

#### **Informant Interview**

Both the Southwest Florida Museum of History and the Lee County Public Library were contacted regarding possible local informants who may have been involved with the Buckingham Flexible Gunnery Training School. While both organizations provided a wealth of second-hand information and directed Suncoast to numerous historic archives regarding the Buckingham Army Air Field, no firsthand informants were identified. Victor Zarick, historian at the Southwest Florida Museum of History, was particularly helpful in sharing his knowledge of the Buckingham Flexible Gunnery Training School.

#### METHODOLOGY AND PROJECT EXPECTATIONS

The purpose of this project was to assist Lee County Parks & Recreation's Conservation 20/20 program in identifying a trailhead location and trail routes that will afford the least impact to the contextual integrity of previously recorded site 8LL2411 and any other possible unrecorded cultural resources within the project area. Both background research and field investigation was used to accomplish this task.

Background research included a review of historic and modern maps, documents and technical reports associated with the project area and surrounding region. This research also included a search of the Florida Master Site File database for information on sites that have been recorded within and in the vicinity of the subject property and to assess the results of previous cultural resource surveys in the region. Background research included a historical review of the Buckingham Army Air Field and specifically the Buckingham Flexible Gunnery Training School.

The field survey employed a systematic subsurface testing program of all non-inundated portions of the project area. Shovel tests were excavated at 25 and 50 meter intervals within areas of moderate to high probability for containing archaeological sites and judgmentally within low probability areas. An extensive surface survey of the property was also conducted in an effort to identify any above ground cultural features or possible surface artifacts. The location of all features associated with the previously recorded gunnery range (8LL2411) and any additional above ground features were plotted using handheld GPS units.

Through background research and a study of prehistoric and early historic settlement patterns within inland locations in southwest Florida, it was found that almost exclusively these site types are located adjacent to creek and river systems. Because of the absence of such geographic features within or adjacent to the subject property it was determined that the Wild Turkey Strand Preserve property has a low probability of supporting prehistoric or early historic habitation sites.

If prehistoric archaeological sites are present within the project area it is likely that they would be associated with either temporary hunting camps or isolated butchery sites. Early historic period sites would likely be associated with southwest Florida's wilderness trades, such a timber operations or free range cattle ranching. Also of consideration during this project is the location of the Third Seminole War military road depicted on historic maps of the region as crossing through or very near the project area. It is doubtful that the actual road corridor still remains; however, it is possible that historic features or archaeological sites associated with this 19<sup>th</sup> century transportation route may be present within the study area.

Background research indicates that the primary historic cultural association of this portion of Lee County occurred during the World War II period, in connection with the Buckingham Army Air Field. A previously recorded gunnery range associated with the period is located within the project area; there is a high likelihood that additional features outside of the 8LL2411 earthworks are also located within the project area.

# **Laboratory Methods and Curation**

All artifacts recovered during this survey were cleaned, washed, and sorted by artifact class and provenance. Historic period artifacts were sorted by material class and where possible historic artifact catalogs and manufacture records were utilized to identify and date historic artifacts. All material was quantified and weighed.

All artifacts will be kept at the Suncoast facilities for analysis and will be returned to the property owner pending completion of the project. All project documentation will remain curated at the Suncoast offices.

## RESULTS

# **Field Survey**

The field investigation of the Wild Turkey Strand Preserve project area included the excavation of 46 shovel tests and an intensive surface survey of the entire project area. As a result of this survey one new archaeological site was recorded along the north edge of the proposed loop trail (Figure 14). The site consists of historic earthworks, historic dumping, and the location of the spur road observed during project background research, all of which are associated with World War II period activity in the region. Within this newly recorded site, and associated with it, are two historic structures; each of which were recorded separately from the archaeological site.



Previously recorded site 8LL2411 was also assessed as a result of this survey. No prehistoric archaeological sites were identified during the survey.

Shovel tests within the northern and central portions of the project area encountered a soil profile consisting of a gray sandy upper horizon extending to between 10 and 30 cmbs, followed typically by a light gray sandy horizon to test termination at 100 cmbs. Within the eastern side of the proposed loop trail tests occasionally encountered a sandy tan horizon below the upper gray layer instead of the light gray sandy horizon. Within the southern portion of the project area, where Valkaria depressional fine sands are found, soil profiles consisted of gray and dark gray sands with a shallow dark brown hardpan at approximately 30 to 50 cmbs. This portion of the project area is likely flooded during periods of heavy rainfall.

#### 8LL2552, Buckingham Wild Turkey Site

The Buckingham Wild Turkey site (8LL2552) was first identified during a review of historic aerial photographs of the project area. These photographs show a short spur road running south-southeast from the main military gunnery range road. The gunnery range road generally follows the present day SR 82 corridor, however, the spur road intersected the main road along an area where the main road curves northeast slightly, heading north of the current SR 82 corridor. The aerials showed what appeared to be two square shaped ponds with a cleared sandy area directly south of each pond. The spur road connected with each sandy area (Figure 15).

During the field survey two relatively large earthen mounds were discovered, each located to the south of a low depressional area. On each mound was a single square shaped structure. These mounds are almost certainly composed of fill dirt which was extracted from each mound's adjacent excavated depression. At the time of this field visit neither depression contained any standing water, however, it was obvious from vegetation and the appearance of the soil that both areas are typically flooded for much of the year. Shovel tests within the site failed to identify a subsurface component.

Each mound measures approximately 1.5 to 2.5 meters above the surround ground surface and each depression measures 1 to 1.5 meters below the surrounding ground level (Figures 16 and 17). It is likely that the height and depth of these features has been moderated through time by natural erosion. A portion of the northern mound and the northern depression have been destroyed through construction of the SR82 right-of-way.

It is unclear what purpose these earthen mounds may have served. A historic aerial review of locations outside of the project area in the vicinity of the current SR 82 corridor failed to identify any similar feature signatures as those formed by the earthworks and spur road. Because the road and earthworks are an isolated occurrence in the region, they is not believed to be functionally associated with 8LL2411 (which is located approximately 300 meters to the west) or any of the other gunnery ranges south of SR 82.

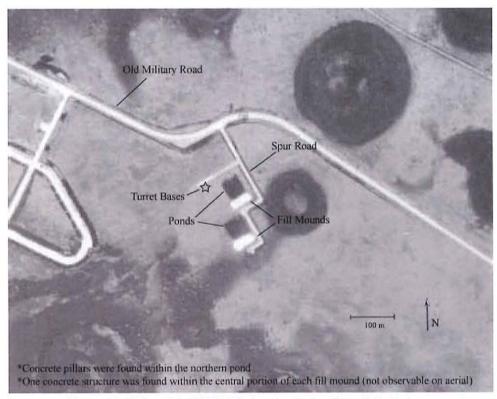


Figure 15. 1958 aerial of 8LL2552 showing the location of site features.



Figure 16. Photo shows the southern edge of the northern depression within 8LL2552 with the northern fill mound and concrete structure in background.



Figure 17. Photo shows the southern depression area within 8LL2552 with the southern earthen mound in background.



Figure 18. Concrete gun turret bases located adjacent to the limerock road within 8LL2552.

While the mounds are the most dominate visual feature within 8LL2552, it is possible that they were not the intent of the excavation, but instead it was the depression. Square shaped "ditch ponds" are known to have been excavated in the vicinity of the main Buckingham Army Air Field facility location to the north. These ponds were used for airmen and gunners to practice open water ditching procedures. Lou Thole in his book Forgotten Fields of America documents one such "ditch pond" associated with the Buckingham Army Air Field that is of approximately the same size and shape as the depressions observed within the project area (Thole 1996). However, evidence against this idea is found on the 1944 aerial photograph of the region where the depressions appear not to be filled with water, although, the 1953, 1958 and 1970 aerials all show these features as being filled with water forming a square shaped pond similar to the ditching pond recorded by Thole.

Also observed during the field survey in this area were four concrete pillars that had been deposited within the bottom of the northernmost depression and five concrete gun turret bases located approximately 40 meters west of the northernmost depression. Both the pillars and the turret bases appear to have been deposited haphazardly.

The concrete pillars are approximately 5 meters long and 50 x 50 cm wide. All appear to have been constructed by a course concrete mixture that was allowed to set within a single mold. All pillars had six bolt ends protruding from one side that were arranged in sets of two, a set of two on each end and a set of two in the middle. Nuts and washers were still attached to each bolt. The placement of the pillars along their sides at the base of the northern depression area suggests that they were likely dumped in their current location. It is unclear what purpose these pillars may have served.

The five gun turret bases were identified directly adjacent to a former limerock road (Figure 18). The road, which is currently covered by a thin layer of grass and soil, is the short road that extended west-southwest from the central portion of the spur road. The turret bases are located along the south side of the road. Each base is constructed of the same course concrete mixture as the pillars also through a single pour mold. The turret bases are all 1.8 meters square. Their height appears to vary greatly; however, it is difficult to determine how much variation because some appear to have settled or possibly been partially buried below the ground surface. The tallest turret base has 1.2 meters exposed above the ground surface and another has its top nearly level with the ground. Each turret base has a circular hole along its top and two holes along its sides connecting with the cavity created by the circular hole. Around the top edge of the circular hole are eight bolt ends, which likely functioned to attach the turret to the bases.

Like the concrete pillars, the turret bases are haphazardly deposited. It is likely that they were placed here at the side of the limerock road when not in use or dumped here after they were no longer of use. However, as with the pillars, due to their size and weight it is possible that these items were utilized not far from their current location, possibly in association with the gunnery ranges.

The 8LL2552 earthworks and concrete implements are all connected in their association with the spur road observed on historic aerials. The road itself is evidenced through a solid limerock base covered by a thin layer of soil. Presently, the road itself has been overgrown by vegetation.

Due to the site's association with the World War II era Buckingham Army Air Field and the unique nature of this collection of features when compared to similar sites in the region dating to this period, it is the opinion of the Principal Investigator that site 8LL2552 is potentially eligible for listing on the NRHP. However, it is our opinion that the information documented in this report has provided sufficient mitigation to any adverse future effect to the site.

# 8LL2550, Wild Turkey Building #1

Building 8LL2550 was is located at the summit of the northernmost earthen mound within the Buckingham Wild Turkey site (Figure 19). The structure is rectangle in shape with a long side measuring 4 meters and the short side measuring 2.5 meters. The building's roof is located 2.5 meters above the ground surface. The structure was formed from solid poured concrete walls and a solid poured concrete roof. The structure has been placed on a concrete slab foundation. Two small screened over holes are located along the front wall, one on the upper half and one on the lower half. These appear to have been used for ventilation. The imprints of wood grain were observed along the interior and exterior of all walls and the concrete roof. This wood grain is evidence for the use of wood framed molds to form the poured concrete walls and roof.

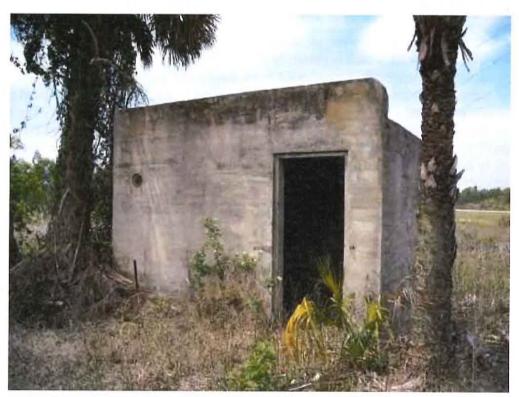


Figure 19. Wild Turkey Building #1, photo facing west.

The front of the building, defined by the door location, faces south-southeast. This orientation is precisely the same as the spur road and the square excavated depression as shown on historic aerials of the property. No historic material was identified within or surrounding the structure. A single shovel test was placed directly outside of the structure entrance; however, no cultural material was encountered. There is no direct evidence as to the function of the building; however, due to the buildings size and construction method it is likely that it may have served as a storage facility possibly associated with the Buckingham Army Airfield.

Few structures associated with Buckingham Army Air Field remain standing. While 8LL2550 has a relatively common design and its function was most likely as a simple storage building, its association with the air field makes this building unique and possibly a candidate for a historic district incorporating all existing Buckingham Army Air Field structures. Therefore, it is the opinion of the Principal Investigator that 8LL2550 is potentially eligible for listing on the NRHP.

# 8LL2551, Wild Turkey Building #2

Building 8LL2551 is located along the south slope of the southern earthen mound within the Buckingham Wild Turkey site (Figure 20). This building is of the exact same design and size as Wild Turkey Building #1. Its also oriented exactly the same, with the front of the structure facing south-southeast. The only difference between this structure and 8LL2550 is its position on the southern earthen mound. Wild Turkey Building #1 is located along the summit of the northern earthen mound, while Wild Turkey Building #2 is partially buried by erosion of the southern earthen mound's south slope.



Figure 20. Wild Turkey Building #2, photo facing north.

A single shovel test was excavated just south of the entrance to 8LL2551; however, no cultural material was encountered. In the vicinity of this structure a large amount of limerock and what appear to be dug up concrete footers are strewn about. This material appears to be either part of the mounds fill or dumped here after the mound was formed. Like 8LL2550, this building appears to have functioned as a storage building associated with the Buckingham Army Air Field.

As with Wild Turkey Building #1, 8LL2551 has been determined to be potentially eligible for listing on the NRHP due to its association with the Buckingham Army Air Field and its potential for future inclusion into an historic district.

#### 8LL2411, Gunnery Range #5

The Gunnery Range #5 site was relocated during this survey. This earthwork was easily identified from the ground due to the relatively high central embankment and the low ditches on either side (Figures 21 and 22). The embankment rises approximately 1.5 to 2.5 meters above the mean ground surface level and on either side of the embankment are ditches that are approximately 1 meter below the surround ground level. The plan-view dimensions of the 8LL2411 earthwork measures approximately 240 meters from northeast to southwest and 500 meters from southeast to northwest.

The interior and exterior ditching surrounding the embankment appears to have been excavated by backhoe, with the excavated fill used to form the central embankment. The ditching along the interior and exterior of the southern embankment and along the exterior of the northern embankment are continuous. However, the ditching along the interior of the northern embankment was dug in pockets, leaving narrow earthen bridge like features connecting the summit of the embankment with the natural ground surface within the central portion of the earthworks.

Disturbances to the site include the destruction of a segment within its central portion of the earthwork through which Rod & Gun Club Road passes and heavy erosion along the northeastern portion of the embankment's summit due to its use as a vehicle access road into the Wild Turkey Strand Preserve property. Throughout the rest of the site the only disturbance observed consisted of natural erosion and slumping of the embankment into the adjacent interior and exterior ditches.

A surface survey of the site and surrounding area identified numerous 50 caliber bullets to the south of the 8LL2411 earthworks and along the northeast side of the southwestern embankment (Figure 23). Many of the bullets were compressed and distorted evidencing impact. No bullets were identified to the north of the 8LL2411 embankment, indicating that the direction of fire at the range was from northeast to southwest. The 50 caliber bullet was the primary ordinance use during World War II for air to air combat; it was most commonly fired from a 50 caliber Browning Machine Gun.



Figure 21. Northwestern edge of 8LL2411 showing ditch and embankment.



Figure 22. Southern edge of 8LL2411 showing ditch and embankment.



Figure 23. 50 caliber bullets found along the southern portion of the project area.



Figure 24. Concrete curbing located along the summit of the northern portion of the embankment.

A search was made to the south of the southwestern embankment for possible concrete tracking that background research indicates were used for guiding retrofitted jeeps that towed large cloth targets. From historic photos and from previous research on similar site types, it was concluded that such tracking was most likely located within the base of the outside ditch adjacent to the southeastern embankment. However, a surface survey of this location failed to find any evidence of concrete tracking. At other gunnery range sites within the Buckingham Army Air Field Gunnery Range resource group it was observed that erosion of the embankment into the adjacent ditch has covered the concrete track, this is likely the case with 8LL2411.

Concrete curbing was identified along the summit of the western portion of the northeastern embankment (Figure 24). This curbing was likely used as a guide for jeeps and trucks carrying trainees engaged in target practice.

Two shovel tests were placed within the central portion of the earthworks and one was placed just south of the southern embankment, no cultural material was identified within any of these tests. Tests were not placed within the earthworks themselves or the associated ditching since the interest of the client for this project is preservation of the resource. No historic structure or structure foundations were identified within or in the direct vicinity of 8LL2411.

The Gunnery Range #5 site is in fairly good condition despite man-made and natural disturbances to its original context. A SHPO evaluation of the site in 2006 determined that it is potentially eligible for listing on the NRHP (DHR Letter Dec. 19, 2006 [2006-4055B]). However, as a result of documentation on all five gunnery range sites within the 8LL2406 resource group, it was determined that enough information had been documented about the sites to mitigate any adverse effect as a result of site contextual disturbance. Through the results of this survey the Principal Investigator for this project concurs with this assessment, and believes the information regarding 8LL2411 within this report only adds to the information currently on file with the FMSF regarding the Buckingham Army Air Field Gunnery Ranges.

#### Seminole War Road

Historic background research for this project identified a 19<sup>th</sup> century road that historic maps indicate ran through or very near the project area. During the field survey an attempt was made to relocate this corridor within the project area, however, no possible routes were identified. It is likely that this road was simply a dirt trail, wide enough to support horse drawn wagons. Thus, without constant use, a resource of this type is likely overgrown and has disappeared into the landscape. No historic archaeological sites or historic features that may be associated with a 19<sup>th</sup> century road were identified within the project area.

# RECOMMENDATIONS FOR PRESERVATION

The potential effect of contextual disturbances to the Buckingham Wild Turkey site and the previously recorded Gunnery Range #5 site are believed to have been mitigated with the information documented in this report. However, the Lee County Conservation 20/20 program has expressed interest in preserving both archaeological sites and the historic structures within the project area so that they may be incorporated within the proposed trail system as historic points of interest. Therefore, the following recommendations will focus on how best to incorporate the proposed Wild Turkey Strand Preserve trail system and trailhead with recorded cultural resources in the project area while minimizing the impact to the recorded historic features.

The proposed trailhead location is to the northeast of 8LL2411. Shovel tests and surface reconnaissance in this location found no cultural resources. However, due to the proximity of the proposed trailhead location to the northern edge of 8LL2411 it is recommended that during trailhead construction all machine operators be made aware of the location of 8LL2411 so that they may make every effort to avoid disturbing the resource. Also, during construction of the trailhead it is advised that a silt fence be placed between the construction zone and the northern exterior ditch adjacent to 8LL2411 in order to control possible soil erosion into this feature. It is recommended that water runoff issues be addressed in the trailhead design stage, as to prevent excessive flooding of the 8LL2411 ditches.

Proposed trail construction within the preserve is to consist of boardwalks, shell lined and natural ground trails. It is recommended that in all areas where the trail is to ascend or descend the earthworks associated with either 8LL2552 or 8LL2411that a boardwalk step system be constructed to help minimize the erosional effects of pedestrian trail use. Trails located along the summits of these earthworks should be shell lined to prevent wear and erosion of the natural surface of these features. Signage should also be placed at the head of all trail systems advising users to stay on the designated trail system.

In the interest of preventing erosion of the property's historic earthworks, it is suggested that equestrian trails not cross onto the earthen mounds or embankments associated with 8LL2552 or 8LL2411.

It should also be considered that the historic features identified within the project area are all associated with World War II ordinance training. While none were discovered during the field survey, it is possible that unexploded ordinances (UXOs) may be located within the project area. The Lee County Conservation 20/20 program should consult with the United States Army Environmental Command (USAEC) regarding procedures for dealing with public access to areas where UXOs could possibly be located.

# CONCLUSION

A phase 1 cultural resource survey was conducted by Suncoast Archaeological Consultants, Inc. of the 80 acre Wild Turkey Strand Preserve project area located to the south of SR 82, in the vicinity of its intersection with Rod & Gun Club Road. This survey was conducted in advance of construction of a trail system and associated trailhead. The survey resulted in the discovery of one newly recorded archaeological site (8LL2552) and two newly recorded historic structures (8LL2550 and 8LL2551). The survey also updated and reassessed one previously recorded archaeological site (8LL2411).

Site 8LL2552 consists of World War II earthworks and concrete implements located in association with a spur road that leads south from the former main military gunnery road. Due to the site's association with Buckingham Army Air Field and its unique nature when compared to similar sites in the region dating to this era, it was determined to be potentially eligible for listing on the NRHP. However, it is our opinion that information about the site documented in this report has proved sufficient to mitigate any adverse effect as a result of any future site contextual disturbance.

The two historic structures identified during this survey are both associated with archaeological site 8LL2552. Wild Turkey Buildings #1 and #2 are both constructed of poured concrete, and likely functioned as military storage facilities. Few historic structures connected with the Buckingham Army Air Field remain standing today, as a result, both 8LL2550 and 8LL2551 have been determined to be potentially eligible for listing on the NRHP. We recommend preservation of these structures; if preservation is not possible than additional historic architectural documentation should be conducted to help mitigate any adverse impact to these resources.

The previously recorded Gunnery Range #5 site was assessed during this survey. As recorded, the site was found to consist of a coat hanger shaped earthen embankment with excavated ditches lining either side. This site served as a gunnery range for the Buckingham Flexible Gunnery Training School. The remains of numerous 50 caliber bullets were found along the south end of the site. SHPO has assessed this site as being potentially eligible for listing on the NRHP, however, they have also stated that information previously documented regarding the site has sufficiently mitigated against any future impact to the site's contextual integrity. The Principal Investigator for this project concurs with this assessment.

Outside of the resources listed above, no additional archaeological sites or historic structures were identified within the project area.

The client for this project, Lee County's Conservation 20/20 program has presented an interest in preserving all World War II era cultural features within the project area. These resources will be incorporated into the proposed trail system with possible educational signage informing the public about of the significant role the World War II era played in the development of Lee County. As a result, we included in this report some suggestions

for how to incorporate public access to these sites through a pedestrian trail system while inflicting a minimal amount of impact to the contextual integrity of the resources.

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Appendix A:
Shovel Test Map



# Appendix F Environmental & User Questionnaires



9110 College Pointe Court. Fort Myers. Florida. 33919
Telephone. (239) 936-4003 Fax. (239) 936-0819
www.GHD.com

# ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT

PROJECT/LOCATION: 655-Acre Proposed Gatewo	od Tract (aka The Fountains DRI)
HISTORY:	
Original Construction (date) V/A	
To the best of your knowledge has the subject property e	ver been used as the following?
( ) Photo Developing Lab	( ) Junkyard / Landfill
( ) Gasoline Station	Waste treatment -
( ) Auto Repair Facility	( ) Storage
( ) Commercial Printing Facility	( ) Disposal
( ) Dry Cleaners	( ) Processing
( ) Industrial Facility	/ ( ) Recycling Facility
( ) Herbicide or Pesticide Mixing or	None
Storage Facility	( ) Unknown
( ) Marina	
Does the owner/occupant have any knowledge of the folio	wing reports for the subject property, that may
exist or are pending for the subject property?	ming reports for the subject property that may
( ) Environmental Site Assessments	( ) Tank Closure Assessment Report
( ) Phase I	Hazardous Waste Generator Notice or Report
( ) Phase II	( ) Environmental Compliance Audit Report
( ) Contamination Site Assessment Report	₩ None
( ) Risk Assessments	Geotechnical and/or Hydrogeologic Reports
f yes, can copies be provided? Yes No	
Does the owner/occupant have any knowledge of the follo	wing items that may exist or is pending
he subject property?	and the state of the perioding
( ) Environmental Liens	( ) Enforcement Actions / Administrative
( ) Environmental Violations	Lawsuits re Hazardous substance release
( ) Deed Restriction - Environmental	None
(Engineering and/or Institutional Controls)	
Does the owner/occupant have any knowledge of the follo	wing environmental permits that may exist or are
pending for the subject property?	
( ) Solid Waste Disposal Permits	( ) NPDES Permits
( ) Hazardous Waste Disposal Permits	( )/Underground Injection Permits/Registrations
( ) Wastewater Permits	✓ None
o the best of your knowledge have the adjacent propertie	s ever been used as the following?
( ) Photo Developing Lab	( ) Junkyard / Landfill
( ) Gasoline Station	( ) Waste treatment -
( ) Auto Repair Facility	( ) Storage
( ) Commercial Printing Facility	( ) Disposal
( ) Dry Cleaners	( ) Processing
( ) Industrial Facility	( ) Recycling Facility
( ) Herbicide or Pesticide Mixing or	None None
Storage Facility	( ) Unknown
( ) Marina	a to previous a security

# PROPERTY DESCRIPTION

2,679.4	7 Acres	
	<ul><li>⋈ Undeveloped Land</li><li>( ) Paving &amp; Utility Impro</li><li>( ) Occupied</li><li>( ) Unoccupied</li></ul>	
Utilities S	erving the Subject Property	? - Please see attached
	( ) Municipal Water	( ) Oil/Water Separator
	( ) Municipal Sewer	( ) Floor Drains
	( ) Septic Tank ( ) Potable Well Water	( ) Grease Trap
	( ) Irrigation Well	( ) Storm Drains
Are there	currently or to the best of	vous knowledge any tenegraphic elterations such as 2
Ale there	( ) Fill Dirt Operations	our knowledge any topographic alterations such as?  ( ) Stained Soil
	( ) Excavations	( ) Burial or Burn Pits
	( ) Waste Disposal Pond	
		A DE STAMORIAN
The mean	as of heating and cooling th	o huilding?
The mean	ns of heating and cooling th () Heating Oil	( ) Propane / Natural Gas
	( ) Electric	( ) Radiators
		, , ,
		our knowledge have there ever been any?
The second secon	Unknown	Above-ground Tanks - Size & Content
Yes (No	Unknown	Underground Tanks - Size & Content
Yes No		Monitor Wells
Yes No		Vent Pipes, Fill Pipes
Yes (No		Hydraulic Lifts
Yes No		Transformers
Yes No		Industrial Drums Cattle Pens
Yes No		Cattle Dipping Vats
	8 = #WEIRCH	
	ny known or suspected :	
Yes (No		Asbestos Containing Materials in the Buildings
Yes No		Polychlorinated Biphenyls (PCB's) in electrical equipment
Yes (No	Unknown	Radon Gas in Buildings
Is there c	urrently, or has there ever b	een or possible suspicion of past occurrences of:
		Groundwater Contamination
Yes No	Unknown	Soil contamination
Yes No	A STATE OF THE STA	Landfill / Burial Activity
Yes No		Chemical / Petroleum Spills
Yes No	Unknown	Strong Odors
Are there	currently or to the best of vo	our knowledge have there ever been any monitoring for:
Yes No	Unknown	Groundwater Quality
Yes No		Potable Water Quality
Yes No		Air Quality
-		
Are there		g Plans for the subject property:
	( ) Community Right To K	
	( ) Safety Plans ⋈ None	( ) Spill Prevention, Countermeasure, and Control Pla
141	INOTIC .	

( ) Degreasers	roducts	chemicals or othe () Solvents () Lead	( ) Caustic ( ) Other
	Industrial Batteries	( ) Acids	None
Do you have MSDS sheets	s available on site? _	YesNo	
Have pesticides, herbicide of at the property? Yes No  Describe any wastes generally	Unknown		ored, mixed applied or disposed
TYPES	QUANTITY PER	MONTH	DISPOSAL METHOD
			- Control of the Cont
* Attach list or continue on back of			
Has the property's purchas hazardous substances or p	e price been reduced etroleum products?	because of environ	
Has the property's purchas hazardous substances or p As the present owner/occup property (or the duly auth	e price been reduced etroleum products?  pant of the property of nonzed representative	yes No	a general partner of the presence of the present owner of the present owner.  (Owner/Lessee)
Has the property's purchas hazardous substances or p As the present owner/occuproperty (or the duly auth	e price been reduced etroleum products?  pant of the property of nonzed representative	yes No	a general partner of the presence of a general partner of the present owner of I hereby certify to and for the beneficisclosed above is true and correct (Owner/Lessee)  (Print Name)
Has the property's purchas hazardous substances or p As the present owner/occuproperty (or the duly auth	e price been reduced etroleum products?  pant of the property, of the property, of the property, of the property of the proper	or as an officer or as an officer or be or such owner), the information of the informatio	a general partner of the presence of I hereby certify to and for the benefit disclosed above is true and correct  (Owner/Lessee)  (Print Name)  (Title)
Has the property's purchas hazardous substances or p As the present owner/occuproperty (or the duly authlender/purchaser that to the	e price been reduced etroleum products?  pant of the property, of the property, of the property, of the property of the proper	or as an officer or as an officer or such owner), the information of the information of the such owner.	a general partner of the presence of I hereby certify to and for the benefit disclosed above is true and correct  (Owner/Lessee)  (Print Name)  (Title)
Has the property's purchas hazardous substances or p As the present owner/occuproperty (or the duly authlender/purchaser that to the	e price been reduced etroleum products?pant of the property, concincted representative best of my knowledge.	or as an officer or as an officer or such owner), the information of the information of the such owner.	a general partner of the present owner of I hereby certify to and for the beneficial disclosed above is true and correct (Owner/Lessee)  (Print Name)  (Title)
hazardous substances or p  As the present owner/occuproperty (or the duly auth	e price been reduced etroleum products?pant of the property, concincted representative best of my knowledge.	or as an officer or as an officer or such owner), the information of the information of the such owner.	a general partner of the present owner of I hereby certify to and for the beneficial disclosed above is true and correct (Owner/Lessee)  (Print Name)  (Title)

Answer to the second question on page two:

Part of the parcel is serviced by Lee County Utilities; however, the whole property is not within the service boundary for LCU so a Comprehensive Plan Amendment is required to incorporate and service the entire property.



# Phase I ESA User Questionnaire

Description of Site/Address: 655-Acre site, Gatewood Tract (aka The Fountains DRI),
12999 Daniels Pkwy, Fort Myers, FL

#### Introduction

As described in ASTM E1527-13, in order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must conduct the following inquiries required by 40 CFR 312. The user should provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete.

- 1. Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the property under federal, tribal, state, or local law? None Known to exist, by henner.
- 2. Did a search of recorded land title records (or judicial records where appropriate) identify any activity and use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state, or local law? The property has a controlling Comp Plan Overlay (her Co.) of "DRGR", (Density Reduction Consultan Recharges) that will have to be amended to proceed with any residential Plane by Lervan Homes.
- 3. Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

  Only knowledge of T72 years are the Army Air Corps used the Northern edge of this situating SR82 for Basic Training Gunney Range. Which concluded at the end of WWIII.
- 4. Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?



5.	Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,
	a. Do you know the past uses of the property? - See Response #3  b. Do you know of specific chemicals that are present or once were present at the property? No
	<ul> <li>b. Do you know of specific chemicals that are present or once were present at the property?</li> <li>c. Do you know of spills or other chemical releases that have taken place at the property?</li> <li>d. Do you know of any environmental cleanups that have taken place at the property?</li> </ul>
6.	Based on your knowledge and experience related to the property are there any obvious
	indicators that point to the presence or likely presence of releases at the property? None known.
	•
true an	er represents that, to the best of the Preparer's knowledge, the above statements and facts are discret; and, to the best of the Preparer's actual knowledge, no material facts have been used or misstated.
_	TRI
	11-2-15
Prepare	er's Signature Date
This AS	TM-E1527-13 All Appropriate Inquiry Questionnaire was completed by:
Name:	Terrence S. Dolan
Title:	Dir. of Planning
1000000	
Firm:	Lennan Homes - SW FL. Div.
	10101 5: 1111 6 - 21 014 51 22811
Firm: Address	

# Appendix G Phase II Documentation

				<b>-</b>	Table 1: ISM Soil Analytical Results Timber Creek 2999 Daniels Parkway Fort Myers, Lee County, FL GHD Project # 11105434	SM Soil Analyti Timber Creek 99 Daniels Park Myers, Lee Cou	e 1: ISM Soil Analytical Res Timber Creek 2999 Daniels Parkway Fort Myers, Lee County, FL GHD Project # 11105434	Results  y , FL				
					Sample ID	le ID					SCTL	
Parameter	Unit	ISM001	ISM002	ISM003	ISM004	ISM005	900MSI	ISM007	ISM008	Residential	Commercial / Industrial	Leachability
Beryllium	mg/kg	(0.27)U	U(727)U (0.27)U	(0.27)U	(0.27)U	(0.27)U	(0.27)U	(0.27)U	(0.27)U	120	1,400	63
Chromium	mg/kg	0.76i	0.88i	0.46i	0.34i	1.4	1.8	1.4	1.5	210	470	38
Nickel	mg/kg	(0.31)U	(0.31)U	(0.31)U	U(18.0)	0.44i	0.36i	(0.31)U	(0.31)U	340**	35,000	130
Copper	mg/kg	31	17	0.21i	1.7	4.0	6.2	3.4	1.2	150**	89,000	***
Zinc	mg/kg	2.00i	1.90i	(0.49)U	(0.49)U	1.60i	0.84i	0.87i	0.70i	26000	630,000	**
Arsenic	mg/kg	0.16i	0.11	(0.082)U (0.082)U	(0.082)U	0.84i	0.13i	0.084i	(0.08)U	2.1	12	* * *
Selenium	mg/kg	(0.47)U	(0.47)U	(0.47)U	(0.47)U	(0.47)U	(0.47)U	(0.47)U	(0.47)U	440	11,000	5.2
Silver	mg/kg	U(0.070)U	U(0.070) U(0.070)U	U(0.070)U	U(070.0)	U(0.070)U	U(0.070) U(0.070) U(0.070) U(0.070)		(0.070)	410	8,200	17
Cadmium	mg/kg	(0.092)U	(0.092)U (0.093)U	(0.092)U	(0.092)U	U(560.0)	(0.092)U (0.093)U (0.093)U (0.093)U		U(560.0)	82	1,700	7.5
Antimony	mg/kg	(0.058)U	(0.058)U (0.058)U	(0.058)U	(0.058)U	(0.058)U	(0.058)U (0.058)U (0.058)U (0.058)U		(0.058)U	27	370	5.4
Thallium	mg/kg	(0.11)U	(0.11)U	(0.11)U	(0.11)U	(0.11)U	(0.11)U	(0.11)U	(0.11)U	6.1	150	2.8
Lead	mg/kg	45	56	0.38i	1.2	18	20	13	5.3	400	1,400	**

Sample Date: October 30, 2015

ISM - Incremental Sampling Methodology (ISM)

ISM001 - Sample ID number

mg/Kg- milligram per kilogram

(0.00)U - Indicates that the compound was analyzed for but not detected (method detection limit (MDL) in parenthesis).

Bold - Above the SCTL

\*Guidance Document-Chapter 62-777 FAC, Soil Cleanup Target Levels (SCTLs), (April 17, 2005)

\*\* Direct exposure value based on acute toxicity considerations.

<sup>\*\*\*</sup> Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.



> Phone: (561)575-0030 Fax: (561)575-4118 www.jupiterlabs.com clientservices@jupiterlabs.com

December 8, 2015

Roxanne Gause GHD 2675 Winkler Ave. #180 Fort Myers, FL 33901

RE:

LOG#

1543764

Project ID:

11105434

COC#

43764

#### Dear Roxanne Gause:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, October 30, 2015. Results reported herein conform to the most current NELAC standards, where applicable, unless indicated by \* in the body of the report. The enclosed Chain of Custody is a component of this package and should be retained with the package and incorporated therein.

Results for all solid matrices are reported in dry weight unless otherwise noted. Results for all liquid matrices are reported as received in the laboratory unless otherwise noted. Results relate only to the samples received. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

Samples are disposed of after 30 days of their receipt by the laboratory unless extended storage is requested in writing. The laboratory maintains the right to charge storage fees for archived samples. This report will be archived for 5 years after which time it will be destroyed without further notice, unless prior arrangements have been made.

Certain analyses are subcontracted to outside NELAC certified laboratories, please see the Project Summary section of this report for NELAC certification numbers of laboratories used. A Statement of Qualifiers is available upon request.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melissa Mills for Kacia Baldwin

200

V.P. of Operations

Report ID: 1543764 - 1544780 12/8/2015

> FDOH# E86546 CERTIFICATE OF ANALYSIS

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Page 1 of 15



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# SAMPLE ANALYTE COUNT

Workorder: 1543764 Project ID: 11105434

Lab ID	Sample ID	Method	Analytes Reported
1543764001	ISM001	EPA 6020	12
	•	SM 2540G	1
1543764002	ISM002	EPA 6020	12
		SM 2540G	1
1543764003	ISM003	EPA 6020	12
		SM 2540G	1
1543764004	ISM004	EPA 6020	12
		SM 2540G	1
1543764005	ISM005	EPA 6020	12
		SM 2540G	1
1543764006	ISM006	EPA 6020	12
		SM 2540G	1
1543764007	ISM007	EPA 6020	12
		SM 2540G	1
1543764008	ISM008	EPA 6020	12
		SM 2540G	:1

Report ID: 1543764 - 1544780

12/8/2015

# FDOH# E86546 CERTIFICATE OF ANALYSIS





> Phone: (561)575-0030 Fax: (561)575-4118

#### SAMPLE SUMMARY

Workorder: 1543764 Project ID: 11105434

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1543764001	ISM001	Soil/Solid	10/28/2015 16:00	10/30/2015 10:50
1543764002	ISM002	Soil/Solid	10/28/2015 16:00	10/30/2015 10:50
1543764003	ISM003	Soil/Solid	10/28/2015 16:00	10/30/2015 10:50
1543764004	ISM004	Soil/Solid	10/28/2015 16:00	10/30/2015 10:50
1543764005	ISM005	Soil/Solid	10/29/2015 10:45	10/30/2015 10:50
1543764006	ISM006	Soil/Solid	10/29/2015 10:45	10/30/2015 10:50
1543764007	ISM007	Soil/Solid	10/29/2015 10:45	10/30/2015 10:50
1543764008	ISM008	Soil/Solid	10/29/2015 10:45	10/30/2015 10:50

Report ID: 1543764 - 1544780

12/8/2015

# FDOH# E86546 CERTIFICATE OF ANALYSIS





> Phone: (561)575-0030 Fax: (561)575-4118

# **ANALYTICAL RESULTS**

Workorder: 1543764 Project ID: 11105434

Lab ID:

1543764001

Date Received: 10/30/2015 10:50

Matrix:

Soil/Solid

Sample ID:	ISM001	Date Collected:	10/28/2015 16:00

Parameters	Results Units	PQL	MDL	DF I	Prepared	Ву	Analyzed	Ву	Qual
Wet Chemistry									
Analysis Desc: 2540G Percent	Solids (Dryweight)			Analytic	al Method: SM 25	40G			
Percent Solids (Dryweight)	99.5 %	0.1		1			12/7/2015 12:12	вн	
Analysis Desc: EPA 6020 13-PI	P Metals by ICP/MS (S)			Prepara	tion Method: EPA	3050B			
				Analytic	al Method: EPA 60	020			
Beryllium	U mg/Kg	1.4	0.27	2	12/7/2015 12:49	zs	12/7/2015 17:40	ZS	
Chromium	0.88i mg/Kg	1.1	0.22	2	12/7/2015 12:49	ZS	12/7/2015 17:40	zs	
Nickel	U mg/Kg	1.5	0.31	2	12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Copper	31 mg/Kg	0.82	0.16	2	12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Zinc	2.0i mg/Kg	2.5	0.49	2	12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Arsenic	0.16i mg/Kg	0.50	0.082	2	12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Selenium	U mg/Kg	1.0	0.47	2	12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Silver	U mg/Kg	0.50	0.070	2	12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Cadmium	U mg/Kg	0.50	0.092	2	12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Antimony	U mg/Kg	0.50	0.058	2	12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Thallium	U mg/Kg	0.55	0.11	2	12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Lead	45 mg/Kg	0.50	0.078	2	12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	

Report ID: 1543764 - 1544780

12/8/2015

# FDOH# E86546 **CERTIFICATE OF ANALYSIS**





Jupiter, FL 33458

Phone: (561)575-0030 Fax: (561)575-4118

# **ANALYTICAL RESULTS**

Workorder: 1543764 Project ID: 11105434

Lab ID:

1543764002

Date Received: 10/30/2015 10:50

Matrix:

Soil/Solid

Sample ID: ISM002

Date Collected: 10/28/2015 16:00

Parameters	Results Units	PQL	MDL	DF Prepared	Ву	Analyzed	Ву	Qual
Wet Chemistry								
Analysis Desc: 2540G Percent	Solids (Dryweight)			Analytical Method: SM:	2540G			
Percent Solids (Dryweight)	99.2 %	0.1		1		12/7/2015 12:12	вн	
Analysis Desc: EPA 6020 13-PI	P Metals by ICP/MS (S)			Preparation Method: EF	PA 3050E			
				Analytical Method: EPA	6020			
Beryllium	U mg/Kg	1.4	0.27	2 12/7/2015 12:49	e zs	12/7/2015 17:40	zs	
Chromium	0.76i mg/Kg	1.1	0.22	2 12/7/2015 12:49	e zs	12/7/2015 17:40	ZS	
Nickel	U mg/Kg	1.5	0.31	2 12/7/2015 12:49	zs	12/7/2015 17:40	ZS	
Copper	17 mg/Kg	0.83	0.17	2 12/7/2015 12:49	zs	12/7/2015 17:40	zs	
Zinc	1.9i mg/Kg	2.5	0.49	2 12/7/2015 12:49	zs	12/7/2015 17:40	zs	
Arsenic	0.11i mg/Kg	0.50	0.083	2 12/7/2015 12:49	zs	12/7/2015 17:40	zs	
Selenium	U mg/Kg	1.0	0.47	2 12/7/2015 12:49	zs	12/7/2015 17:40	zs	
Silver	U mg/Kg	0.50	0.071	2 12/7/2015 12:49	zs	12/7/2015 17:40	zs	
Cadmium	U mg/Kg	0.50	0.093	2 12/7/2015 12:49	zs	12/7/2015 17:40	ZS	
Antimony	U mg/Kg	0.50	0.058	2 12/7/2015 12:49	zs	12/7/2015 17:40	ZS	
Thallium	U mg/Kg	0.55	0.11	2 12/7/2015 12:49	zs	12/7/2015 17:40	ZS	
Lead	56 mg/Kg	0.50	0.079	2 12/7/2015 12:49	zs	12/7/2015 17:40	ZS	

Report ID: 1543764 - 1544780

12/8/2015

FDOH# E86546 **CERTIFICATE OF ANALYSIS** 





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# **ANALYTICAL RESULTS**

Workorder: 1543764 Project ID: 11105434

Lab ID:

1543764003

Date Received: 10/30/2015 10:50

Matrix:

12/7/2015 17:40

12/7/2015 17:40 ZS

ZS

Soil/Solid

Sample ID:

Thallium

Lead

ISM003

Date Collected: 10/28/2015 16:00

2 12/7/2015 12:49 ZS

2 12/7/2015 12:49 ZS

Parameters	Results Units	PQL	MDL	DF Prepared	Ву	Analyzed	Ву	Qual
Wet Chemistry								
Analysis Desc: 2540G Percent	t Solids (Dryweight)			Analytical Method: SM 2	540G			
Percent Solids (Dryweight)	99.5 %	0.1		1		12/7/2015 12:12	вн	
Analysis Desc: EPA 6020 13-PI	P Metals by ICP/MS (S)			Preparation Method: EP	A 3050E	Mary Comment (Care)		
				Analytical Method: EPA	6020			
Beryllium	U mg/Kg	1.4	0.27	2 12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Chromium	0.46i mg/Kg	1.1	0.22	2 12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Nickel	U mg/Kg	1.5	0.31	2 12/7/2015 12:49	zs	12/7/2015 17:40	ZS	
Copper	0.21i mg/Kg	0.82	0.16	2 12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Zinc	U mg/Kg	2.5	0.49	2 12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Arsenic	U mg/Kg	0.50	0.082	2 12/7/2015 12:49	ZS	12/7/2015 17:40	zs	
Selenium	U mg/Kg	1.0	0.47	2 12/7/2015 12:49	ZS	12/7/2015 17:40	zs	
Silver	U mg/Kg	0.50	0.070	2 12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Cadmium	U mg/Kg	0.50	0.092	2 12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Antimony	U mg/Kg	0.50	0.058	2 12/7/2015 12:49	ZS	12/7/2015 17:40	zs	
			The state of the s		12212	그 없이 가지 되면 되었다면 하는데 그 없는데 뭐 했다.		

0.11

0.078

0.55

0.50

U mg/Kg

0.38i mg/Kg

Report ID: 1543764 - 1544780

12/8/2015

FDOH# E86546 **CERTIFICATE OF ANALYSIS** 





> Phone: (561)575-0030 Fax: (561)575-4118

#### **ANALYTICAL RESULTS**

Workorder: 1543764 Project ID: 11105434

Lab ID: Sample ID: 1543764004

ISM004

Date Received: 10/30/2015 10:50

Matrix:

Soil/Solid

Date Collected: 10/28/2015 16:00

Parameters	Results Units	PQL	MDL	DF Prepared	Ву	Analyzed	Ву	Qual
Wet Chemistry								
Analysis Desc: 2540G Percent	Solids (Dryweight)			Analytical Method: SM 2	2540G			
Percent Solids (Dryweight)	99.5 %	0.1		1		12/7/2015 12:12	вн	
Analysis Desc: EPA 6020 13-Pi	P Metals by ICP/MS (S)			Preparation Method: EF	A 3050E	3		
				Analytical Method: EPA	6020			
Beryllium	U mg/Kg	1.4	0.27	2 12/7/2015 12:49	zs	12/7/2015 17:40	zs	
Chromium	0.34i mg/Kg	1.1	0.22	2 12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Nickel	U mg/Kg	1.5	0.31	2 12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Copper	1.7 mg/Kg	0.82	0.16	2 12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Zinc	U mg/Kg	2.5	0.49	2 12/7/2015 12:49	ZS	12/7/2015 17:40	ZS	
Arsenic	U mg/Kg	0.50	0.082	2 12/7/2015 12:49	ZS	12/7/2015 17:40	zs	
Selenium	U mg/Kg	1.0	0.47	2 12/7/2015 12:49	ZS	12/7/2015 17:40	zs	
Silver	U mg/Kg	0.50	0.070	2 12/7/2015 12:49	ZS	12/7/2015 17:40	zs	
Cadmium	U mg/Kg	0.50	0.092	2 12/7/2015 12:49	ZS	12/7/2015 17:40	zs	
Antimony	U mg/Kg	0.50	0.058	2 12/7/2015 12:49	zs	12/7/2015 17:40	zs	
Thallium	U mg/Kg	0.55	0.11	2 12/7/2015 12:49	zs	12/7/2015 17:40	zs	
Lead	1.2 mg/Kg	0.50	0.078	2 12/7/2015 12:49	zs	12/7/2015 17:40	ZS	

Report ID: 1543764 - 1544780

12/8/2015

FDOH# E86546 **CERTIFICATE OF ANALYSIS** 





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#### ANALYTICAL RESULTS

Workorder: 1543764 Project ID: 11105434

Lab ID:

Lead

1543764005

Date Received: 10/30/2015 10:50

Matrix:

Soil/Solid

Sample ID: **Parameters**  ISM005

Results Units PQL

MDL

0.27

0.22

DF Prepared

By

ZS

ZS

ZS

ZS

Analyzed

Ву Qual

**Wet Chemistry** 

Analysis Desc: 2540G Percent Solids (Dryweight)

1.4

1.1

Analytical Method: SM 2540G

Date Collected: 10/29/2015 10:45

Preparation Method: EPA 3050B Analytical Method: EPA 6020

2 12/7/2015 12:49

2 12/7/2015 12:49

2 12/7/2015 12:49

2 12/7/2015 12:49

12/7/2015 17:40

12/7/2015 17:40

12/7/2015 17:40 12/7/2015 17:40

12/7/2015 17:40

12/7/2015 17:40

12/7/2015 17:40

Percent Solids (Dryweight)

99.4 %

0.1

12/7/2015 12:12

ZS ZS

ZS

ZS

ZS

ZS

ZS

Analysis Desc: EPA 6020 13-PP Metals by ICP/MS (S)

Beryllium U mg/Kg Chromium 1.4 mg/Kg Nickel 0.44i mg/Kg

Copper 4.0 mg/Kg Zinc 1.6i mg/Kg Arsenic 0.084i mg/Kg U mg/Kg Selenium

U mg/Kg Silver U mg/Kg Cadmium Antimony U mg/Kg U mg/Kg Thallium 18 mg/Kg

1.5 0.31 0.83 0.17 2.5 0.49 0.50 0.083 0.47 1.0 0.50 0.070 0.50

0.093 0.50 0.058 0.55 0.11 0.50 0.078 2 12/7/2015 12:49 ZS 2 12/7/2015 12:49 ZS 2 12/7/2015 12:49 ZS ZS 2 12/7/2015 12:49 2 12/7/2015 12:49 2 12/7/2015 12:49

12/7/2015 17:40 ZS ZS 2 12/7/2015 12:49 ZS 2 12/7/2015 12:49 ZS

12/7/2015 17:40 ZS 12/7/2015 17:40 ZS 12/7/2015 17:40 ZS 12/7/2015 17:40

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Page 8 of 15



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#### ANALYTICAL RESULTS

Workorder: 1543764 Project ID: 11105434

Lab ID:

**Parameters** 

Beryllium

Chromium

Nickel

Copper

Arsenic

Silver

Selenium

Cadmium

Antimony

Thallium

Lead

Zinc

1543764006

Date Received: 10/30/2015 10:50

Matrix:

Soil/Solid

Sample ID: ISM006

> Results Units PQL

MDL

0.27

0.22

0.31

0.17

0.49

0.083

0.47

0.071

0.093

0.059

0.11

0.079

Date Collected: 10/29/2015 10:45

DF Prepared

Analyzed Ву

Qual

ZS

Wet Chemistry					
Analysis Desc: 2540G Percent Solids (Dryweight)			Analytical Method: SM 2540G		
Percent Solids (Dryweight)	99.0 %	0.1	1	12/7/2015 12:12	вн
Analysis Desc: EPA 6020 13-PP	Metals by ICP/MS (S)		Preparation Method: EPA 3050B		

1.4

1.1

1.5

0.83

2.5

0.50

1.0

0.50

0.50

0.50

0.56

0.50

U mg/Kg

1.8 mg/Kg

6.2 mg/Kg

0.36i mg/Kg

0.87i mg/Kg

0.13i mg/Kg

U mg/Kg

U mg/Kg

U mg/Kg

U mg/Kg

U mg/Kg

20 mg/Kg

Analytical Method: EPA 6020

2 12/7/2015 12:49 ZS 12/7/2015 17:40 2 12/7/2015 12:49 ZS 12/7/2015 17:40 2 12/7/2015 12:49 ZS

12/7/2015 17:40 ZS 2 12/7/2015 12:49 ZS 12/7/2015 17:40 ZS 2 12/7/2015 12:49 ZS 12/7/2015 17:40 ZS ZS 12/7/2015 17:40 ZS

2 12/7/2015 12:49 2 12/7/2015 12:49 ZS 12/7/2015 17:40 ZS 2 12/7/2015 12:49 ZS 12/7/2015 17:40

Report ID: 1543764 - 1544780 12/8/2015

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#### **ANALYTICAL RESULTS**

Workorder: 1543764 Project ID: 11105434

Lab ID:

**Parameters** 

Beryllium

Chromium

Nickel

Zinc Arsenic

Copper

Selenium

Cadmium

Antimony

Thallium

Lead

Silver

1543764007

Date Received: 10/30/2015 10:50

Matrix:

Soil/Solid

Date Collected: 10/29/2015 10:45 Sample ID: ISM007

> Results Units PQL MDL

DF Prepared By Analyzed

Qual

**Wet Chemistry** 

Analysis Desc: 2540G Percent Solids (Dryweight) 99.3 %

0.1

Analytical Method: SM 2540G

Percent Solids (Dryweight)

Preparation Method: EPA 3050B

12/7/2015 12:12

BH

Ву

ZS

ZS

ZS

ZS

Analysis Desc: EPA 6020 13-PP Metals by ICP/MS (S)

U mg/Kg

1.4 mg/Kg

U mg/Kg

3.4 mg/Kg

U mg/Kg

U mg/Kg

U mg/Kg

U mg/Kg

0.84i mg/Kg

0.084i mg/Kg

1.4 0.27 1.1 1.5 0.31 0.83

0.50

1.0

0.50

0.50

0.22 0.17 2.5 0.49

0.083

0.47

0.071

2 12/7/2015 12:49 2 12/7/2015 12:49 2 12/7/2015 12:49 2 12/7/2015 12:49

Analytical Method: EPA 6020

ZS 12/7/2015 17:40 ZS 12/7/2015 17:40 ZS ZS

12/7/2015 17:40 ZS 12/7/2015 17:40 ZS 12/7/2015 17:40 ZS 12/7/2015 17:40 ZS ZS

2 12/7/2015 12:49 ZS 2 12/7/2015 12:49 ZS 12/7/2015 17:40 2 12/7/2015 12:49 ZS 2 12/7/2015 12:49 ZS 12/7/2015 17:40 ZS 12/7/2015 17:40 2 12/7/2015 12:49 2 12/7/2015 12:49 ZS

13 mg/Kg

U mg/Kg

0.50 0.55 0.50

0.093 0.058 0.11 0.079

2 12/7/2015 12:49 2 12/7/2015 12:49

ZS ZS

12/7/2015 17:40 12/7/2015 17:40

12/7/2015 17:40

ZS

Report ID: 1543764 - 1544780

12/8/2015

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#### ANALYTICAL RESULTS

Workorder: 1543764 Project ID: 11105434

Lab ID:

**Parameters** 

1543764008

Date Received: 10/30/2015 10:50

Matrix:

Ву

Soil/Solid

Sample ID: ISM008

MDL

0.27

PQL

Date Collected: 10/29/2015 10:45

DF Prepared

Analyzed

Qual By

Wet Che	m	istr	y
Analysis	De	esc:	2

Analysis Desc: 2540G	Percent	Solids (Dryweight)	
Percent Solids (Drywei	ght)	99.4 %	

0.1

Analytical Method: SM 2540G

12/7/2015 12:12

ZS

Preparation Method: EPA 3050B

12/7/2015 17:40

BH

Analysis Desc: EPA 6020 13-PP Metals by ICP/MS (S)

Beryllium U mg/Kg 1.4 Chromium 1.5 mg/Kg 1.1 Nickel

0.22 U mg/Kg 1.5 0.31 Copper 1.2 mg/Kg 0.82 0.16 Zinc 0.70i mg/Kg 2.5 0.49 Arsenic U mg/Kg 0.50 0.082 Selenium U mg/Kg 1.0 0.47

Results Units

Silver U mg/Kg 0.50 0.070 Cadmium U mg/Kg 0.50 0.093 Antimony U mg/Kg 0.50 0.058 Thallium U mg/Kg 0.55 0.11 Lead 5.3 mg/Kg 0.50 0.078

2 12/7/2015 12:49 2 12/7/2015 12:49 ZS 2 12/7/2015 12:49 ZS

2 12/7/2015 12:49

2 12/7/2015 12:49

Analytical Method: EPA 6020

12/7/2015 17:40 12/7/2015 17:40 2 12/7/2015 12:49 ZS 12/7/2015 17:40 2 12/7/2015 12:49 ZS 2 12/7/2015 12:49

12/7/2015 17:40 ZS ZS 12/7/2015 17:40 ZS ZS 2 12/7/2015 12:49 12/7/2015 17:40 ZS 2 12/7/2015 12:49 ZS 12/7/2015 17:40 ZS 2 12/7/2015 12:49 ZS 12/7/2015 17:40 ZS

2 12/7/2015 12:49 ZS 12/7/2015 17:40 ZS ZS 12/7/2015 17:40 ZS ZS 12/7/2015 17:40

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#### **ANALYTICAL RESULTS QUALIFIERS**

Workorder: 1543764 Project ID: 11105434

#### PARAMETER QUALIFIERS

#### PROJECT COMMENTS

1543764

A reported value of U indicates that the compound was analyzed for but not detected above the MDL. A value flagged with an "i" flag indicates that the reported value is between the laboratory method detection limit and the practical quantitation limit.

Report ID: 1543764 - 1544780 12/8/2015

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#### **QUALITY CONTROL DATA**

Workorder: 1543764 Project ID: 11105434

QC Batch:

MXX/7291

Analysis Method:

EPA 6020

QC Batch Method:

**EPA 3050B** 

1543764001 1543764007

1543764002 1543764008

1543764003

1543764004 1543764005 1543764006

METHOD BLANK: 88953

Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Beryllium	mg/Kg	U	0.14	
Chromium	mg/Kg	U	0.11	
Nickel	mg/Kg	U	0.15	
Copper	mg/Kg	U	0.082	
Zinc	mg/Kg	U	0.25	
Arsenic	mg/Kg	U	0.041	
Selenium	mg/Kg	U	0.23	
Silver	mg/Kg	U	0.035	
Cadmium	mg/Kg	U	0.046	
Antimony	mg/Kg	U	0.029	
Γhallium	mg/Kg	U	0.055	
Lead	mg/Kg	U	0.039	

LABORATORY	CONTROL SAMPLE & LCSD:	
------------	------------------------	--

88954

88955

Parameter	Units	Spike Conc.	LCS Result	LCSD	LCS % Rec	LCSD	% Rec	DDD	Max	0 - 115
rarameter	Offics	Conc.	Result	Result	% Rec	% Rec	Limit	RPD	RPD	Qualifiers
Beryllium	mg/Kg	10	9.5	9.5	95.4	94.8	75-125	0	20	
Chromium	mg/Kg	10	10	10	103	101	75-125	0	20	
Nickel	mg/Kg	10	10	10	102	101	75-125	0	20	
Copper	mg/Kg	10	10	10	102	101	75-125	0	20	
Zinc	mg/Kg	10	9.9	9.8	99.1	98.2	75-125	1.02	20	
Arsenic	mg/Kg	10	9.9	9.8	98.8	97.7	75-125	1.02	20	
Selenium	mg/Kg	10	9.7	9.8	97.3	98	75-125	1.03	20	
Silver	mg/Kg	10	9.1	10	90.5	105	75-125	9.42	20	
Cadmium	mg/Kg	10	10	9.9	100	98.6	75-125	1.01	20	
Antimony	mg/Kg	10	9.0	11	90.4	105	75-125	20	20	
Thallium	mg/Kg	10	9.8	9.7	97.7	97	75-125	1.03	20	
Lead	mg/Kg	10	9.7	9.5	96.7	95.5	75-125	2.08	20	

Report ID: 1543764 - 1544780

12/8/2015

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#### **QUALITY CONTROL DATA**

Workorder: 1543764 Project ID: 11105434

MATRIX SPIKE SAMPLE: 88957 Original: 1544240003 Original Spike MS MS % Rec Parameter Units Result Conc. Result % Rec Limits Qualifiers Beryllium mg/Kg Chromium mg/Kg Nickel mg/Kg mg/Kg Copper Zinc mg/Kg Arsenic mg/Kg 0.69 20 20 97.9 75-125 Selenium mg/Kg Silver mg/Kg Cadmium mg/Kg Antimony mg/Kg Thallium mg/Kg

SAMPLE DUPLICATE: 88956

mg/Kg

Lead

Original: 1544240003

		0.1-11	5115				
Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers	
Beryllium	mg/Kg		U				
Chromium	mg/Kg		u				
Nickel	mg/Kg		U				
Copper	mg/Kg		U				
Zinc	mg/Kg		U		¥.		
Arsenic	mg/Kg	0.69	0.78	4.26	20		
Selenium	mg/Kg		U				
Silver	mg/Kg		U				
Cadmium	mg/Kg		U				
Antimony	mg/Kg		U				
Thallium	mg/Kg		U				
Lead	mg/Kg		U				

Report ID: 1543764 - 1544780

12/8/2015

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#### **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Workorder: 1543764 Project ID: 11105434

Lab ID Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
543764001 ISM001	SM 2540G	WGR/2645		
543764002 ISM002	SM 2540G	WGR/2645		
543764003 ISM003	SM 2540G	WGR/2645		
543764004 ISM004	SM 2540G	WGR/2645		
543764005 ISM005	SM 2540G	WGR/2645		
543764006 ISM006	SM 2540G	WGR/2645		
543764007 ISM007	SM 2540G	WGR/2645		
543764008 ISM008	SM 2540G	WGR/2645		
543764001 ISM001	EPA 3050B	MXX/7291	EPA 6020	MMS/6543
543764002 ISM002	EPA 3050B	MXX/7291	EPA 6020	MMS/6543
543764003 ISM003	EPA 3050B	MXX/7291	EPA 6020	MMS/6543
543764004 ISM004	EPA 3050B	MXX/7291	EPA 6020	MMS/6543
543764005 ISM005	EPA 3050B	MXX/7291	EPA 6020	MMS/6543
543764006 ISM006	EPA 3050B	MXX/7291	EPA 6020	MMS/6543
543764007 ISM007	EPA 3050B	MXX/7291	EPA 6020	MMS/6543
543764008 ISM008	EPA 3050B	MXX/7291	EPA 6020	MMS/6543

Report ID: 1543764 - 1544780 12/8/2015

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Environmental Laboratories foc.

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J.E.L. Log # (543 764 P.O.# Quote #

Company Name (5 H I)				***************************************		LAB ANALYSIS	NALY!	SIS	H.	Requested Turnaround Time	punc
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500W5IS	6701	1015									
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-7 ISA 007		1045									
8004SI8	<u> </u>	5601	>	>	\						
6											
0			)								
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Drinking Water		D- NaOH N - Na S E- HCI Z- ZnÃc	රූ	C	RACK	10/30/15	(0,50		n	10/14/15 1	05:01
QA/QC level with report None 1 2 3 See price	e guide for a	See price guide for applicable fees			in eigen mitter – Carposessonologiste erentimistische Schriftsteren erentimisteren erentimistische Schriftsteren erentimisten erentimistische Schriftsteren erentimistische						
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SFWMD O ADAPTO	рота	24.9 °C							<b>SEMENTAL INCIDENTAL DESCRIPTION CONTRACTOR DESCRIPTION CONTRACTOR DESCRIPTION</b>		
					Pageof					43764	41
											17,001

# Login Checklist

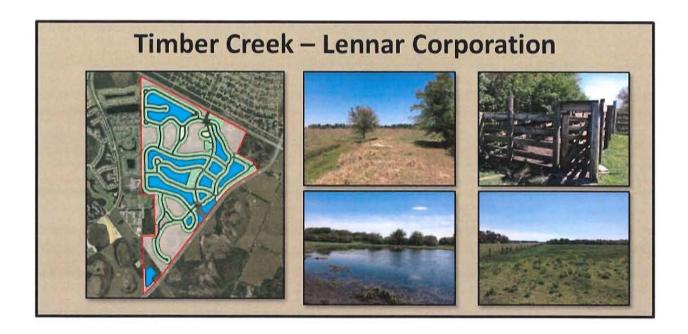
			•						
Cooler Unpac	ked/Check	ed by:	<u> </u>			Date	: <u>(0/</u> 5	2/15	
JEL LOG#:/	5437	64							
Cooler Ch	eck								
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Are all samples	in cooler o	n COC?: Ye	5	V	N	lo			
If no, fill out sam			maumou e e E E E E E E E E E E E E E E E E E	V					
Are all samples	on COC in	cooler?: Ye	s		^	lo			

If no, fill out sample discrepancy form.

N/A = not Applicable Temperature Gun ID #: <u>TEMP-GUN-1</u>

# **Enhanced Lake Management Plan**

# For Timber Creek



September 2016

Progressive Water Resources, LLC 6561 Palmer Park Circle, Suite D Sarasota, Florida 34238

# **Enhanced Lake Management Plan for Timber Creek**

# **Table of Contents**

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Section	1.	Historic Surface Water Hydrology	4
Section	2.	Water Resources Best Management Practices	4
		Construction Phase BMPs Post-Construction Phase BMPs	4 5
Section	3.	Lake Maintenance	6
Section	B. C. D. F. G. A. B. C. D.	General Provisions Nuisance and Exotic Vegetation Control Littoral Vegetation Preservation Fertilizer Application Erosion Protection and Lake Bank Maintenance Lake Education Program Pesticide, Herbicide or Fungicide Applications  Surface Water Quality Monitoring Program  General Data Quality Objectives Surface Water Monitoring Goals Surface Water Quality Monitoring Water Quality Data Reporting and Analysis	6 6 7 7 8 8 <b>9</b> 9 9
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Figures	1.	Site Topography	
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#### Introduction

The proposed residential development (i.e. Timber Creek) demonstrates a substantial net benefit to the water resources within the project area as compared to the previous agricultural land use. The subject property site was previously characterized as a "grandfathered" farming operation with a decades-long history as a row crop, container flower farm and cattle grazing operation. The historical farming operation was not required to have a stormwater management system for flood control and water quality treatment purposes, nor was it required to monitor surface water quality. Benefits of the residential development over the historic conditions include:

- Reduced groundwater withdrawals as a result of the conversion of the site from a farming operation to a conjunctive use (recycled stormwater and groundwater) residential irrigation system;
- 2. The use of a centralized master irrigation system that precludes individual homeowner irrigation wells and controllers/timers to enhance overall community-wide water conservation;
- 3. The connection to public utilities for both potable supply and wastewater, thereby eliminating numerous private wells and septic tanks to eliminate potential sanitary hazards;
- 4. The improved opportunity for increasing recharge to the Surficial Aquifer System, otherwise known as the Water Table Aquifer, through the elimination of historic drainage ditches and the construction of stormwater retention ponds.
- 6. The elimination of the permitted Water Table Aquifer withdrawals historically used by the farming operations thereby dramatically decreasing potential drawdown impacts on nearby environmental features including wetlands.

Collectively, these improvements represent a much higher standard of water resource protection as compared to the currently authorized land use.

The change in land use, coupled with the managed practices contained within the Enhanced Lake Management Plan (ELMP) herein, provides for an exceptionally high standard for water resource protection. As shown herein, the proposed ELMP contains several sections that address key elements, with each of the main ELMP sections in turn having subsections that provide specificity regarding the management actions necessary to ensure that the water resources will be safeguarded and maintained. Where applicable, Best Management Practices (BMPs) are provided in bold text to highlight the water resource protection measures included in this ELMP.

## Section 1. Historic Surface Water Hydrology

To better understand the proposed water resource management actions contained within this ELMP, it is important to understand historic surface water flows on the property. The land surface elevations on the site range from approximately 20.2 feet above the North American Vertical Datum (NAVD 88) in a wetland in the northern section of the property to approximately 26.2 feet NAVD 88 in the eastern side of the property. Therefore, the property is relatively flat with a slight topographic gradient to the west and exhibits several isolated wetlands in the north and southern sections of the property. Historically, stormwater was conveyed away from the centrally located farming operations by drainage ditches that intersected the farm fields as illustrated by **Figure 1**.

The subject property is fairly isolated in regards to surface water drainage patterns based on the Southeast Lee County DRGR Major Flowways Map, produced from National Resources Conservation Service (NRCS) hydric and transitional soils data and 1953 aerial photography. The South Florida Water Management District (SFWMD) indicates that the site as well as areas immediately east of Daniels Parkway are within the Six Mile Cypress Sub-Watershed.

### **Section 2. Water Resources Best Management Practices**

As the project evolves from predominately a "construction phase" to "partial construction" and ultimately to a "post-construction" residential phase, the BMPs must also evolve to maintain water resource protection. Construction of the proposed development may take up to 10 years, depending on market conditions. However, after initiation of construction, the vast majority of major earthwork is anticipated to be completed by the end of the 5<sup>th</sup> year.

#### A. <u>Construction Phase BMPs</u>

During construction of the proposed development, the greatest potential for impacts is associated with increased turbidity and/or potential spills of fuel/oils (hydrocarbons), otherwise known as Volatile Organic Compounds (VOCs) used to power earthmoving equipment, etc. Specific BMPs associated with the construction phase are provided below. The Developer will be responsible for maintaining compliance with all ELMP BMPs and requirements until such time that control of the development is transitioned to the Homeowner's Association (HOA) and/or Community Development District (CDD).

#### **Construction Phase BMPs**

 The site's general contractor shall be responsible for assuring that each contractor or subcontractor evaluates the work area before construction is initiated to determine if site conditions may pose particular problems for the safe and secure handling of any regulated substances.

- 2. If any regulated substances are stored on the construction site during the construction process, they shall be stored in a location and manner which will minimize any possible risk of release to the environment. There will be no intention to use, handle, produce or store regulated substances in violation the Lee County Land Development Code Section 14-477 Stormwater Pollution Prevention Plan (SWP3) criteria.
- 3. Each contractor/subcontractor shall familiarize themselves with the manufacturer's safety data sheet supplied with each material containing a regulated substance and shall be familiar with procedures required to contain and clean up any releases of the regulated substance. Any tools or equipment necessary to accomplish the same shall be available in case of an accidental release.
- 4. In the event of a spill of a regulated substance, the contractor/subcontractor will immediately notify the Developer, who will in turn notify the Lee County Division of Natural Resources Director at (239) 533-8109 and the FDEP South District Office at (239) 344-5600. Additional measures, such as those described in the Lake Maintenance Plan (Section 3), may also apply.
- 5. Upon completion of construction, all unused quantities of regulated substances and their containment systems shall be completely removed from the construction site.
- 6. Proper turbidity abatement measures, as required by the SFWMD, the Florida Stormwater Sedimentation Control Inspector's Manual standards, and the FDEP National Pollutant Discharge Elimination System (NPDES) permit will be maintained while construction is ongoing or until adequate vegetation or other stabilization measures have been established.

#### B. Post-Construction Phase BMPs

After Lee County Certificate of Compliance or SFWMD stormwater management system certification is completed in a particular phase of the development, the primary focus of the ELMP will be maintaining the stormwater management system lakes, since all runoff will be routed to these features for treatment. It is also anticipated that the Developer will establish and create an HOA and/or a CDD that will be responsible for the maintenance of all aspects of the stormwater management system including the lakes and associated stormwater conveyance and control components, in perpetuity. At a minimum, the operation and maintenance of the stormwater management system and water quality testing will require compliance with the terms and conditions as contained within the ELMP.

Additional details on BMPs, including the monitoring of surface water is provided in the Lake Maintenance Section (Section 3).

#### Section 3. Lake Maintenance

#### A. <u>General Provisions</u>

Proper lake maintenance is an integral aspect of this ELMP since stormwater runoff is directed to these features for treatment and attenuation. As previously described, the lakes will be excavated into the top of the Water Table Aquifer. As an added protection to underlying groundwater resources, the excavation of the lakes will not penetrate underlying clays or limestone, whichever is encountered first. In addition, the groundwater withdrawn from onsite wells will be used to augment five (5) of the lakes proposed for use in the master irrigation system as shown in **Figure 2**.

There are five proposed (5) master irrigation system pumps (SW-1, SW-2, SW-3, SW-4 and SW-5) that will "repump" groundwater supplies and retained stormwater (surface water) for irrigation of the residential development. The recycling of surface water quantities is expected to further improve water quality on the property and maintain high water quality in the lakes. The stormwater lakes must be maintained in perpetuity and the following management actions are proposed. Specific post-construction BMPs are also provided.

#### B. <u>Nuisance and Exotic Vegetation Control</u>

The HOA and/or CDD will be responsible for the removal (in perpetuity) of all nuisance and exotic vegetation from the stomwater management system as defined by the Lee County Land Development Code.

#### **Nuisance and Exotic Vegetation Control BMPs**

- 1. Lakes must be inspected annually and any prohibited vegetation must be removed by the use of hand-clearing or appropriate treatment. Only aquatic approved compounds may be utilized in the stormwater management system lakes.
- Herbicides and/or algaecides may only be applied by a licensed professional applicator, who meets the requirements of Lee County, and in accordance with manufacturer specifications. All applicable local, state and/or federal guidelines and requirements will also be followed.

### C. <u>Littoral Vegetation Preservation</u>

Littoral zone vegetation is required to be installed by the Developer and maintained by the HOA and/or CDD, in perpetuity, in all of the lakes within the project area, unless prohibited by the Federal Aviation Administration. Littoral zones provide habitats for wading birds, fish, and aquatic invertebrates. Littoral vegetation also helps to stabilize lake shorelines and prevents erosional problems.

#### **Littoral Vegetation Preservation BMPs**

- 1. Littoral plants that die will be replaced in accordance with Lee County Land Development Code requirements. The presence of littoral plants throughout the lakes is desirable and may help to improve the water quality within the lakes.
- 2. The spread of littoral plants will be encouraged throughout the designated planted littoral shelves.
- Mechanical trimming, mowing or the use of herbicides on desirable littoral plants will be prohibited. Any trimming or removal of vegetation required to promote the survival and viability of littoral vegetation will be performed by hand or by approved aquatic herbicides and methods.

#### D. Fertilizer Application

Strict adherence will be maintained with Lee County's Fertilizer Ordinance. Individual lot owners shall be prohibited from applying fertilizer to their lots. Any person(s) applying fertilizers must have received a limited certification in compliance with Florida Statute 482.1562 prior to application of any and all fertilizers. Additionally, fertilizer content and application rate must be in compliance with Lee County's Fertilizer Ordinance.

#### **Fertilizer Application BMPs**

- 1. All professional landscape businesses must register with Lee County prior to performing landscaping within unincorporated Lee County.
- 2. At least one (1) employee must be a Certified Professional Landscaper.
- 3. Proof of completion of a Lee County-approved BMP training program must be provided to the Division of Lee County Natural Resources.
- 4. At least one (1) BMP-trained employee must be on site while fertilizers are applied. A registration decal provided by the division must be displayed on all company vehicles.

#### E. Erosion Protection and Lake Bank Maintenance

Lake banks are generally susceptible to erosion due to overland flow of stormwater runoff, wave action, and the natural seasonal fluctuation of water levels. Accordingly, lake banks within the project are designed to minimize this potential for erosion.

#### **Erosion Protection and Lake Bank Maintenance**

- 1. Lake banks will be inspected annually to identify areas of erosion. Once identified, the erosion will be repaired and the source of erosion shall be eliminated if possible.
- 2. Where excessive erosion occurs, repair of the lake banks and/or enhancement of stabilization measures may be necessary.

### F. <u>Lake Education Program</u>

A narrative explaining the benefits of littoral vegetation, lake maintenance, and surface and groundwater quality will be made available to residents.

#### **Lake Education Program BMPs**

- 1. Lake experts will be encouraged to attend the HOA and/or CDD meetings annually to discuss the lake system operation and maintenance requirements.
- 2. Individual homeowners within the property will be informed that they are prohibited from removing or trimming littoral vegetation.
- 3. Additionally, the homeowners will be made aware of the extreme importance related to the elimination of any introduction of hazardous materials or substances into the lakes.

#### G. Pesticide, Herbicide or Fungicide Applications

All applications of pesticides, herbicides, algaecides and/or fungicides shall be applied by a licensed professional applicator, meet the requirements of Lee County, be applied in accordance with the manufacturer's specifications, and shall meet all applicable local, state and/or federal guidelines and requirements. Only approved aquatic herbicides may be used to treat the stormwater management system.

#### Pesticide, Herbicide, Algaecide or Fungicide Application BMPs

- Individual lot owners shall be prohibited from applying pesticides, herbicides and/or fungicides to their lots. These activities will only be performed by certified contractors approved by the HOA and/or CDD.
- The use of any chemical product in a manner that will allow airborne or waterborne entry of such products into surface water is prohibited. This rule shall not apply to the use of chemical agents by certified lake management specialists for the control of algae

and nuisance vegetation within the stormwater management system lakes. However, application of such agents shall be in compliance with the requirements of Lee County, applied in accordance with the manufacturer specifications, and meet all applicable local, state and/or federal guidelines and requirements.

Pesticides, fungicides, and herbicides will be used only in response to a specific problem
and in the manner and amount recommended by the manufacturer to address the
specific problem. Broad applications of pesticides, fungicides and herbicides as a
preventative measure is strongly discouraged.

### **Section 4. Surface Water Quality Monitoring Program**

#### A. General Data Quality Objectives

All water quality samples will be collected in accordance with Chapter 62-160, Florida Administrative Code (F.A.C.), and the FDEP's Standard Operating Procedures (SOPs) DEP-SOP-001/01 FQ 1000 Field Quality Control Requirements.

All surface water quality samples will be collected in accordance with FDEP-SOP-001/01 FS 2100 Surface Water Sampling. A summary of the proposed surface water sampling schedule is provided in the attached **Table 1**.

#### B. <u>Surface Water Monitoring Goals</u>

The purpose of the surface water monitoring program is to assure stormwater discharges from the subject property meet all applicable requirements of the SFWMD Environmental Resource Permit (ERP) program authorized pursuant to Part IV of Chapter 373, F.S. and all applicable requirements of Chapter 62-302, F.A.C., Surface Water Quality Standards before discharging any water off-site. Additionally, monitoring of the lakes will allow management actions to assure the lakes' health for the residents' enjoyment. Please note that additional surface water quality parameters may be required if the FDEP determines that the subwatershed or FDEP Water Body Identification (WBID) No. 3258C becomes impaired.

### C. <u>Surface Water Quality Monitoring</u>

Immediately after the operational completion of the proposed stormwater outfall lake (see Figure 2), quarterly (March, June, September and December) water quality sampling will be conducted at the discharge leaving the lake control structure(s). Surface water grab samples will be collected within the top 12 inches of the discharge water column per FDEP protocol. Surface water quality parameters shall be analyzed by a NELAC/TNI-certified laboratory. These parameters are listed below and summarized in

**Table 2**. Please note that if there is no stormwater discharge observed leaving the property at the time of sampling, the no-flow condition will be noted and no samples will be collected.

- Field Parameters: Depth of Water, Dissolved Oxygen Saturation (% and mg/L), pH,
   Temperature and Specific Conductivity.
- Lab Parameters: Total Nitrogen, Nitrite + Nitrate, Ammonium, Ammonia, Total Kjeldahl Nitrogen, Total Phosphorus, Chlorophyll-a, and Ortho-phosphate.

Quarterly water quality monitoring at the discharge outfall(s) shall be continued for a minimum of 5 years after operational completion of the stormwater outfall lake. After 5 consecutive years of testing, a request for discontinuation or reduction in the monitoring requirements will be proposed to the Lee County Natural Resources Department if it can be demonstrated that water quality is being maintained within applicable State standards.

#### D. Water Quality Data Reporting and Analysis

Surface water data will be submitted to Lee County Department Natural Resources staff in an approved electronic format within 30 days of receiving the water quality results from the contract laboratory. The submittal will include all field notes, field and laboratory water quality data results and all previously collected water quality data, i.e., period of record. The submittals will also include a brief narrative on the most recent sample collection, sample chain of custody, descriptions of any re-testing of erroneous values, and any water quality exceedances.

By March 1 of each year, a Water Quality Summary Report for the preceding calendar year shall be supplied to Lee County Natural Resources staff that summarizes the surface water testing results for the development. The results will include a summary table that lists all the field and laboratory parameters for the monitoring location. Laboratory parameter concentrations that fall below the Practical Quantitation Limit (PQL) for that parameter will be reported with no value; however a value qualifier of "I" (between the MDL and PQL) or "U" (below the MDL) will be included in the table.

All water quality data for the analytes listed in **Table 2** that are detected in concentrations above the laboratory PQL will be reviewed, graphed and statistically analyzed for trends and exceedances above two (2) standard deviations of the mean of all values. Any reported concentrations above the Maximum Contamination Level (MCL) will be clearly identified as well as remedial actions that were used to timely reduce that particular analyte's concentration. Details regarding remedial actions are provided in the Remedial Actions section of this ELMP

#### E. Remedial Actions

In the unforeseen event that significant surface water impacts (as defined below) are identified as a result of a hydrocarbon spill or pesticide/herbicide application at the property, the Developer or designee of the HOA and/or CDD will notify the Director of the Natural Resources Division within no less than 12 hours (or next business day). If a spill or release "presents an immediate threat to human health and/or the environment" the FDEP Office of Emergency Response ("OER") will be contacted within 24 hours. Guidance outlining the definition of a release as well as reporting procedures is presented in the OER Web page located at:

#### http://www.dep.state.fl.us/per/reportable incident.htm.

The Developer or their successor(s) will coordinate contamination assessment and remediation efforts with Lee County and will comply with applicable local, state, and federal permitting requirements. The initial phase of the remediation plan may consist of temporary monitoring wells installed for short-term temporal monitoring of potential subsurface impacts and to evaluate the horizontal and vertical distribution of the impacted area. Based on the findings of the initial phase, if necessary, a comprehensive assessment may be required.

#### In Conclusion

The information and technical requirements in this ELMP are provided to the Developer or designee of the HOA and/or CDD to assist with the understanding of the importance of a well maintained and fully functioning stormwater management system. The lakes within the development are not only necessary but can be a source of beauty and enjoyment for the residents while maintaining the value and integrity of the water resources.



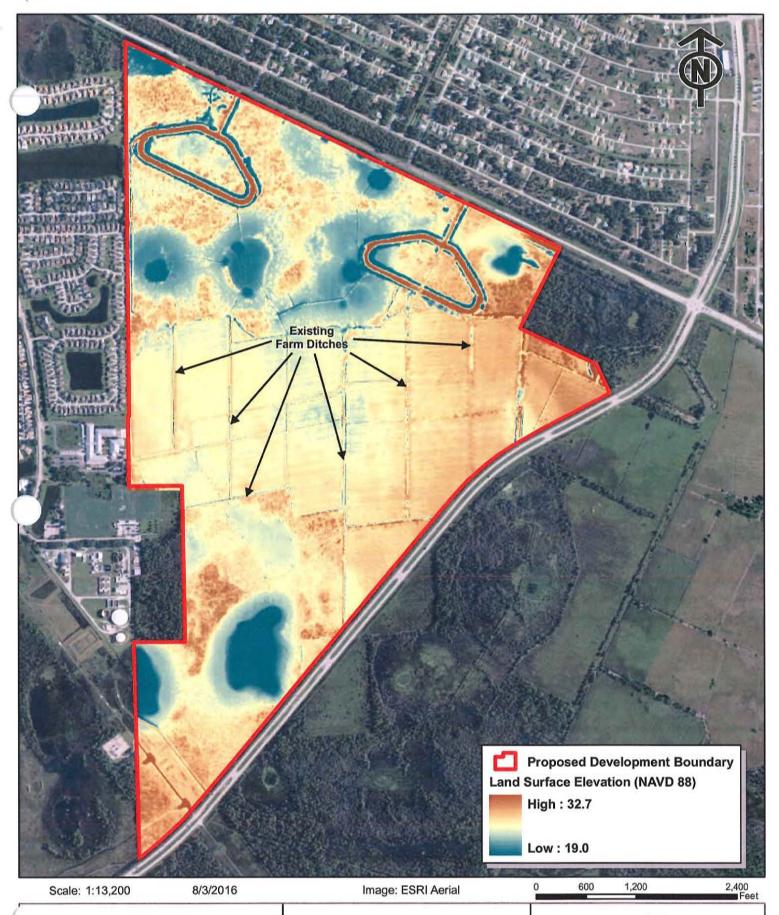
**Table 1**Water Quality Sampling Schedule

Date	Sample Type	Sample Location		
January-31	N/A	N/A		
February-28	N/A	N/A		
March-31	Surface Water	Project Outfall		
April-30	N/A	N/A		
May-31	N/A	N/A		
June-30	Surface Water	Project Outfall		
July-31	N/A	N/A		
August-31	N/A	N/A		
September-30	Surface Water	Project Outfall		
October-31	N/A	N/A		
November-30	N/A	N/A		
December-31	Surface Water	Project Outfall		

**Table 2**Surface Water Quality Analytes and Schedule for Sampling

Field Parameters								
Parameter	Units	MDL	Sampling Frequency					
Depth of Water	Feet	NA	Quarterly					
Dissolved Oxygen	mg/L	NA	Quarterly					
рН	SU	NA	Quarterly					
Temperature	Deg C	NA	Quarterly					
Specific Conductivity	μs/cm	NA	Quarterly					
Laboratory Parameters (Nutrients)								
Total Nitrogen	mg/L	CALC	Quarterly					
Nitrite + Nitrate	mg/L	0.004	Quarterly					
Ammonium	mg/L	CALC	Quarterly					
Ammonia	mg/L	0.012	Quarterly					
Total Kjeldahl Nitrogen	mg/L	0.05	Quarterly					
Total Phosphorus	mg/L	0.008	Quarterly					
Chlorophyll-a	mg/L	0.62	Quarterly					
Ortho-phosphate	mg/L	0.002	Quarterly					





# Figure 1

Lennar Corporation - Timber Creek
Site Topography

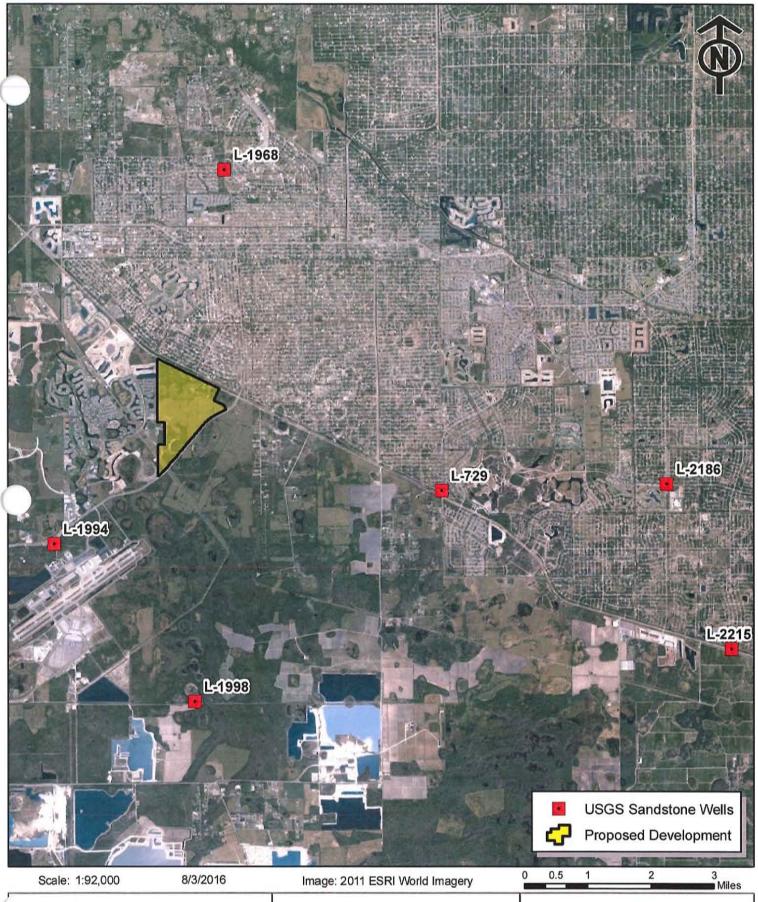




# Figure 2

Lennar Corporation - Timber Creek
Proposed Lakes and
Outfall Location





# Figure 1

Lennar Corp. - Timber Creek
Nearby USGS Monitor Wells



To increase surface and groundwater storage, which could diminish the affects of water use and drought, the SFWMD Big Cypress Basin Capital Improvement Program has made structural, operational, and monitoring improvements to the Golden Gate Canal System to retain stormwater within the canal system.

#### Intermediate Aquifer System Water Levels

In the LWC Planning Area, the IAS includes the Sandstone and Mid-Hawthorn aquifers (see Chapter 9 of the Support Document). There appears to be a slight overall downward trend in water levels over the last 10 years, with some evidence of a slight rise in water levels over the last three years. Figure 9 shows Sandstone aquifer water levels in southern Lehigh Acres. Since 2005, record low water levels have occurred for the period of record in Well L-729 and other Sandstone aquifer wells in Lehigh Acres (Figure 9). These reduced water levels caused some DSS wells to become inoperable. During the 2007 drought, 64 percent of the 526 replacement wells permitted by Lee County were in Lehigh Acres. However, Sandstone aquifer water levels have recovered in wellfield areas where Lee County Utilities has reduced its withdrawals from this aquifer (Figure 9). Overall, DSS and other withdrawals from the Sandstone aquifer have increased in the LWC Planning Area.

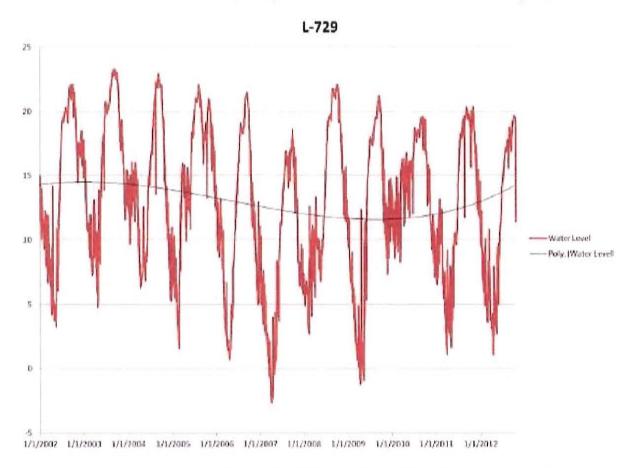


Figure 9. Sandstone aquifer water levels at Well L-729 in southern Lehigh Acres.

8/3/2016

Image: From Chapter 3 and Page 52 of the SFWMD Lower West Coast Water Supply Plan

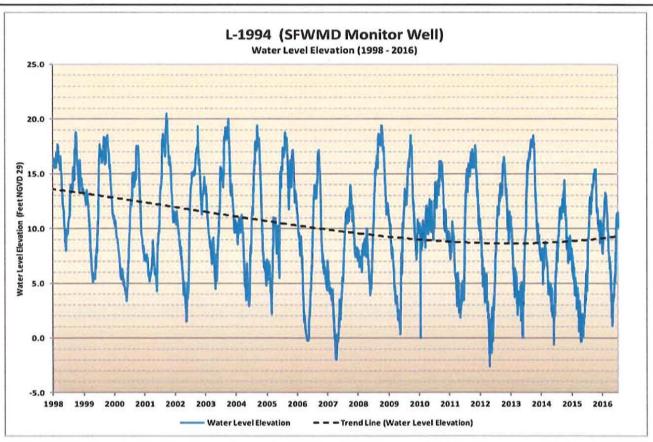
pgressive Water Resources has provided the images or data presented in this map for informational purposes only. This data is not intended to be used in lieu of official survey data provided by a Professional Surveyor licensed by the State of Florida

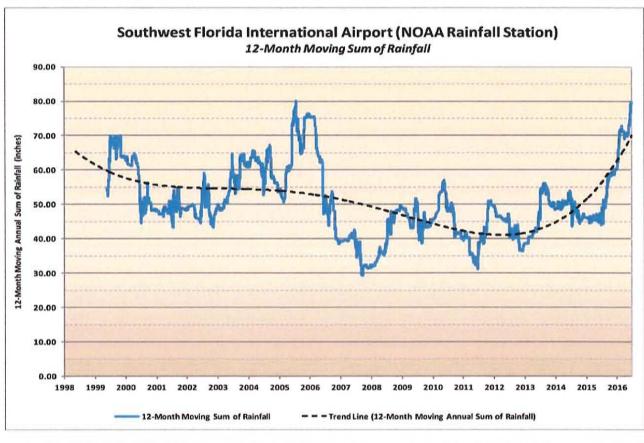
## Figure 2

Lennar Corp. - Timber Creek

USGS L-729 Water Levels



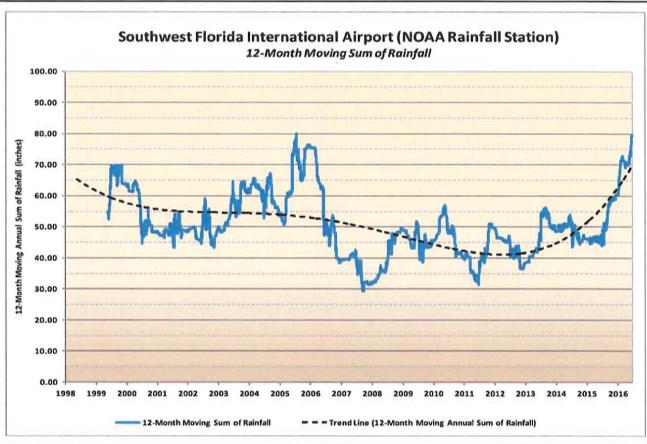




# Figure 3

Lennar Corp. - Timber Creek Sandstone Aquifer Water Levels vs Rainfall near Timber Creek





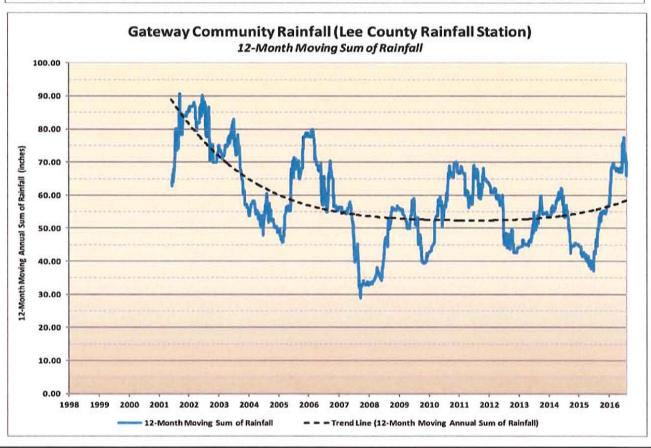


Figure 4
Lennar Corp. - Timber Creek
Rainfall Station Comparison





SF 62 (torner tillian road)

Moving Jago 

#1

#8

ISM001

#8

ISM004

#3

Northwest Gunnery Range (8LL2407)
Approximate Length 4100 feet Samples +/-135 feet apart
1944 Aerial Photograph (UFDC website)

Central Gunnery Range (8LL2408)
Approximate Length 4100 feet Samples +/-135 feet apart
1944 Aerial Photograph (UFDC website)

			il Sample Location per composite sample)
$\oplus$	- Composite IS	SM Soil Sample	
	side Top Slope 003 & ISM007)		Inside Top Slope (ISM002 & ISM003)
	Bottom Slope 04 & ISM008)	Berm	Inside Bottom Slop (ISM001 & ISM005)

Parameter	Unit	ISM001	ISM002	ISM003	ISM004	ISM005	ISM006	ISM007	ISM008	SCTL		
										Residential	Commercial / Industrial	Leachability
Beryllium	mg/kg	(0.27)U	120	1,400	63							
Chromium	mg/kg	0.76i	0.88i	0.48i	0.34i	1.4	1.8	1.4	1.5	210	470	38
Nickel	mg/kg	(0.31)U	(0.31)U	(0.31)U	(0.31)U	0.44i	0.36i	(0.31)U	(0.31)U	340**	35,000	130
Copper	mg/kg	31	17	0.21i	1.7	4.0	6.2	3.4	1.2	150**	89,000	***
Zinc	mg/kg	2.00i	1.90i	(0.49)U	(0.49)U	1.6Di	0.84i	0.87i	0.70i	26000	630,000	***
Arsenic	mg/kg	0.16i	0.11	(0.082)U	(0.082)U	0.841	0.13i	0.084i	(0.08)U	2.1	12	FIF
Selenium	mg/kg	(0.47)U	(0.47)U	(0.47)U	(0.47)U	(0.47)U	(0.47)U	(D.47)U	(0.47)U	440	11,000	5.2
Silver	mg/kg	(0.070)U	410	8,200	17							
Cadmium	mg/kg	(0.092)U	(0.093)U	(0.092)U	(0.092)U	(0.093)U	(0.093)U	(D.093)U	(0.093)U	82	1,700	7.5
Antimony	mg/kg	(0.058)U	(0.058)U	(0.058)U	(0.058)U	(0.058)U	(0.058)U	(D.058)U	(0.058)U	27	370	5.4
Thallium	mg/kg	(0.11)U	6.1	150	2.8							
Lead	mg/kg	45	56	0.38i	1.2	18	20	13	5.3	400	1,400	717

Scale: 1:5,000 8/3/2016 Image: Taken from GHD Figure 3, Phase 1 Environmental Site Assessment/Limited Phase 2 Assessment

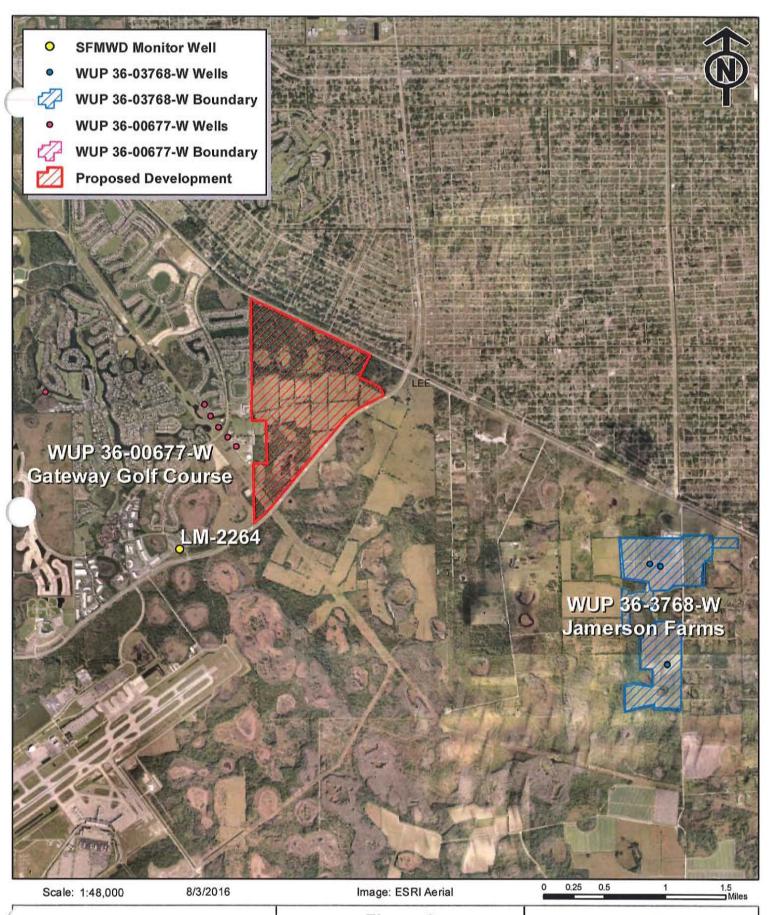
Figure 5

Lennar Corporation - Timber Creek

GHD Soil Sample Locations for Triangular Gunnery Berms



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## Figure 6 nar Corp. - Timber C

Lennar Corp. - Timber Creek Hydrogeologic Data Locations



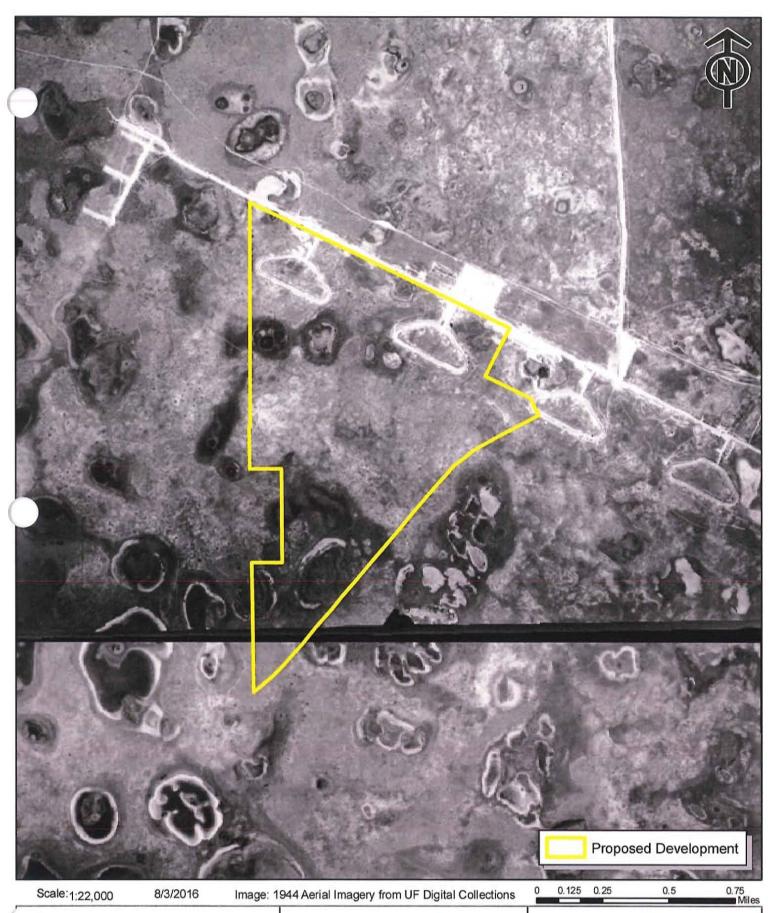


Figure 7
Lennar Corp. - Timber Creek
1944 Aerial Imagery



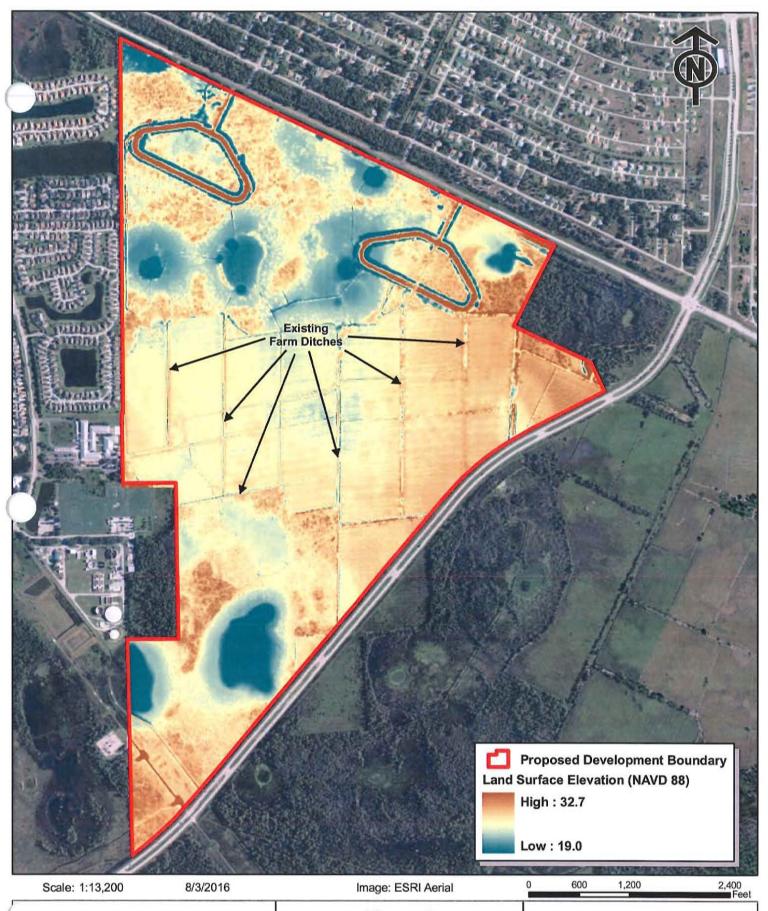
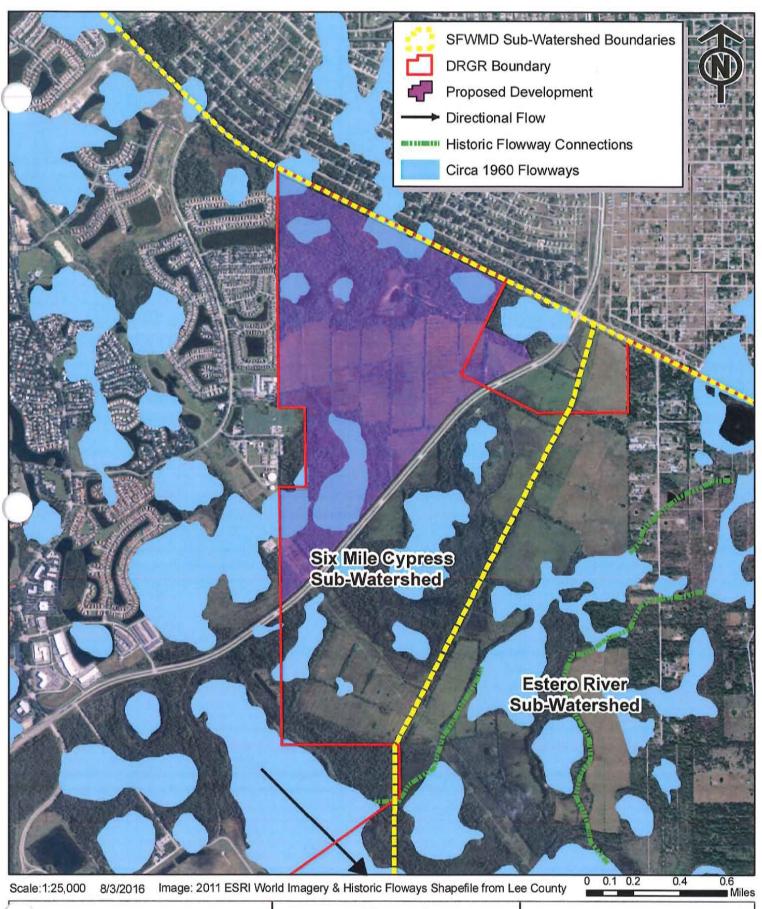


Figure 8
Lennar Corp. - Timber Creek
Site Topography

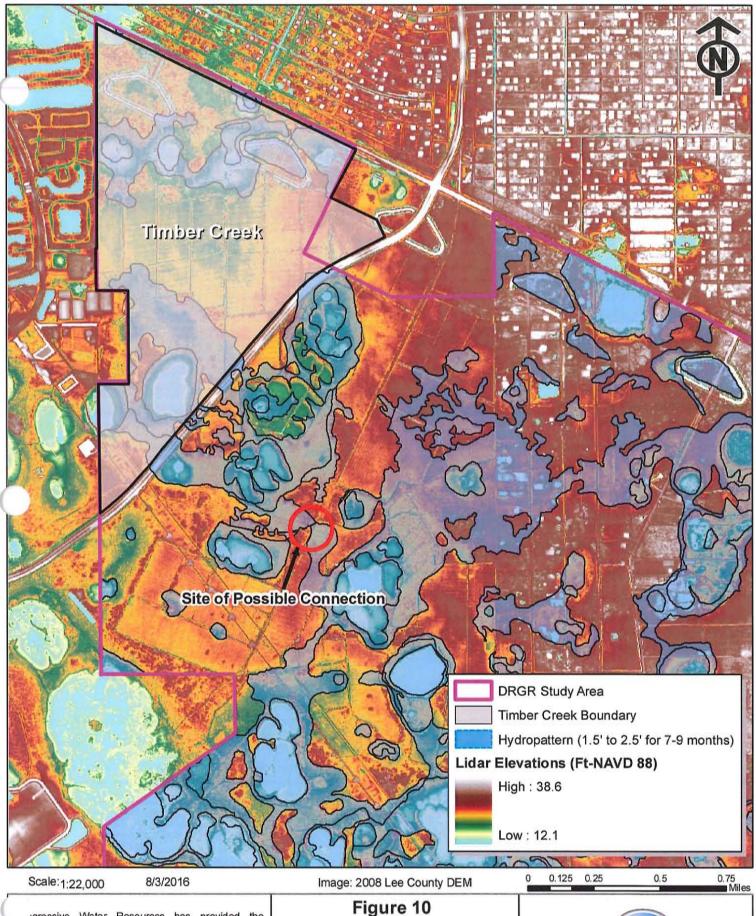




# Figure 9

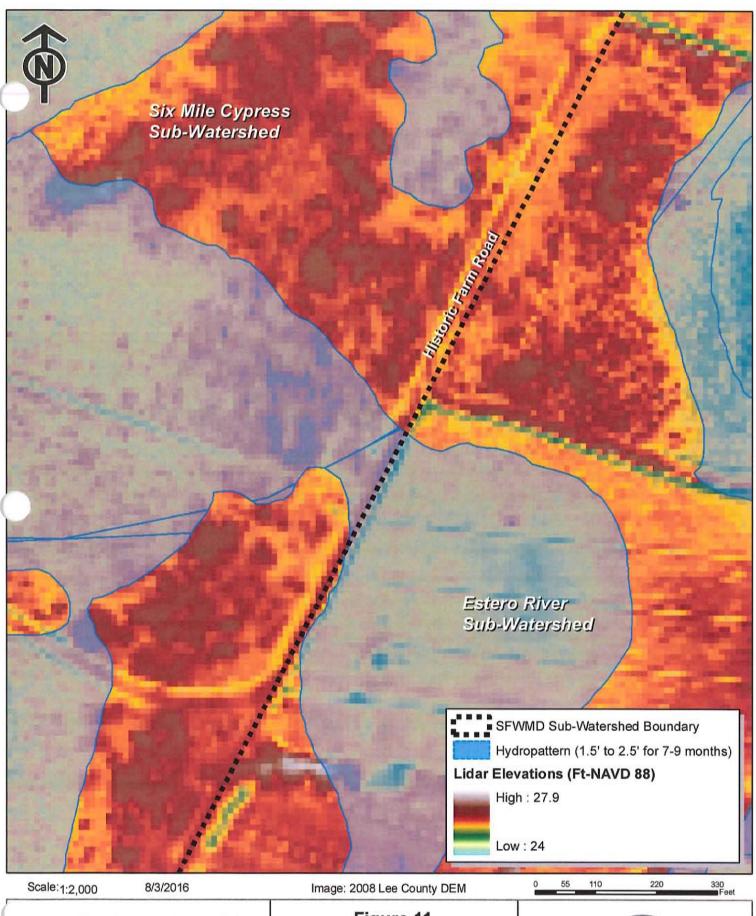
Lennar Corp. - Timber Creek
Lee County Major Flowways





Lennar Corp. - Timber Creek Regional Topography & Hydropatterns





# Figure 11

Lennar Corp. -Timber Creek Sub-Watershed Divide Detail





Figure 12
Lennar Corporation - Timber Creek
Proposed Lakes and

**Outfall Location** 





LANDSCAPE ARCHITECTS

Phone (239) 337-3993 | Toll Free (866) 337-7341 www.morris-depew.com

# Timber Creek

# Comprehensive Plan Amendment Application 1st Insufficiency Response

### **Transportation**

- Table 1a- Level of Service Thresholds 2040 Analysis
- Table 2a- 2040 Roadway Link Level of Service Calculations
- Table 3a- Peak Direction Project Traffic vs. LOS C Link Volumes
- Table 4a- 5 Year Level of Service Analysis
- Table 5a- 2040 Roadway Link Level of Service Thresholds:
   S.R. 82 LOS Based on Class I Arterial Service Volumes
- Table 6a- 2040 Roadway Link Level of Service Calculations:
   S.R.82 LOS Based on Class I Arterial Service Volumes

Fort Myers | Gainesville | Tallahassee | Destin

#### TABLE 1A LEVEL OF SERVICE THRESHOLDS 2040 ANALYSIS

Revised 8-11-2016

#### **GENERALIZED SERVICE VOLUMES**

	ROADWA	AY SEGMENT	2040	E + C NETWORK LANES	LOS A	LOS B	LOS C	LOS D	LOS E
ROADWAY	FROM	<u>10</u>	# Lanes	Roadway Designation	VOLUME	VOLUME	<u>VOLUME</u>	VOLUME	<u>VOLUME</u>
Daniels Pkwy	Fiddlesticks	I-75	6LD	Class I - Arterial	0	430	3,050	3,180	3,180
	I <b>-</b> 75	Treeline Ave.	6LD	Class I - Arterial	0	430	3,050	3,180	3,180
	Treeline Ave.	Gateway Blvd.	6LD	Class I - Arterial	0	430	3,050	3,180	3,180
	Gateway Blvd.	Project	6LD	Class I - Arterial	0	430	3,050	3,180	3,180
	Project	SR 82	6LD	Class I - Arterial	0	430	3,050	3,180	3,180
								1	
Gunnery Road	SR 82	23rd St.	4LD	Class I - Arterial	0	260	1,840	1,960	1,960
	23rd St	8th St. W.	4LD	Class I - Arterial	0	260	1,840	1,960	1,960
	8th St. W.	Lee Blvd.	4LD	Class I - Arterial	0	260	1,840	1,960	1,960
	Lee Blvd.	Buckingham Rd.	2LN	Class I - Arterial	0	140	800	860	860
									i
SR 82	Buckingham Rd.	Lee Blvd.	6LD	Class I - Arterial	0	0	2940	3020	3020
	Lee Blvd.	Gateway Blvd.	6LD	Class I - Arterial	0	0	2940	3020	3020
	Gateway Blvd.	Site Access	6LD	Uninterrupted Flow Hightway	0	2720	3840	4860	5380
	Site Access	Daniels Pkwy	6LD	Uninterrupted Flow Hightway	1600	2720	3840	4860	5380
	Daniels Pkwy	Alabama Rd.	6LD	Uninterrupted Flow Hightway	1600	2720	3840	4860	5380
	Alabama Rd.	Homestead Rd.	6LD	Uninterrupted Flow Hightway	1600	2720	3840	4860	5380
	Homestead Rd.	Alex Bell.	6LD	Uninterrupted Flow Hightway	1600	2720	3840	4860	5380
Treeline Ave.	Daniels Pkwy	Airport Connector	4LD	Class I - Arterial	0	260	1,840	1,960	1,960
I-75	Daniels Pkwy	Alico Rd.	6LF	Freeway	0	3360	4580	5500	6080
Lee Blvd.	Treeline Ave.	SR 82	6LD	Class I - Arterial	0	410	2,840	2,940	2,940
	Gunnery Rd.	Sunshine Blvd.	6LD	Class I - Arterial	0	410	2,840	2,940	2,940
			- Denote	es the LOS Standard for e	ach road	way segr	nent		

Level of Service Thresholds taken from Lee County Generalized LOS Tables and FDOT Q/LOS Manual - Table 7

TABLE 2A
2040 ROADWAY LINK LEVEL OF SERVICE CALCULATIONS
TIMBER CREEK

TOTAL PM PEAK HOUR PROJEC 1025 VPH IN= 646 OUT= 379

Revised 8-11-2016

											2040 BACKG	ROUND			2040 BACKGF	OUND PLUS PROJ
			2040			AADT		100TH HIGHEST		PM PK HR	PEAK DIRE	CTION	PROJECT	PK DIR	PEAK	DIRECTION
	ROADWAY	SEGMENT	FSUTMS	LCDOT PCS OF F	PEAKSEASON	BACKGROUND	K-100	HOUR PK DIR	D	PEAK	TRAFFIC VOLUM	IES & LOS	TRAFFIC	PM PROJ	TRAFFIC V	OLUMES & LOS
ROADWAY	FROM	TO	PSWDT	FDOT SITE #	FACTOR	TRAFFIC	FACTOR	2-WAY VOLUME	FACTOR	DIRECTION	VOLUME	LOS	DIST.	TRAFFIC	VOLUME	LOS
Daniels Pkwy	Fiddlesticks	1-75	90,024	31	1.087	82,819	0.0950	7,868	0.54	EAST	4249	F	10%	65	4,314	F
	1-75	Treeline Ave.	83,993	52	1.130	74,330	0.1060	7,879	0.58	EAST	4570	F	20%	129	4,699	F
	Treeline Ave.	Gateway Blvd.	71,482	52	1.130	63,258	0.1060	6.705	0.58	EAST	3889	F	38%	245	4,134	F
	Gateway Blvd.	Project	81,132	48	1,107	73,290	0.1030	7,549	0.6	EAST	4529	F	44%	284	4,813	F
	Project	SR 82	81,132	48	1.107	73,290	0.1030	7,549	0.6	EAST	4529	F	40%	258	4,787	F
Gunnery Road	SR 82	23rd St.	51,725	21	1.053	49,122	0.085	4,175	0.62	NORTH	2589	F	18%	116	2,705	F
	23rd St	8th St. W.	36,138	21	1.053	34,319	0.085	2,917	0.62	NORTH	1809	С	17%	110	1,919	D
	8th St. W.	Lee Blvd.	33,104	21	1.053	31,438	0.085	2,672	0.62	NORTH	1657	С	15%	97	1,754	С
	Lee Blvd.	Buckingham Rd	18,845	22	1.027	18,350	0.092	1,68B	0.62	NORTH	1047	F	3%	19	1,066	F
SR 82	Buckingham Rd.	Lee Blvd.	72,552	21	1.053	68,900	0.085	5,857	0.62	EAST	3631	F	25%	162	3,793	F
	Lee Blvd.	Gateway Blvd.	70,515	21	1.053	66,966	0.085	5,692	0.62	EAST	3529	F	35%	226	3,755	F
	Gateway Blvd.	Site Access	50,771	21	1.053	48,216	0.085	4,098	0.62	EAST	2541	В	35%	226	2,767	С
	Site Access	Daniels Pkwy	36.120	21	1.053	34,302	0.085	2,916	0.62	EAST	1808	В	35%	226	2,034	В
	Daniels Pkwy	Alabama Rd.	70.050	21	1.053	66,524	0.085	5,655	0.62	EAST	3506	С	3%	19	3,525	С
	Alabama Rd.	Homestead Rd.	66,727	21	1.053	63,368	0.085	5,386	0.62	EAST	3339	С	3%	19	3,358	С
	Homestead Rd.	Alex Bell.	44,321	21	1.053	42,090	0.085	3,578	0.62	EAST	2218	В	2%	13	2,231	В
Treeline Ave.	Daniels Pkwy	Airport Connect	32,067	61	1.24	25.860	0.099	2,560	0.59	NORTH	1510	С	15%	97	1,607	С
1-75	Daniels Pkwy	Alico Rd.	122,721	120184	0.9	110,449	0.09	9,940	0.58	NORTH	5765	E	7%	45	5,810	E
																_
Lee Blvd.	Treeline Ave.	SR 82	83898	22	1.027	81,692	0.092	7,516	0.62	EAST	4660	F	10%	65	4,725	F
	Gunnery Rd.	Sunshine Blvd.	76587	22	1.027	74,574	0.092	6,861	0.62	EAST	4254	F	13%	84	4,338	F

# TABLE . PEAK DIRECTION PROJECT TRAFFIC VS. LOS C LINK VOLUMES TIMBER CREEK FUTURE LAND USE AMENDMENT - 5-YEAR ANALYSIS

TOTAL AM PEAK HOUR PROJECT TRAFFIC = 889 VPH IN= 222 OUT= 667

TOTAL PM PEAK HOUR PROJECT TRAFFIC = 1025 VPH IN= 646 OUT= 379

Revised 8-11-2016

								PROJECT				
		# of	LOS A	LOS B	LOS C	LOS D	LOS E	TRAFFIC	NEW PRO	J TRAFFIC	PROJ/	Significant
ROADWAY	SEGMENT	<b>LANES</b>	VOLUME	VOLUME	VOLUME	VOLUME	VOLUME	DISTRIBUTION	AM PEAK	PM PEAK	LOS C	<u>Impact</u>
Daniels Pkwy	W. of I-75	6LD	0	2,470	3,000	3,000	3,000	10%	67	65	2.22%	
	W. of Treeline Ave.	6LD	2,610	3,180	3,180	3,180	3,180	20%	133	129	4.19%	
	W. of Gateway Blvd.	6LD	2,610	3,180	3,180	3,180	3,180	38%	253	245	7.97%	
	W. of Project	4LD	1,680	2,120	2,120	2,120	2,120	44%	293	284	13.84%	Yes
	W. of SR 82	4LD	1,680	2,120	2,120	2,120	2,120	40%	267	258	12.58%	Yes
								_				
Gunnery Road	N. of SR 82	4LD	0	1,920	1,920	1,920	1,920	18%	120	116	6.25%	
·	N. of 23rd Street	4LD	0	1,920	1,920	1,920	1,920	17%	113	110	5.91%	
	N. of 8th St. W.	4LD	0	1,920	1,920	1,920	1,920	15%	100	97	5.21%	
	N, of Lee Bkvd	2LN	0	610	1,020	1,020	1,020	3%	20	19	1.96%	
SR 82	N. of Lee Blvd.	6LD	130	2,820	2,820	2,820	2,820	25%	167	162	5.91%	
	N. of Gateway Blvd.	6LD	130	2,820	2,820	2,820	2,820	35%	233	226	8.28%	
	N. of Site	6LD	130	2,820	2,820	2,820	2,820	35%	233	226	8.28%	
	N. of Daniels Pkw	6LD	130	2,820	2,820	2,820	2,820	35%	233	226	8.28%	
	N. of Alabama Rd.	2LN	130	450	860	1,210	1,370	3%	20	19	2.33%	
	N. of Homestead Rd.	4LD	0	1,810	2,560	3,240	3,590	3%	20	19	0.78%	
	N. of Alex Bell	4LD	0	1,810	2,560	3,240	3,590	2%	13	13	0.52%	
				•		-		_				
Treeline Ave.	S. of Daniels Pkwy	4LD	1,260	1,960	1,960	1,960	1,960	15%	100	97	5.10%	
1-75	S. of Daniels Pkwy	6LF	0	3,360	4,580	5,500	6,080	7%	47	45	1.02%	
, , ,	,			•								
Lee Blvd.	W. of SR 82	6LD	0	410	2,840	2,940	2,940	10%	67	65	2.35%	
Lee Divu.	E. of Gunnery Rd.	6LD	820	2,940	2,940	2,940	2,940	13%	87	84	2.95%	
	E. of Gurinery Ru.	פנט	020	2,340	2,340	4,070	2,070	1070	٠.	٠.	÷.0070	

The Level of Service thresholds for all roadways were obtained from the Lee County Link Specific Service Volume Tables

- Denotes a Significantly Impacted roadway segment (Defined as project traffic exceeding 10% of LOS "C" Service Volume)

Daniels Pkwy & Gunnery Rd are Controlled Access Facilities per Lee County BOCC

Service Volumes for SR 82 & I-75 were taken from FDOT Q/LOS Manual - Table 7

- Denotes Recommended Minimum LOS Volume per Lee Plan

# TABLE 4A TIMBER CREEK 5-YEAR LEVEL OF SERVICE ANALYSIS

2014

2022

FOTAL AM PEAK HOUR PROJECT TRAFFIC: 889 VPH IN= 222 OUT= 667
FOTAL PM PEAK HOUR PROJECT TRAFFIC: 1025 VPH IN= 646 OUT= 379

Revised 8-11-2016

2022

2022

							PK HR	PK HR PK S	EASON	PROJECT			BCKGR	ND	вскс	RND	Significant
		SITE/	BASE YR	2014	YRS OF	ANNUAL	PK SEASON	PEAK DIRE	CTION	TRAFFIC	AM PROJ	PM PROJ	+ AM PF	SOJ	+ PM P	ROJ	& Adverse
ROADWAY	SEGMENT	STATION	ADT	ADT	GROWTH	RATE	PEAK DIR.	VOLUME	LOS	DISTRIBUTION	TRAFFIC	TRAFFIC	VOLUME	<u>LOS</u>	VOLUME	LOS	<u>lmapct</u>
Daniels Pkwy	W. of I-75	264	56,500	48,700	9	1.00%	2,494	2,701	С	10%	67	65	2,767	С	2,765	С	
	W. of Treeline Ave.	52	54,200	47,100	9	1.00%	2,506	2,714	В	20%	133	129	2,847	В	2,843	В	
	W. of Gateway Blvd.	48	31,800	38,100	9	2.03%	2,293	2,693	В	38%	253	245	2,946	В	2,938	В	
	W. of Project	524	17,500	28,200	9	5.44%	1,585	2,422	F	44%	293	284	2,716	F	2,706	F	No
	W. of SR 82	524	17,500	28,200	9	5.44%	1,585	2,422	F	40%	267	258	2,689	F	2,681	F	No
Gunnery Road	N. of SR 82	290	15,400	18,300	9	1.94%	1,442	1,681	В	18%	120	116	1,801	В	1,797	В	
	N. of 23rd Street	290	15,400	18,300	9	1.94%	1,442	1,681	В	17%	113	110	1,794	В	1,791	В	
	N. of 8th St. W.	290	15,400	18,300	9	1.94%	1,442	1,681	В	15%	100	97	1,781	В	1,778	В	
	N, of Lee Bkvd	289	14,600	13,600	9	1.00%	732	793	С	3%	20	19	813	С	812	С	
SR 82	N. of Lee Blvd.	120021	21,000	25,500	9	2.18%	1,342	1,595	В	25%	167	162	1,762	В	1,756	В	
	N. of Gateway Bivd.	120077	19,600	27,000	9	3.62%	1,467	1,950	В	35%	233	226	2,184	В	2,176	В	
	N. of Site	120108	10,700	15,100	9	3.90%	799	1,085	В	35%	233	226	1,319	В	1,311	В	
	N. of Daniels Pkw	120108	10,700	15,100	9	3.90%	799	1,085	8	35%	233	226	1,319	В	1,311	В	
	N. of Alabama Rd.	21	18,000	25,100	9	3.76%	1,370	1,841	F	3%	20	19	1,861	F	1,860	F	No
	N. of Homestead Rd.	120068	10,300	10,300	9	1.00%	530	574	В	3%	20	19	594	В	593	В	
	N. of Alex Bell	120068	10,300	10,300	9	1.00%	463	501	В	2%	13	13	515	В	514	В	
Treeline Ave.	S. of Daniels Pkwy	48	31,800	38,100	9	2.03%	1,352	1,588	В	15%	100	97	1,688	В	1,685	В	
I-75	S. of Daniels Pkwy	120184	67,723	77,211	4	3.33%	4,058	5,275	D	7%	47	45	5,321	D	5,320	D	
Lee Blvd.	W. of SR 82	246	34,900	39,500	9	1.39%	2,127	2,374	С	10%	67	65	2,441	С	2,439	С	
	E. of Gunnery Rd.	48	31,800	38,100	9	2.03%	1,601	1,880	В	13%	87	84	1,967	В	1,964	В	

<sup>1</sup>The 2014 peak hour, peak season, peak direction traffic volumes were taken from the 2015 Lee County Concurrency Report.

For I-75, FDOT Traffic Count Information used. Daily traffic volume factored by K & D Factors to determine peak direction volume

Base Year and 2014 ADT volumes taken from Lee County Traffic Count Report & FDOT Traffic Information Online

# TABLE 5A LEVEL OF SERVICE THRESHOLDS 2040 ANALYSIS S.R. 82 LOS BASED ON CLASS I ARTERIAL SERVICE VOLUMES

#### **GENERALIZED SERVICE VOLUMES**

	ROADWA	AY SEGMENT	2040 E	+ C NETWORK LANES	LOS A	LOS B	LOS C	LOS D	LOS E
ROADWAY	FROM	<u>TO</u>	# Lanes	Roadway Designation	VOLUME	VOLUME	VOLUME	VOLUME	VOLUME
Daniels Pkwy	Fiddlesticks	1-75	6LD	Class I - Arterial	0	430	3,050	3,180	3,180
	1-75	Treeline Ave.	6LD	Class I - Arterial	0	430	3,050	3,180	3,180
	Treeline Ave.	Gateway Blvd.	6LD	Class I - Arterial	0	430	3,050	3,180	3,180
	Gateway Blvd.	Project	6LD	Class I - Arterial	0	430	3,050	3,180	3,180
	Project	SR 82	6LD	Class I - Arterial	0	430	3,050	3,180	3,180
Gunnery Road	SR 82	23rd St.	4LD	Class I - Arterial	0	260	1,840	1,960	1,960
	23rd St	8th St. W.	4LD	Class I - Arterial	0	260	1,840	1,960	1,960
	8th St. W.	Lee Blvd.	4LD	Class I - Arterial	0	260	1,840	1,960	1,960
	Lee Blvd.	Buckingham Rd.	2LN	Class I - Arterial	0	140	800	860	860
SR 82	Buckingham Rd.	Lee Blvd.	6LD	Class I - Arterial	0	0	2940	3020	3020
	Lee Blvd.	Gateway Blvd.	6LD	Class I - Arterial	0	0	2940	3020	3020
	Gateway Blvd.	Site Access	6LD	Class I - Arterial	0	0	2940	3020	3020
	Site Access	Daniels Pkwy	6LD	Class I - Arterial	0	0	2940	3020	3020
	Daniels Pkwy	Alabama Rd.	6LD	Class I - Arterial	0	0	2940	3020	3020
	Alabama Rd.	Homestead Rd.	6LD	Class I - Arterial	0	0	2940	3020	3020
	Homestead Rd.	Alex Bell.	6LD	Class I - Arterial	0	0	2940	3020	3020
Treeline Ave.	Daniels Pkwy	Airport Connector	4LD	Class I - Arterial	0	260	1,840	1,960	1,960
I-75	Daniels Pkwy	Alico Rd.	6LF	Freeway	0	3360	4580	5500	6080
Lee Blvd.	Treeline Ave.	SR 82	6LD	Class I - Arterial	0	410	2,840	2,940	2,940
	Gunnery Rd.	Sunshine Blvd.	6LD	Class I - Arterial	0	410	2,840	2,940	2,940
		Ī	- Denote	s the LOS Standard for	each road	way segr	nent	•	

Level of Service Thresholds taken from Lee County Generalized LOS Tables and FDOT Q/LOS Manual - Table 7

# TABLE 6A 2040 ROADWAY LINK LEVEL OF SERVICE CALCULATIONS TIMBER CREEK S.R. 82 LOS BASED ON CLASS I ARTERIAL SERVICE VOLUMES

TOTAL PM PEAK HOUR PROJEC 1025 VPH IN= 646 OUT= 379

											2040 BACKG	ROUND			2040 BACKGR	OUND PLUS PROJ
			2040			AADT		100TH HIGHEST		PM PK HR	PEAK DIRE	CTION	PROJECT	PK DIR	PEAK	DIRECTION
	ROADWAY	SEGMENT	FSUTMS	LCDOT PCS OF	PEAKSEASON	BACKGROUND	K-100	HOUR PK DIR	D	PEAK	TRAFFIC VOLU	MES & LOS	TRAFFIC	PM PROJ	TRAFFIC V	DLUMES & LOS
ROADWAY	FROM	<u>TO</u>	PSWDT	FDOT SITE #	FACTOR	TRAFFIC	FACTOR	2-WAY VOLUME	FACTOR	DIRECTION	VOLUME	LOS	DIST.	TRAFFIC	VOLUME	LOS
Daniels Pkwy	Fiddlesticks	1-75	90,024	31	1.087	82,819	0.0950	7,868	0.54	EAST	4249	F	10%	65	4,314	F
	1-75	Treeline Ave.	83,993	52	1.130	74,330	0.1060	7,879	0.58	EAST	4570	F	20%	129	4,699	F
	Treeline Ave.	Gateway Blvd.	71,482	52	1.130	63,258	0.1060	6,705	0.58	EAST	3889	F	38%	245	4,134	F
	Gateway Blvd.	Project	81,132	48	1.107	73,290	0.1030	7,549	0.6	EAST	4529	F	44%	284	4.813	F
	Project	SR 82	81,132	48	1.107	73,290	0.1030	7,549	0.6	EAST	4529	F	40%	258	4,787	F
Gunnery Road	SR 82	23rd St.	51,725	21	1.053	49,122	0.085	4,175	0.62	NORTH	2589	F	18%	116	2,705	F
	23rd St	8th St. W.	36,138	21	1.053	34,319	0.085	2,917	0.62	NORTH	1809	С	17%	110	1,919	D
	8th St. W.	Lee Blvd.	33,104	21	1.053	31,438	0.085	2,672	0.62	NORTH	1657	С	15%	97	1.754	С
	Lee Blvd.	Buckingham Rd	18,845	22	1.027	18,350	0.092	1,688	0.62	NORTH	1047	F	3%	19	1,066	F
SR 82	Buckingham Rd.	Lee Blvd.	72,552	21	1.053	68,900	0.085	5,857	0.62	EAST	3631	F	25%	162	3,793	F
	Lee Blvd.	Gateway Blvd.	70,515	21	1.053	66,966	0.085	5,692	0.62	EAST	3529	F	35%	226	3,755	F
	Gateway Blvd.	Site Access	50.771	21	1.053	48,216	0.085	4,098	0.62	EAST	2541	С	35%	226	2,767	С
	Site Access	Daniels Pkwy	36,120	21	1.053	34,302	0.085	2,916	0.62	EAST	1808	С	35%	226	2,034	С
	Daniels Pkwy	Alabama Rd.	70,050	21	1.053	66,524	0.085	5,655	0.62	EAST	3506	F	3%	19	3,525	F
	Alabama Rd.	Homestead Rd.	66,727	21	1.053	63,368	0.085	5,386	0.62	EAST	3339	F	3%	19	3,358	F
	Homestead Rd.	Alex Beil.	44,321	21	1.053	42,090	0.085	3,578	0.62	EAST	2218	С	2%	13	2,231	С
Treeline Ave.	Daniels Pkwy	Airport Connect	32,067	61	1.24	25,860	0.099	2,560	0.59	NORTH	1510	С	15%	97	1,607	С
1-75	Daniels Pkwy	Alico Rd.	122,721	120184	0.9	110,449	0.09	9,940	0.58	NORTH	5765	E	7%	45	5,810	Ε
		00.00	00000	22	4 007	04 000	0.000	7.516	0.62	FACT	4660	F	10%	65	4,725	F
Lee Blvd.	Treeline Ave.	SR 82	83898	22	1.027	81,692	0.092	7,516	0.62	EAST	4660	F				F
	Gunnery Rd.	Sunshine Blvd.	76587	22	1.027	74,574	0.092	6,861	0.62	EAST	4254	r	13%	84	4,338	r



Phone (239) 337-3993 | Toll Free (866) 337-7341 www.morris-depew.com

# Timber Creek

### Comprehensive Plan Amendment Application 1<sup>st</sup> Insufficiency Response

### **Environmental**

- South Florida Water Management Wetland Determination Letter & Supporting Exhibits
- Species Location Map
- Existing Land Use and Cover Summary Table & FLUCCS
- Exhibit B- FLUCCS and SFWMD Wetlands Map
- Exhibit C- Aerial with FLUCFCS and SFWMD Wetlands Map
- Exhibit I- Aerial with FLUCFCS Map, Survey Transects, and Listed **Species Locations**
- Exhibit E- Soils Map

Fort Myers

Gainesville

Tallahassee

Destin



#### SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Regulation Division

August 4, 2016

Mr. Terrence Dolan Lennar Homes-SW Florida 10481 Ben C. Pratt/Six Mile Cypress Pkwy Fort Myers, Florida 33966

Subject:

Timber Creek Informal Wetland Determination

Environmental Resource Permit Application No. 160414-10

Permit No. 36-00030-IF

Lee County

Dear Mr. Dolan:

The District offers the following in response to your request for a determination of the jurisdictional wetland and other surface water (OSW) boundaries located within the subject property. Jewelene S. Harris, Environmental Analyst, of the Natural Resources Management Division, conducted a site inspection on May 31, 2016.

The project boundaries shown on the attached aerial exhibits define the area that was inspected. The project consists of approximately 654.37 acres. Based on the information provided and the results of the site inspection, jurisdictional wetlands as defined in Chapter 62-340, Florida Administrative Code (FAC) have been identified on the property. The onsite upland habitats encompass approximately 487.39 acres which primarily consists of pasture lands. The uplands also include upland pine flatwoods and mixed forested uplands with varying degrees of infestation by exotic vegetation such as melaleuca and Brazilian pepper.

The site contains approximately 149.57 acres of wetlands and 17.41 acres of surface waters. The onsite wetland habitats consist primarily of hydric pine flatwoods, freshwater marshes, and wet prairie. These wetlands contain varying degrees of infestation by exotic vegetation such as melaleuca and Brazilian pepper. The surface waters within the property are agricultural ditches and swales.

District staff performed a site inspection on May 31, 2016, to re-evaluate the presence of jurisdictional wetlands and other surface waters located within the subject property. A wetland delineation was conducted by District staff during the review of Environmental Resource Permit Application No. 060721-5 for a development known as The Fountains. This application for



LOWER WEST COAST SERVICE CENTER: 2301 McGregor Boulevard, Fort Myers, FL 33901

8/4/16 OKEECHOBEE SERVICE CENTER: 3800 N.W. 16th Blvd, Suite A, Okeechobee, FL 34972

ORLANDO SERVICE CENTER: 1707 Orlando Central Parkway, Suite 200, Orlando FL 32809

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 (800) 432-2045

• (239) 338-2929 • (800) 248-1201

• (863) 462-5260 • (800) 250-4200

• (407) 858-6100 • (800) 250-4250



Mr. Terrence Dolan Timber Creek Informal Wetland Determination Application No. 160414-10 August 4, 2016 Page 2

development was withdrawn on October 9, 2009 and the file was closed. During the site inspection on May 31, 2016, the observed site conditions were similar to the site conditions assessed in 2006. Based on the areal extent of obligate and facultative wetland plant species greater than 80% in the canopy and groundcover stratum, the "B" Test was used to delineate the extent of wetlands within the project boundaries. Please refer to Exhibit No. 2.0 for the location of the wetlands and surface waters.

According to the Florida Association of Soil Scientist's Hydric Soils of Florida Handbook (3rd edition), the site contains both historically mapped hydric soils and non-hydric soils. The historically mapped hydric soils include: Hallandale Fine Sand (Soil Map Unit 6), Pompano Fine Sand (Soil Map 10), Felda Fine Sand (Soil Map Unit 12), Pineda Fine Sand (Soil Map Unit 26), Pompano Fine Sand- Depressional (Soil Map Unit 27), Malabar Fine Sand (Soil Map Unit 34), Malabar Fine Sand- Depressional (Soil Map Unit 44), Felda Fine San- Depressional (Soil Map Unit 49), and Pineda Fine Sand- Depressional (Soil Map Unit 73). The non-hydric soils include: Myakka Fine Sand (Soil Map Unit 11) which contains 20% hydric inclusions/components, Boca Fine Sand (Soil Map Unit 13) which contains 30% hydric inclusions/components.

The following exhibits are attached: Location Map (Exhibit 1.0), FLUCCS Map with Wetlands (Exhibit 2.0), FLUCCS Map (2.1) and Soils Map (Exhibit 2.2).

This correspondence is an informal jurisdictional wetland determination pursuant to Section 373.421(6), Florida Statutes and Rule 62-312.040(7), FAC. It does not bind the District, its agents or employees, nor does it convey any legal rights, expressed or implied. Persons obtaining this informal jurisdictional determination are not entitled to rely upon it for purposes of compliance with provision of law or District rules.

A binding jurisdictional determination may be obtained by submitting an application to the South Florida Water Management District.

Sincerely,

Laura P. Layman

Laura Layman

Section Leader

South Florida Water Management District

cc: Jared F. Holes, Trustee, Land Trust Number 5018

Shane Johnson, Passarella and Associates Inc.

Ryan Shute, Morris-Depew Associates, Inc.

Jacob Siegrist, U.S. Army Corps of Engineers, (Jacob.A.Siegrist@usace.army.mil)

#### **NOTICE OF RIGHTS**

As required by Sections 120.569 and 120.60(3), Fla. Stat., the following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all of the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

#### RIGHT TO REQUEST ADMINISTRATIVE HEARING

A person whose substantial interests are or may be affected by the South Florida Water Management District's (SFWMD or District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on a SFWMD decision which affects or may affect their substantial interests shall file a petition for hearing with the Office of the District Clerk of the SFWMD, in accordance with the filing instructions set forth herein, within 21 days of receipt of written notice of the decision, unless one of the following shorter time periods apply: (1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Fla. Stat.; or (2) within 14 days of service of an Administrative Order pursuant to Section 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of written notice through mail, electronic mail, or posting that the SFWMD has or intends to take final agency action, or publication of notice that the SFWMD has or intends to take final agency action. Any person who receives written notice of a SFWMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

If the District takes final agency action which materially differs from the noticed intended agency decision, persons who may be substantially affected shall, unless otherwise provided by law, have an additional Rule 28-106.111, Fla. Admin. Code, point of entry.

Any person to whom an emergency order is directed pursuant to Section 373.119(2), Fla. Stat., shall comply therewith immediately, but on petition to the board shall be afforded a hearing as soon as possible.

A person may file a request for an extension of time for filing a petition. The SFWMD may, for good cause, grant the request. Requests for extension of time must be filed with the SFWMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the SFWMD and any other parties agree to or oppose the extension. A timely request for an extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

#### FILING INSTRUCTIONS

A petition for administrative hearing must be filed with the Office of the District Clerk of the SFWMD. Filings with the Office of the District Clerk may be made by mail, hand-delivery, or e-mail. Filings by facsimile will not be accepted. A petition for administrative hearing or other document is deemed filed upon receipt during normal business hours by the Office of the District Clerk at SFWMD headquarters in West Palm Beach, Florida. The District's normal business hours are 8:00 a.m. – 5:00 p.m., excluding weekends and District holidays. Any document received by the Office of the District Clerk after 5:00 p.m. shall be deemed filed as of 8:00 a.m. on the next regular business day. Additional filing instructions are as follows:

 Filings by mail must be addressed to the Office of the District Clerk, P.O. Box 24680, West Palm Beach, Florida 33416.

Rev. 06/21/15

- Filings by hand-delivery must be delivered to the Office of the District Clerk. Delivery of a petition to
  the SFWMD's security desk does not constitute filing. It will be necessary to request that the
  SFWMD's security officer contact the Office of the District Clerk. An employee of the SFWMD's
  Clerk's office will receive and file the petition.
- Filings by e-mail must be transmitted to the Office of the District Clerk at <a href="clerk@sfwmd.gov">clerk@sfwmd.gov</a>. The filing date for a document transmitted by electronic mail shall be the date the Office of the District Clerk receives the complete document. A party who files a document by e-mail shall (1) represent that the original physically signed document will be retained by that party for the duration of the proceeding and of any subsequent appeal or subsequent proceeding in that cause and that the party shall produce it upon the request of other parties; and (2) be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed.

#### INITIATION OF AN ADMINISTRATIVE HEARING

Pursuant to Sections 120.54(5)(b)4. and 120.569(2)(c), Fla. Stat., and Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the SFWMD in legible form and on 8 1/2 by 11 inch white paper. All petitions shall contain:

- 1. Identification of the action being contested, including the permit number, application number, SFWMD file number or any other SFWMD identification number, if known.
- 2. The name, address, any email address, any facsimile number, and telephone number of the petitioner and petitioner's representative, if any.
- 3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
- 4. A statement of when and how the petitioner received notice of the SFWMD's decision.
- 5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
- 6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the SFWMD's proposed action.
- 7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the SFWMD's proposed action.
- If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
- A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the SFWMD to take with respect to the SFWMD's proposed action.

#### **MEDIATION**

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401–.405, Fla. Admin. Code. The SFWMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

#### RIGHT TO SEEK JUDICIAL REVIEW

Pursuant to Section 120.68, Fla. Stat., and in accordance with Florida Rule of Appellate Procedure 9.110, a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal with the Office of the District Clerk of the SFWMD in accordance with the filing instructions set forth herein within 30 days of rendition of the order to be reviewed, and by filing a copy of the notice with the clerk of the appropriate district court of appeal.

Rev. 06/21/15 2

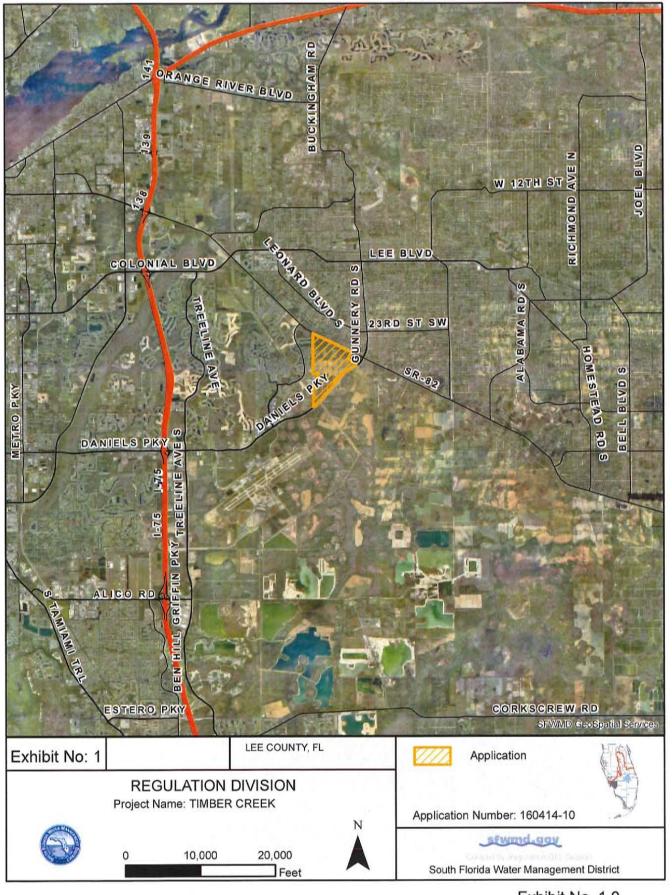


Exhibit No. 1.0 Application No. 160414-10 Page 1 of 1









APPLICATION NUMBER

160414-101

- E Description

  HALLANDALE FINE SAND

  POLIPANO FINE SAND

  MYAKKA FINE SAND

  MYAKKA FINE SAND

  PELDA FINE SAND

  PELDA FINE SAND

  PINEDA FINE SAND

  POLIPANO FINE SAND

  DOLPANO FINE SAND

  ALLADAR FINE SAND, DEPRESSIONAL

  PINEDA FINE SAND, DEPRESSIONAL

#### 2,000

1,000 Feet

## PASSARELLA & ASSOCIATES

ABRIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH FLIGHT DATES OF JANUARY - FEBRUARY 2015.

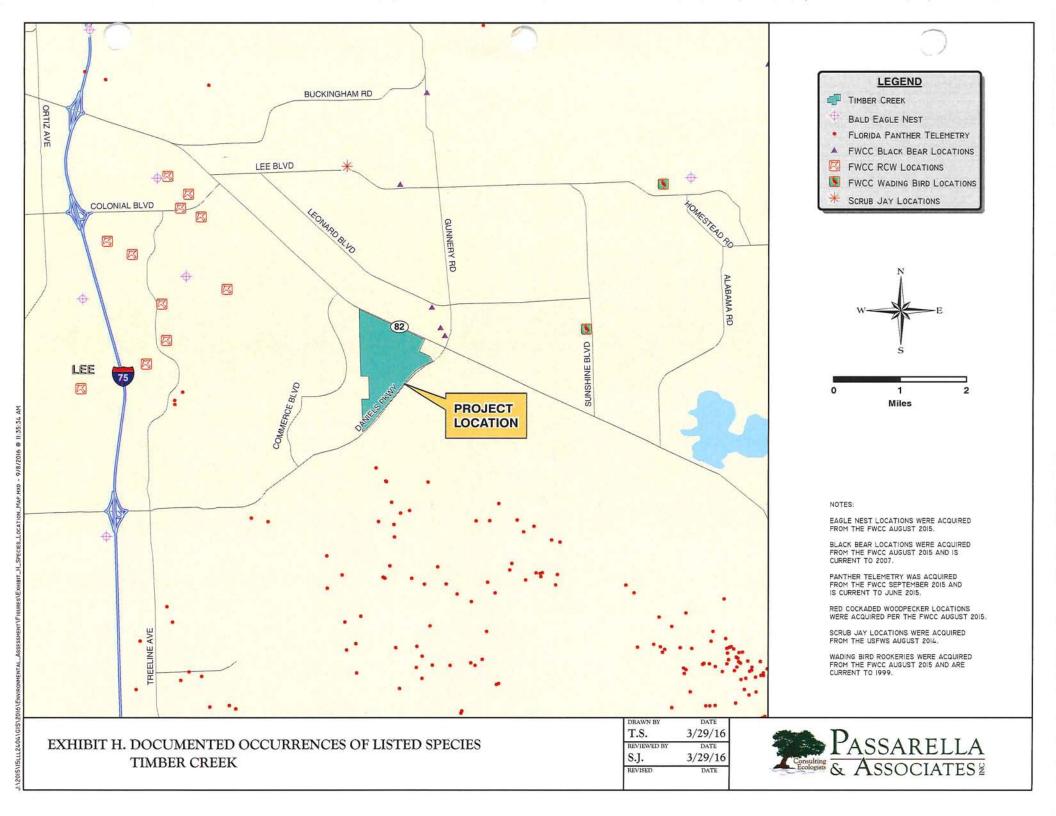
#### ORIGINAL SUBMITTAL

APR 1 4 2016

LWC SERVICE CENTER SOILS MAP

15LLL2404 FIGURE 2

D.B./T.S. 4/8/16 4/8/16 9/10 13020 Metropolis Acentic Suite 200 Fort Myers, Florida 33912 Phone (239) 274-0067 Fax (239) 274-0069



# TIMBER CREEK EXISTING LAND USE AND COVER SUMMARY TABLE AND FLUCFCS DESCRIPTIONS

#### **Revised September 2016**

The Florida Land Use, Cover and Forms Classification System (FLUCFCS) codes identified within Timber Creek are listed below (Table 1). The dominant plant species found in each of these codes are listed in the FLUCFCS descriptions that follow.

Table 1. Existing Land Use and Cover Summary

FLUCFCS Code	Description	Acreage	Percent of Total
	Density Reduction/Groundwater Resource (DR/GR	) Tract	
211	Improved Pasture	212.80	33.9
262	Low Pasture	35.60	5.7
3219 E1	Palmetto Prairie, Disturbed (0-24% Exotics)	1.87	0.3
4119 E1	Pine Flatwoods, Disturbed (0-24% Exotics)	36.94	5.9
4119 E2	Pine Flatwoods, Disturbed (25-49% Exotics)	93.97	15.0
4119 E3	Pine Flatwoods, Disturbed (50-75% Exotics)	5.91	0.9
4119 E4	Pine Flatwoods, Disturbed (76-100% Exotics)	8.12	1.3
4159 E4	Pine, Disturbed (76-100% Exotics)	2.37	0.4
422	Brazilian Pepper	2.19	0.3
4241	Melaleuca, Hydric	12.81	2.0
4279 E1	Live Oak, Disturbed (0-24% Exotics)	4.28	0.7
4279 E4	Live Oak, Disturbed (76-100% Exotics)	2.03	0.3
4349 E1	Hardwood/Conifer Mixed, Disturbed (0-24% Exotics)	0.95	0.2
4349 E2	Hardwood/Conifer Mixed, Disturbed (25-49% Exotics)	9.96	1.6
4349 E3	Hardwood/Conifer Mixed, Disturbed (50-75% Exotics)	31.82	5.1
4389 E3	Mixed Hardwoods, Disturbed (50-75% Exotics)	6.13	1.0
514	Ditch	15.79	2.5
514H	Ditch, Hydric	0.11	<0.1
525	Shallow Pond	0.08	< 0.1
6179 E2	Mixed Wetland Hardwoods, Disturbed (25-49% Exotics)	0.55	0.1
6259 E2	Pine, Hydric, Disturbed (25-49% Exotics)	0.34	0.1
6259 E3	Pine, Hydric, Disturbed (50-75% Exotics)	1.03	0.2
6259 E4	Pine, Hydric, Disturbed (76-100% Exotics)	34.40	5.5

Table 1. (Continued)

FLUCFCS Code	Description	Acreage	Percent of Total
	DR/GR Tract (Continued)		
6319 E1	Wetland Shrub, Disturbed (0-24% Exotics)	1.98	0.3
6319 E2	Wetland Shrub, Disturbed (25-49% Exotics)	5.57	0.9
6419 E1	Freshwater Marsh, Disturbed (0-24% Exotics)	25.18	4.0
6419 E2	Freshwater Marsh, Disturbed (25-49% Exotics)	6.24	1.0
6419 E3	Freshwater Marsh, Disturbed (50-75% Exotics)	1.68	0.3
6439 E1	Wet Prairie, Disturbed (0-24% Exotics)	22.61	3.6
6439 E4	Wet Prairie, Disturbed (76-100% Exotics)	0.70	0.1
740	Disturbed Land	7.58	1.2
7401	Disturbed Land, Hydric	0.76	0.1
747	Berm	24.77	3.9
832	Electrical Power Transmission Lines	10.88	1.7
	DR/GR Tract Sub-Total	628.00	100.0
	Central Urban Tract	metal syst	
211	Improved Pasture	20.05	76.1
4349 E1	Hardwood/Conifer Mixed, Disturbed (0-24% Exotics)	3.20	12.1
514	Ditch	1.54	5.8
740	Disturbed Land	0.08	0.3
747	Berm	1.49	5.7
	Central Urban Tract Sub-Total	26.36	100.0
	Total	654.36	100.0

#### Improved Pasture (FLUCFCS Code 211)

The canopy of this land use type is primarily open, with widely scattered slash pine (*Pinus elliottii*), cabbage palm (*Sabal palmetto*), live oak (*Quercus virginiana*), and laurel oak (*Quercus laurifolia*). The sub-canopy is primarily open with scattered Brazilian pepper (*Schinus terebinthifolius*), cabbage palm, and saw palmetto (*Serenoa repens*). The ground cover includes bahiagrass (*Paspalum notatum*), dog fennel (*Eupatorium capillifolium*), broomsedge (*Andropogon virginicus*), and smutgrass (*Sporobolus indicus*).

#### Low Pasture (FLUCFCS Code 262)

The canopy of this land use type is open. The sub-canopy contains scattered wax myrtle (*Myrica cerifera*), Brazilian pepper, and cabbage palm. The ground cover includes bahiagrass, broomsedge, dog fennel, Mexican primrose willow (*Ludwigia octovalvis*), spikerush (*Eleocharis sp.*), Asiatic pennywort (*Centella asiatica*), water pennywort (*Hydrocotyle umbellata*), blue waterlily (*Nymphaea elegans*), pickerelweed (*Pontederia cordata*), and Virginia buttonweed (*Diodia virginiana*).

#### Palmetto Prairie, Disturbed (0-24% Exotics) (FLUCFCS Code 3219 E1)

The canopy of this habitat type contains widely scattered slash pine. The sub-canopy is dominated by saw palmetto, with scattered wax myrtle. The ground cover includes saw palmetto.

#### Pine Flatwoods, Disturbed (0-24% Exotics) (FLUCFCS Code 4119 E1)

The canopy of this habitat type includes slash pine, cabbage palm, dahoon holly (*Ilex cassine*), and scattered live oak. The sub-canopy contains slash pine, saw palmetto, wax myrtle, earleaf acacia (*Acacia auriculiformis*), dahoon holly, cabbage palm, winged sumac (*Rhus copallinum*), and scattered Brazilian pepper. The ground cover is mostly sparse and includes muscadine grape (*Vitis rotundifolia*), beautyberry (*Callicarpa americana*), spermacoce (*Spermacoce verticillata*), saw palmetto, caesarweed (*Urena lobata*), dog fennel, smutgrass, and bahiagrass.

#### Pine Flatwoods, Disturbed (25-49% Exotics) (FLUCFCS Code 4119 E2)

The vegetation composition in this habitat type is similar to FLUCFCS Code 4119 E1, except with higher concentrations of Brazilian pepper.

#### Pine Flatwoods, Disturbed (50-75% Exotics) (FLUCFCS Code 4119 E3)

The vegetation composition in this habitat type is similar to FLUCFCS Code 4119 E2, except with higher concentrations of Brazilian pepper.

#### Pine Flatwoods, Disturbed (76-100% Exotics) (FLUCFCS Code 4119 E4)

The vegetation composition in this habitat type is similar to FLUCFCS Code 4119 E3, except with higher concentrations of Brazilian pepper.

#### Pine, Disturbed (76-100% Exotics) (FLUCFCS Code 4159 E4)

The canopy of this habitat type includes slash pine. The sub-canopy is dominated by Brazilian pepper. The ground cover is mostly sparse with scattered Brazilian pepper.

#### Brazilian Pepper (FLUCFCS Code 422)

The canopy of this habitat type is open. The sub-canopy consists entirely of Brazilian pepper. The ground cover includes spermacoce and caesarweed.

#### Melaleuca, Hydric (FLUCFCS Code 4241)

The canopy and sub-canopy of this habitat type is dominated by melaleuca, with scattered slash pine. The ground cover contains little blue maidencane (*Amphicarpum muhlenbergianum*), dayflower (*Commelina* sp.), dog fennel, Southern beaksedge (*Rhynchospora microcarpa*), bahiagrass, sawgrass (*Cladium jamaicense*), Wright's Nutrush (*Scleria lacustris*), Virginia buttonweed, and gulfdune paspalum (*Paspalum monostachyum*).

#### Live Oak, Disturbed (0-24% Exotics) (FLUCFCS Code 4279 E1)

The canopy and sub-canopy of this habitat type are dominated by live oak. The ground cover contains spermacoce and caesarweed.

#### Live Oak, Disturbed (76-100% Exotics) (FLUCFCS Code 4279 E4)

The vegetation composition in this habitat type is similar to FLUCFCS Code 4279 E1, except with much higher concentrations of exotics.

#### Hardwood/Conifer Mixed, Disturbed (0-24% Exotics) (FLUCFCS Code 4349 E1)

The canopy of this habitat type includes slash pine, laurel oak, live oak, cabbage palm, and scattered melaleuca. The sub-canopy contains cabbage palm, slash pine, saw palmetto, wax myrtle, laurel oak, live oak, and scattered Brazilian pepper. The ground cover includes muscadine grape, slash pine, laurel oak, spermacoce, tropical flatsedge (*Cyperus surinamensis*), caesarweed, dog fennel, smutgrass, chocolateweed (*Melochia corchorifolia*), gulf muhly (*Muhlenbergia capillaris*), gulfdune paspalum, and scattered bahiagrass and Brazilian pepper.

#### Hardwood/Conifer Mixed, Disturbed (25-49% Exotics) (FLUCFCS Code 4349 E2)

The vegetation composition in this habitat type is similar to FLUCFCS Code 4349 E1, except with higher concentrations of Brazilian pepper and bahiagrass.

#### Hardwood/Conifer Mixed, Disturbed (50-75% Exotics) (FLUCFCS Code 4349 E3)

The vegetation composition in this habitat type is similar to FLUCFCS Code 4349 E2, except with higher concentrations of Brazilian pepper and bahiagrass.

#### Mixed Hardwoods, Disturbed (50-75% Exotics) (FLUCFCS Code 4389 E3)

The canopy of this habitat type includes live oak and laurel oak. The sub-canopy include live oak, laurel oak, Brazilian pepper, and scattered wax myrtle. The ground cover contains bahiagrass, Brazilian pepper, caesarweed, broomsedge, and smutgrass.

#### Ditch (FLUCFCS Code 514)

The canopy and sub-canopy of this land use type are open. The ground cover is primarily open water with blue waterlily, pickerelweed, West Indian marsh grass (*Hymenachne amplexicaulis*), Asiatic pennywort, and wild taro (*Colocasia esculenta*).

#### Ditch, Hydric (FLUCFCS Code 514H)

This FLUCFCS type is similar to FLUCFCS Code 514 but is entirely surrounded by wetlands and is included in the Project's overall wetland acreage.

#### Shallow Pond (FLUCFCS Code 525)

The land use type consists of an unvegetated cattle pond.

#### Mixed Wetland Hardwoods, Disturbed (25-49% Exotics) (FLUCFCS Code 6179 E2)

The canopy of this community type consists of laurel oak, slash pine, and cabbage palm. The sub-canopy consists of wax myrtle, Brazilian pepper, and hog plum (*Ximenia americana*). The ground cover includes bushy bluestem (*Andropogon glomeratus*), torpedograss (*Panicum repens*), yellow-eyed grass (*Xyris* sp.), Asiatic pennywort, and scattered bahiagrass and Bermuda grass (*Cynodon dactylon*).

#### Pine, Hydric, Disturbed (25-49% Exotics) (FLUCFCS Code 6259 E2)

The canopy of this habitat type contains slash pine, melaleuca, cabbage palm, and laurel oak. The sub-canopy contains melaleuca, slash pine, and Brazilian pepper. The ground cover includes little blue maidencane, dayflower, dog fennel, Southern beaksedge, bahiagrass, sawgrass, Wright's nutrush, Virginia buttonweed, and gulfdune paspalum.

#### Pine, Hydric, Disturbed (50-75% Exotics) (FLUCFCS Code 6259 E3)

The vegetation composition in this habitat type is similar to FLUCFCS Code 6259 E2, except with higher concentrations of melaleuca, Brazilian pepper, bahiagrass, and Wright's nutrush.

#### Pine, Hydric, Disturbed (76-100% Exotics) (FLUCFCS Code 6259 E4)

The vegetation composition in this habitat type is similar to FLUCFCS Code 6259 E3, except with higher concentrations of melaleuca, Brazilian pepper, bahiagrass, and Wright's nutrush.

#### Wetland Shrub, Disturbed (0-24% Exotics) (FLUCFCS Code 6319 E1)

The canopy of this habitat type is open. The sub-canopy contains wax myrtle, Brazilian pepper, and melaleuca. The ground cover includes knotroot foxtail (*Setaria parviflora*), bahiagrass, little blue maidencane, Tracy's beaksedge (*Rhynchospora tracyi*), wax myrtle, Virginia buttonweed, smallfruit primrose willow (*Ludwigia microcarpa*), and starrush whitetop (*Rhynchospora colorata*).

#### Wetland Shrub, Disturbed (25-49% Exotics) (FLUCFCS Code 6319 E2)

The vegetation composition in this habitat type is similar to FLUCFCS Code 6319 E1, except with higher concentrations of exotics.

#### Freshwater Marsh, Disturbed (0-24% Exotics) (FLUCFCS Code 6419 E1)

The canopy of this habitat type is primarily open with scattered laurel oak, melaleuca, and slash pine along the edges. The sub-canopy is primarily open with melaleuca, slash pine, Brazilian pepper, and wax myrtle along the edges. The ground cover includes spikerush, torpedograss, false fennel (*Eupatorium leptophyllum*), spermacoce, pickerelweed, white waterlily (*Nymphaea odorata*), blue waterlily, Virginia buttonweed, Wright's nutrush, gulfdune paspalum, sawgrass, swamp fern (*Blechnum serrulatum*), West Indian marsh grass, and yellow-eyed grass.

#### Freshwater Marsh, Disturbed (25-49% Exotics) (FLUCFCS Code 6419 E2)

The vegetation composition in this habitat type is similar to FLUCFCS Code 6419 E1, except with higher concentrations of exotics.

#### Freshwater Marsh, Disturbed (50-75% Exotics) (FLUCFCS Code 6419 E3)

The vegetation composition in this habitat type is similar to FLUCFCS Code 6419 E2, except with higher concentrations of exotics.

#### Wet Prairie, Disturbed (0-24% Exotics) (FLUCFCS Code 6439 E1)

The canopy of this habitat type is primarily open with scattered melaleuca and slash pine. The sub-canopy contains scattered wax myrtle, melaleuca, and slash pine. The ground cover contains Wright's nutrush, spermacoce, Asiatic pennywort, Southern beaksedge, starrush whitetop, little blue maidencane, soft rush (*Juncus effusus*), broomsedge, and Tracy's beaksedge.

#### Wet Prairie, Disturbed (76-100% Exotics) (FLUCFCS Code 6439 E4)

The vegetation composition in this habitat type is similar to FLUCFCS Code 6439 E1, except with much higher concentrations of exotics.

#### Disturbed Land (FLUCFCS Code 740)

The canopy and sub-canopy of this land use type are primarily open with scattered slash pine and Brazilian pepper. The ground cover includes broomsedge, smutgrass, bahiagrass, spermacoce, and dog fennel.

#### Disturbed Land, Hydric (FLUCFCS Code 7401)

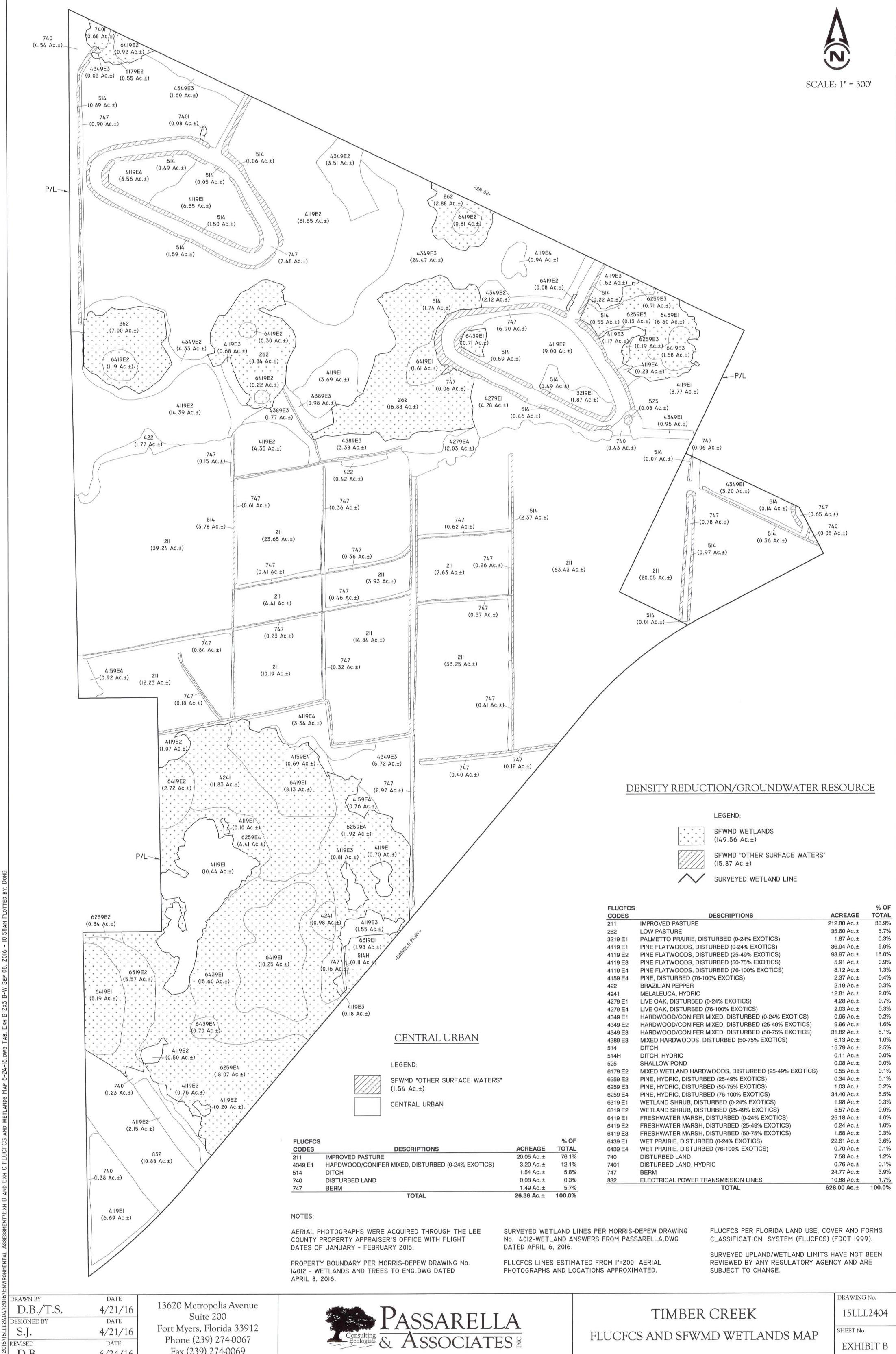
The canopy and sub-canopy of this land use type are primarily open with scattered melaleuca and slash pine. The ground cover includes torpedograss, false fennel, spermacoce, Virginia buttonweed, and gulfdune paspalum.

#### Berm (FLUCFCS Code 747)

The canopy of this land use type includes slash pine, cabbage palm, laurel oak, and live oak. The sub-canopy contains Brazilian pepper, saw palmetto, cabbage palm, and slash pine. The ground cover includes broomsedge, spermacoce, crabgrass (*Digitaria* sp.), saw palmetto, and gulfdune paspalum.

#### Electrical Power Transmission Lines (FLUCFCS Code 832)

The canopy of this land use type is open. The sub-canopy contains widely scattered cabbage palm and wax myrtle. The ground cover includes dog fennel, broomsedge, spermacoce, and smutgrass.



DATE

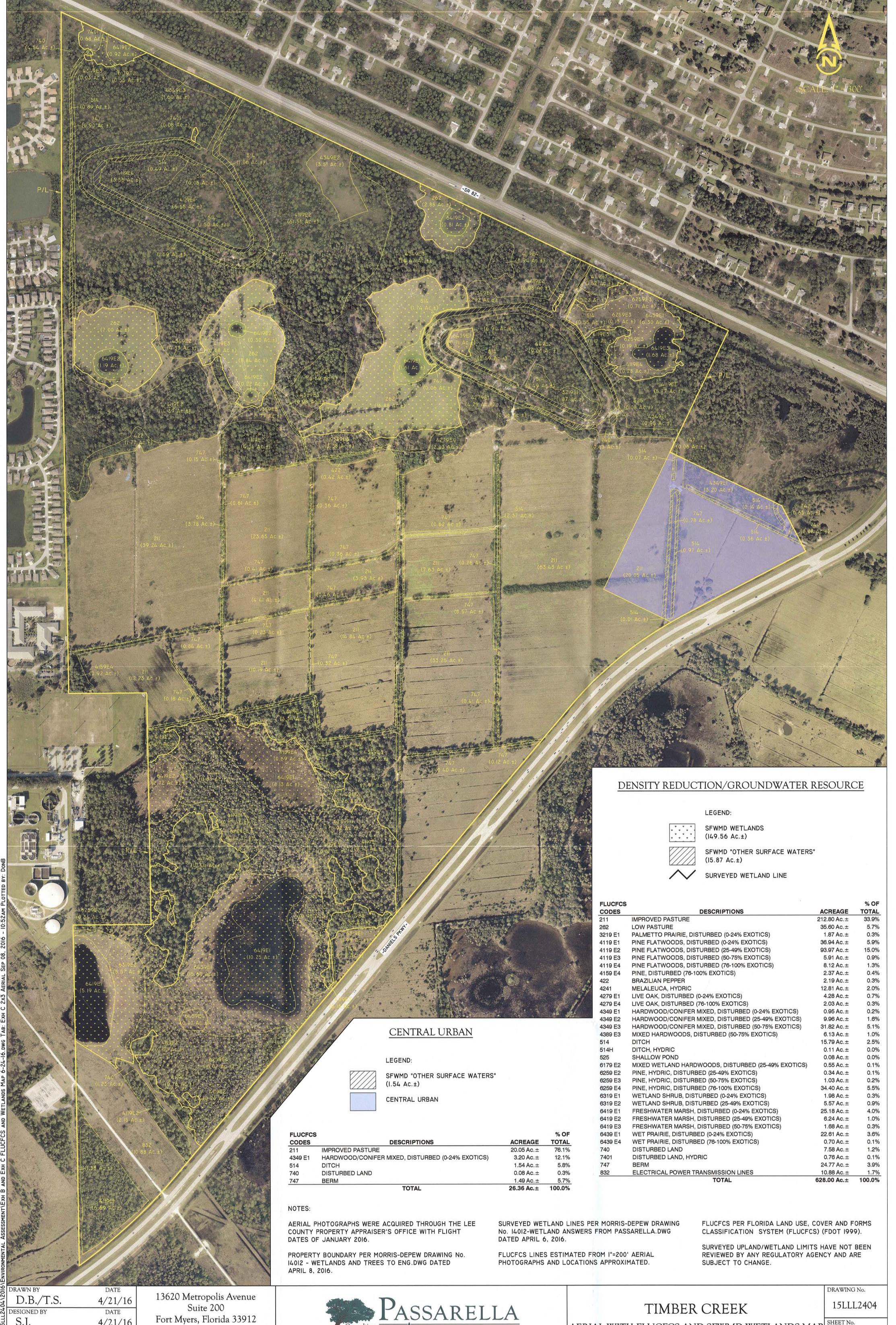
6/24/16

D.B.

Fax (239) 274-0069

FLUCFCS AND SFWMD WETLANDS MAP

EXHIBIT B



Phone (239) 274-0067

Fax (239) 274-0069

S.J.

REVISED

D.B.

4/21/16

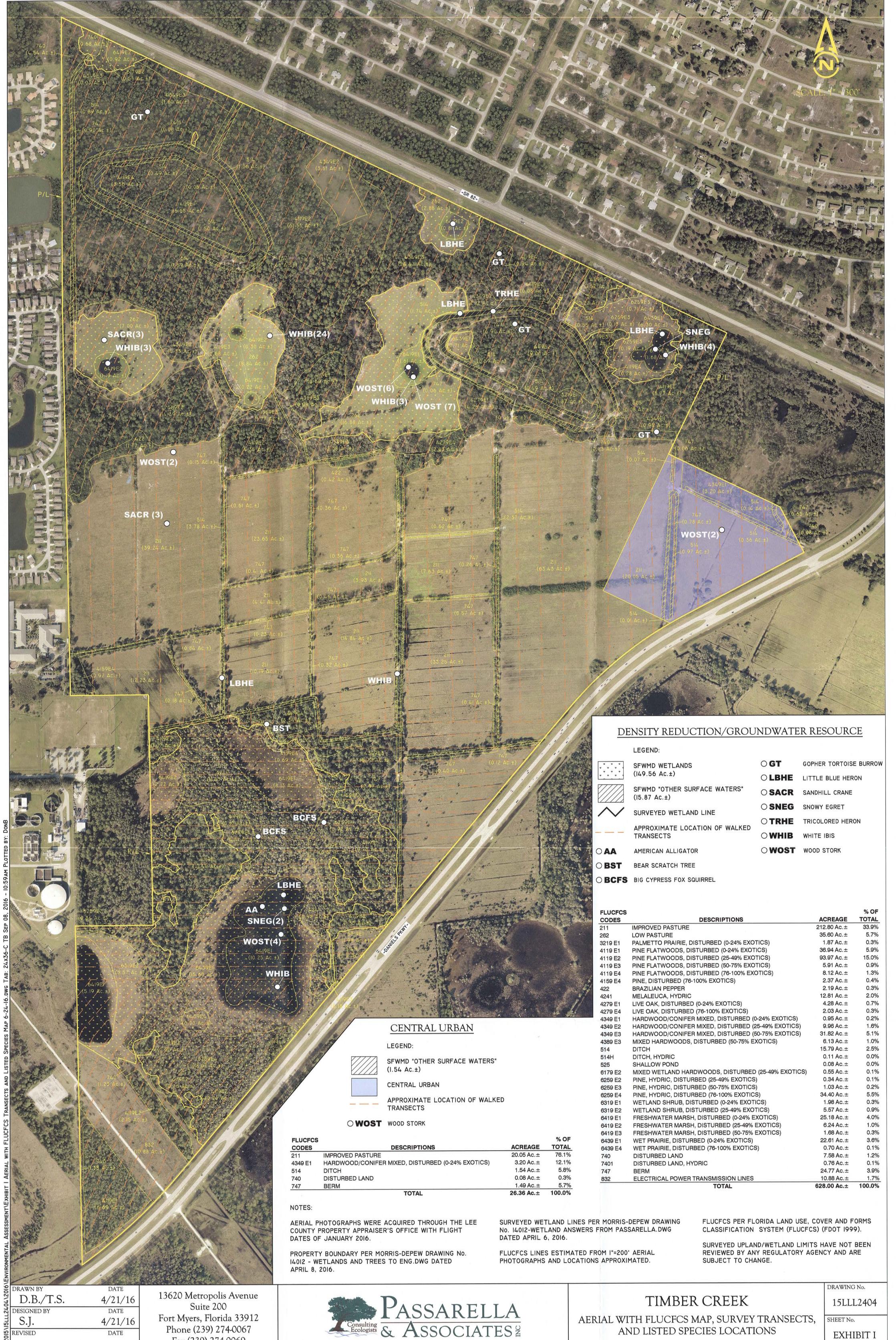
DATE

6/24/16

PASSARELLA & ASSOCIATES &

SHEET No. AERIAL WITH FLUCFCS AND SFWMD WETLANDS MAP

EXHIBIT C

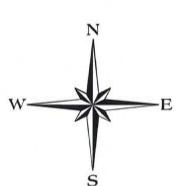


PASSARELLA & ASSOCIATES &

Fax (239) 274-0069

AND LISTED SPECIES LOCATIONS







Soil Unit Description
6 HALLANDALE FINE SAND

6 HALLANDALE FINE SAND
10 POMPANO FINE SAND

11 MYAKKA FINE SAND

12 FELDA FINE SAND

13 BOCA FINE SAND26 PINEDA FINE SAND

27 POMPANO FINE SAND, DEPRESSIONAL

33 OLDSMAR SAND

MALABAR FINE SAND

MALABAR FINE SAND, DEPRESSIONAL

49 FELDA FINE SAND, DEPRESSIONAL73 PINEDA FINE SAND, DEPRESSIONAL

0 500 1,000 1,500 Feet

## NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH A FLIGHT DATE OF JANUARY 2016.

ROADWAY NETWORKS WERE ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

SOILS MAPPING WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE OCTOBER 2007 AND CREATED BY THE NATURAL RESOURCES CONSERVATION SERVICE 1990.

DATE
3/23/16
DATE
3/23/16
DATE
6/3/16

13620 Metropolis Avenue Suite 200 Fort Myers, Florida 33912 Phone (239) 274-0067 Fax (239) 274-0069



TIMBER CREEK SOILS MAP DRAWING No.

15LLL2404

SHEET No.

EXHIBIT E