

SITE INSPECTION REPORT

COUNTY: Volusia

INSPECTION DATE: 5/31/2011

LOCATION: Tomoka Farms Landfill, 1990 Tomoka Farms Road, Port Orange FL

WATERBODY: wetlands, known to be the head waters of Spruce creek, also believed to be contiguous with the wetlands and surface waters of the Tomoka River, both which are classified as Outstanding Florida Waters.

PARTIES PRESENT: P. Ammon, D. Baggett, Chris Ferraro, Ali Kazi, Anil Desai, Hitesh Barde, Leonard Marion, Jennifer Stirk, Multiple Parties From The Landfill & Consulting Company

ENTITIES / AGENCIES PRESENT: FDEP (ERP & Water Facilities), VCUD, Various Consultants

HISTORY: From aerial investigation and file investigation from 1993 to 2009, the site has had various site inspections as well as significant alterations. According to aerial imagery, the site appears to have originally been altered sometime between 1984 and 1989 (VCUD staff confirmed this). During permitting with DER for the landfill, it appears that a Natural Resource Land Management Plan was submitted and accepted by Staff (Jim Carr) in August 1993. From aerial reviews it appears in 1999 several areas surrounding the site that were identified as uplands in the Land Management plan (uplands were specifically "South Florida Flatwoods - # 6, Ecological Communities") were cleared. This area also appears to have been replanted with slash pine. This would be a legal alteration of this community. The only area surrounding the site which was mapped as uplands, but not altered, was the community immediately north of the site and south of Interstate 4. Based on the information gained onsite and file reviews, Staff determined that the altered sites test would be applied to those areas legally altered and replanted. For other areas which appear to have not been altered, Staff would utilize applicable wetland tests.

ONSITE FINDINGS: All parties met in the facilities office at approx. 930am and drove together to the site. Once at the site, ERP Staff (Staff) and Water Facilities Staff separately performed inspections. Staff noted the drainage ditch adjacent to the entrance road into the sprayfield area is not connected to the ditch which once surrounded the sprayfield.

Staff spoke with VCUD Staff about the history of the site. In approximately 2009/2010 the surrounding ditch and pond were filled in, the bomb shelter was relocated, the ground was leveled, and a berm was constructed which surrounds the spray field. Also during that time, relief pipes were

installed in the berm to allow for drainage of any rain / stormwater that flooded the field and made it un-useable. Once the field was drained, then the pipes were closed.

Staff walked the berm and eventually into the forested system to a point labeled on the attached aerial as "Insp 1". This pine / cypress system appears to have been intact and not replanted or previously altered. Staff did not find typical rows & furrows which one would see in a replanted system. Staff also noted the persistence of larger, older growth, pines. Staff identified the vegetation (native and exotic), hydric soils and hydrological indicators.

Staff left this area and walked back into the spray field and into the next location as labeled "Insp 2." This location had the same FACW and OBL vegetation with hydrological indicators and lacked hydric soil.

Staff left this location and while walking north along the berm noticed the previously explained relief pipes extending through the berm and into the wetlands (noted as "Relief pipe assessment"). Staff noted the vegetation outside of the sprayfield within this area was more representative of a wetter ecosystem. In reviewing the soils, there was very little leaf litter and non jurisdictional redox within the lower two inches of the plug. Staff believed the difference within this area is the influx of water from the relief pipes.

Staff left this area and went to "Insp 3." While at this location it was noted that areas south of this location had been cleared, replanted, rowed, and furrowed, while the north area had not. Rows of slash pines were easily identifiable with sparse scattered ground cover. Staff identified plants within this area, but prior to identifying hydrological indicators and investigating the soils, it was suggested all parties drive east into the property (wetlands) to inspect the ground monitoring wells.

A rudimentary "roadway" through the wetlands was utilized to access the monitoring wells. This approx. road location is labeled red on the attached aerial. While the roadway did not appear to have had any road bed material placed, the wetlands within the roadway were experiencing an impact. Vehicles tracks were easily seen and there was a significant lack of subcanopy and canopy vegetation. Staff questioned the frequency of use and were told quarterly and then monthly. VCUD Staff said they utilize the road to inspect equipment, ensure operation, and gather samples. Everyone continued to drive out of the wetlands on the "roadway" which eventually made a loop to

the same entrance from the sprayfield. Once back on the sprayfield, Staff continued their inspection of the ecosystems surrounding the spray field.

Staff entered from the NE corner of the spray field into two ecosystems: one appeared to have been altered while the other had not. Staff followed a ditch and ATV path into a cypress / bay canopy to “Insp 5.” This location appeared to have more diversity within all three levels of vegetation (canopy, sub canopy, & ground cover). There also lacked signs from replanting. The soils appeared to be more indicative of a natural wetland system, however they still lacked jurisdictional hydric indicators.

Staff proceeded to “Insp 6” and noted that it appeared to be uplands as previously identified in 1993. This area lacked signs of alteration (rows, furrows) and had significant diversity within all levels of vegetation (canopy, sub canopy, & ground cover).

Staff proceeded to “Insp 7” and noted the presence of wetland vegetation, deep flow channels and hummocking. This area was also identified as wetlands in 1993 and 2009. This area appears to have not been altered.

Staff proceeded to “Insp 8” and noted that it appeared to be replanted with slash pine. This area showed signs of alteration (rows, furrows) and lacked diversity within all levels of vegetation (canopy, sub canopy, & ground cover).

Data collected from each inspection location:

Insp 1:

Canopy: Slash Pine (Up), Cypress (Obl)

Subcanopy: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl)

Ground: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl), blue maidencane (FACW) maidencane (Obl), cabbage palm (FAC), virginia chain fern (FACW), swamp fern (FACW)

Hydrological indicators: secondary flow channels, vegetated hummocks, morphological plant adaptations

Hydric Soils: none, approx 3 inches of leaf litter, followed by 2 inches of gray soil, then white soil.

Exotic vegetation: brazilian pepper, chinese tallow

Insp 2:

Canopy: Slash Pine (Up)

Subcanopy: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl)

Ground: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl), blue maidencane (FACW) maidencane (Obl), cabbage palm (FAC), golden canna (Obl), virginia chain fern (FACW), swamp fern (FACW)

Hydrological indicators: secondary flow channels, vegetated hummocks, morphological plant adaptations

Hydric Soils: none, approx 3 inches of leaf litter, followed by 2 inches of gray soil, then white soil

Exotic vegetation: brazilian pepper, chinese tallow,

Relief pipe assessment:

Canopy: none

Subcanopy: slash pine (UP), swamp bay (Obl), Dahoon Holly (Obl),

Ground: dog fennel (FACW), frog fruit (FAC), salt bush (FAC), golden canna (Obl), Virginia chain fern (FACW), swamp fern (FACW), Yellow eyed grass (Obl), maidencane (Obl), switchgrass (FACW), velvet panicum (FACW), white nut sedge (FACW), torpedo grass (FACW)

Hydrological indicators: adventitious roots, secondary flow channels, algal mats

Hydric Soils: none

Exotic vegetation: brazilian pepper, chinese tallow,

Insp 3:

Canopy: Slash Pine (Up), Cypress (Obl), swamp bay (Obl),

Subcanopy: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl)

Ground: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl), blue maidencane (FACW), golden canna (Obl)

Hydrological indicators: Did not gather

Hydric Soils: Did not gather

Exotic vegetation: brazilian pepper, chinese tallow

Insp 4:

Canopy: Slash Pine (Up), Cypress (Obl)

Subcanopy: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl)

Ground: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl), blue maidencane (FACW) maidencane (Obl), cabbage palm (FAC), virginia chain fern (FACW)

Hydrological indicators: secondary flow channels, vegetated hummocks, morphological plant adaptations

Hydric Soils: none

Exotic vegetation: brazilian pepper, chinese tallow

Insp 5:

Canopy: Cypress (Obl), pond pine (Obl), swamp bay (Obl)

Subcanopy: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl)

Ground: Cypress (Obl), swamp bay (Obl), blue maidencane (FACW), maidencane (Obl), virginia chain fern (FACW), swamp fern (FACW),

Hydrological indicators: secondary flow channels, vegetated hummocks, morphological plant adaptations

Hydric Soils: none

Exotic vegetation: chinese tallow

Insp 6:

Canopy: Slash Pine (Up), Long Leaf Pine (Up)

Subcanopy: Cypress (Obl), slash pine (Up), Cabbage palm (FAC),

Ground: Dahoon Holly (Obl), Cabbage Palm (FAC), Saw palmetto (Up),

Hydrological indicators: Did not gather

Hydric Soils: Did not gather

Exotic vegetation: chinese tallow

Insp 7:

Canopy: Cypress (Obl), Swamp Bay (Obl)

Subcanopy: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl)

Ground: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl), maidencane (Obl), cabbage palm (FAC), swamp fern (FACW)

Hydrological indicators: secondary flow channels, vegetated hummocks, morphological plant adaptations

Hydric Soils: Did not gather

Exotic vegetation: chinese tallow

Insp 8:

Canopy: Slash Pine (Up), Cypress (Obl)

Subcanopy: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl)

Ground: Cypress (Obl), swamp bay (Obl), Dahoon Holly (Obl), maidencane (Obl), cabbage palm (FAC), virginia chain fern (FACW)

Hydrological indicators: secondary flow channels, morphological plant adaptations

Hydric Soils: Did not gather

Exotic vegetation: brazilian pepper, chinese tallow



Location Map: X

Aerials: X

Photographs: X

[Signature]

5/31/2011

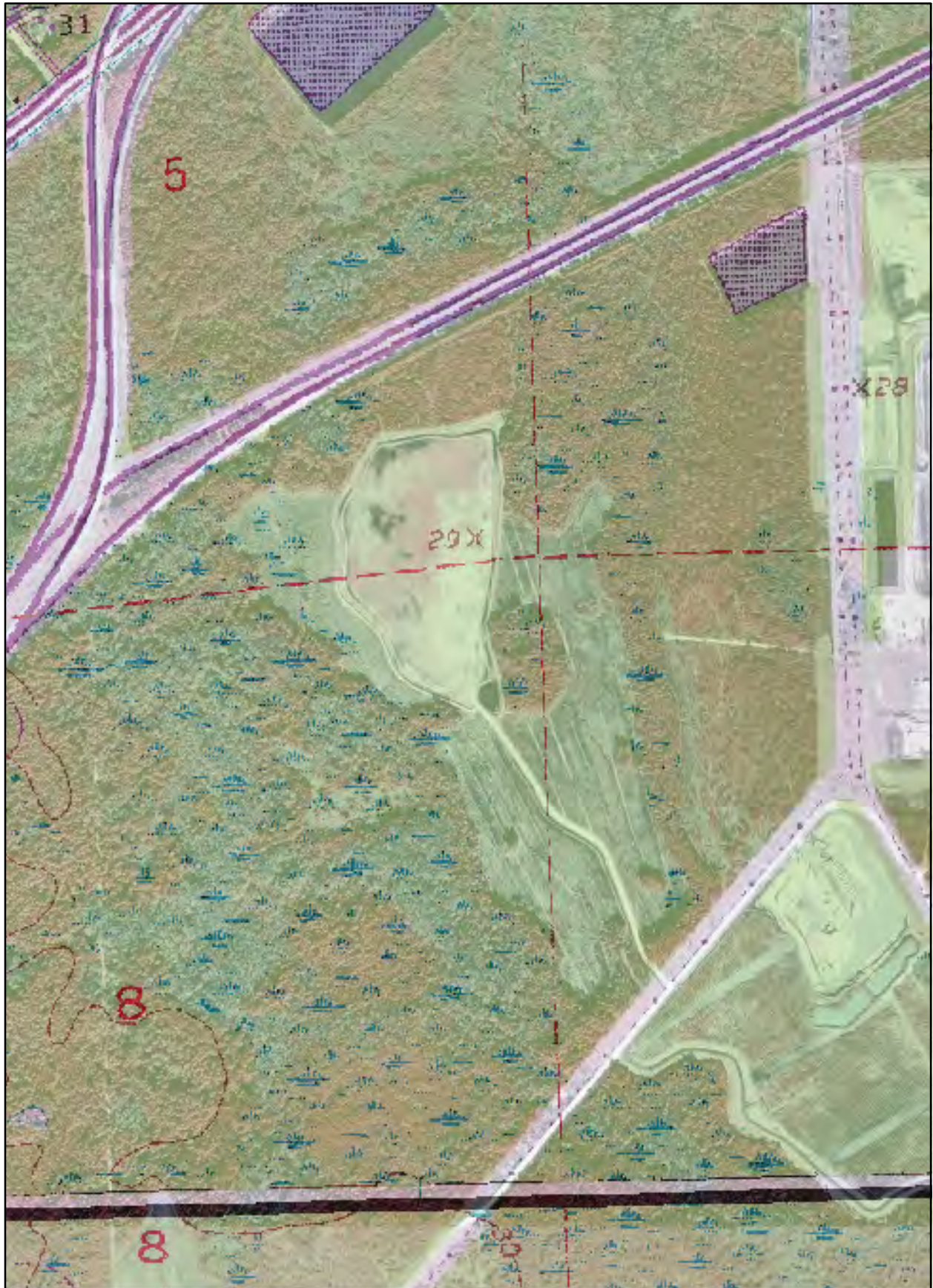
DEP STAFF Signature / Print Name & Title

DATE

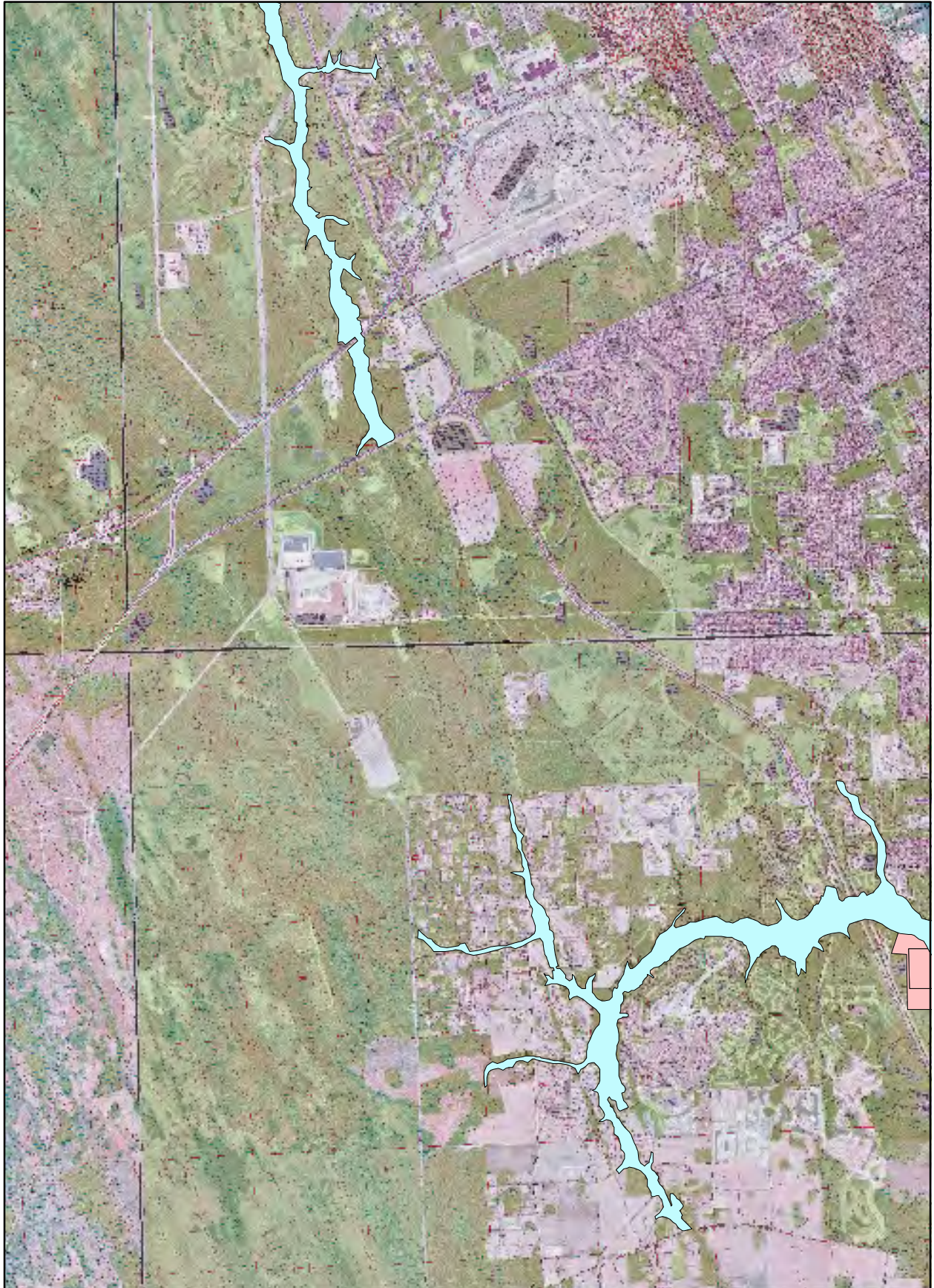
5 31 2011 JURISDICTIONAL SITE VISIT
P. AMMON, D. BAGGETT
TOMOKA FARMS LANDFILL SPRAYFIELD



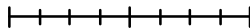
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|-----|-----|-----|-----|-----|



0 275 550 1,100 Feet
|-----|-----|-----|-----|-----|

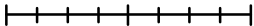


0 2,050 4,100 8,200 Feet





0 287.5 575 1,150 Feet

A horizontal scale bar with tick marks at intervals of 287.5 feet, extending to a total of 1,150 feet.



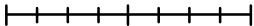
0 287.5 575 1,150 Feet
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0 287.5 575 1,150 Feet

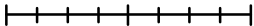


0 287.5 575 1,150 Feet

A horizontal scale bar with vertical tick marks. The first tick mark is at the left end, followed by four evenly spaced ticks, and a final tick mark at the right end.

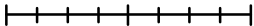


0 287.5 575 1,150 Feet

A scale bar with tick marks corresponding to the values 0, 287.5, 575, and 1,150 feet.

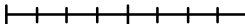


0 287.5 575 1,150 Feet

A horizontal scale bar with vertical tick marks at intervals of 287.5 feet, totaling 1,150 feet.



0 285 570 1,140 Feet

A horizontal scale bar with vertical tick marks. The bar is divided into four equal segments by three vertical lines. The first segment is labeled '0', the second '285', the third '570', and the fourth '1,140 Feet'.

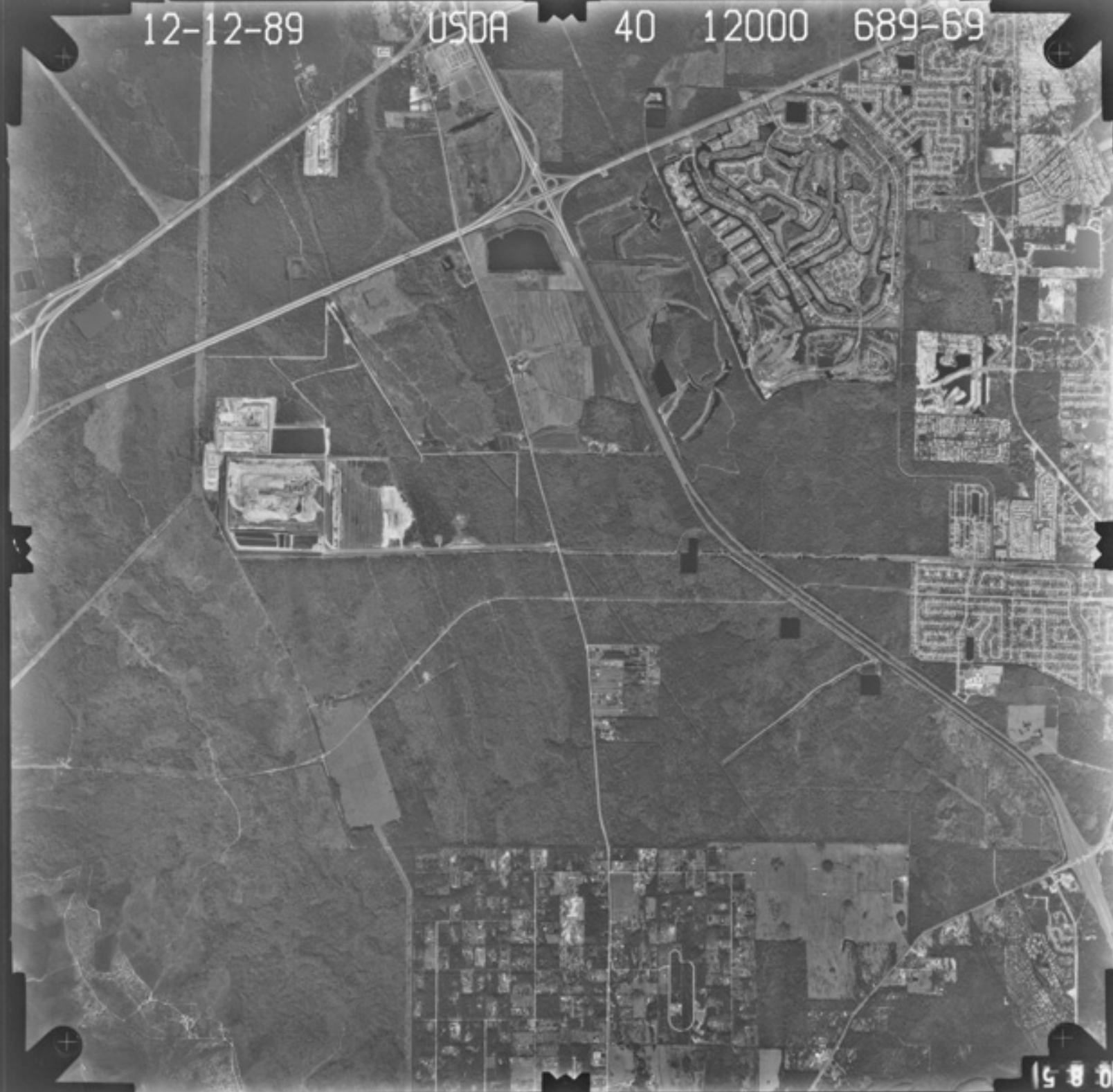
12-12-89

USDA

40

12000

689-69



15 8 01

1- 6-80

VCOG-2-65



1-13-73

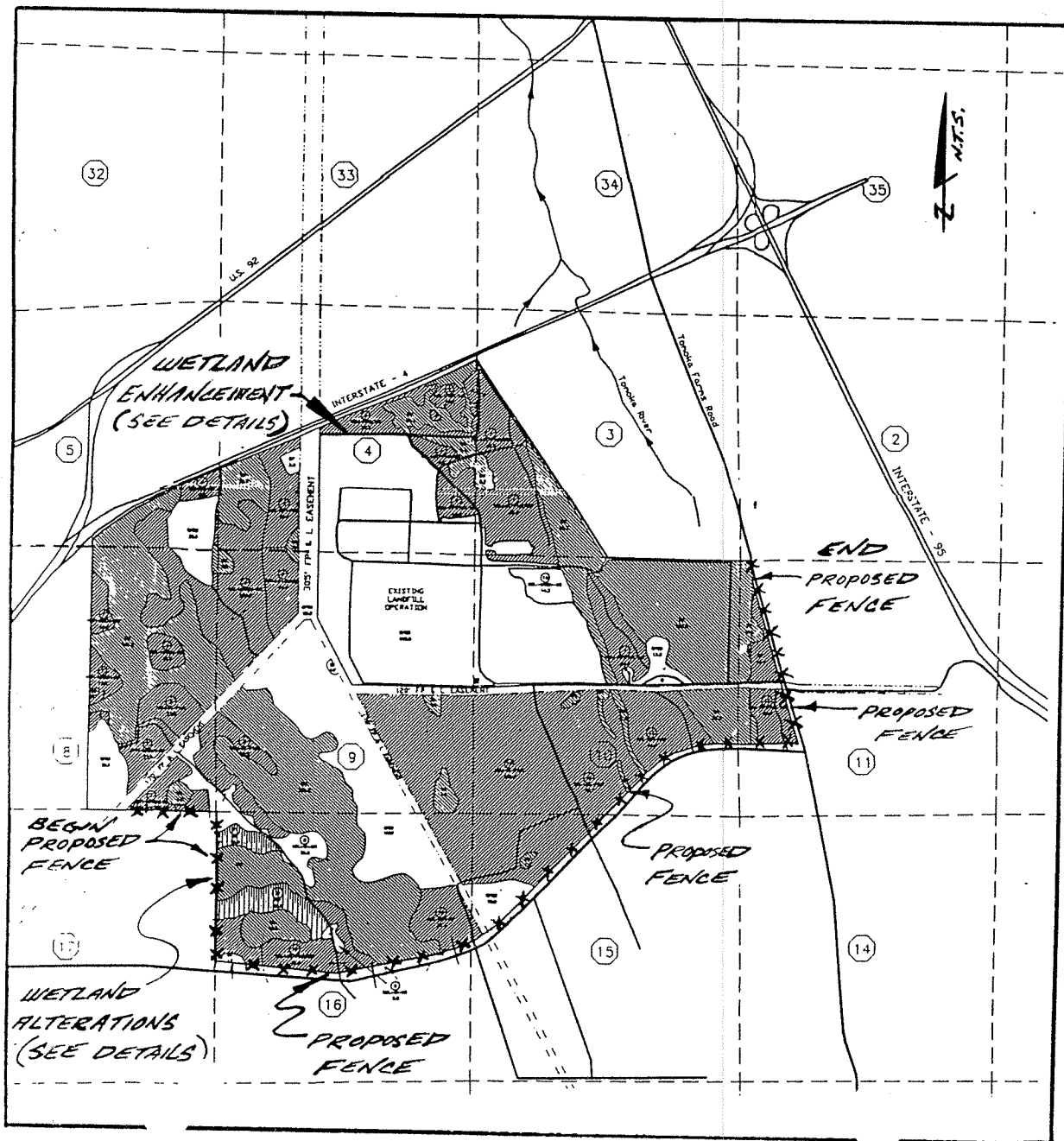
A 40

12127 173-127



TOMOKA FARMS ROAD LANDFILL SITE

VOLUSIA COUNTY, FLORIDA
ECOLOGICAL COMMUNITIES MAP



LEGEND:

X = PROPOSED
FENCE
TYPE "A"

LENGTH OF
PROPOSED
FENCE =
22,770.0 ±
FEET.

PERMIT 642638864

MAP LEGEND

PAVED ROAD	—————
GRADED ROAD	—————
WOODS ROAD	—————
RIVER/STREAM	—————>
SECTION LINE	- - - - -
EASEMENT BOUNDARY	- - - - -
TRACT BOUNDARY	—————
STAND BOUNDARY	—————
SECTION NUMBER	(5)
TIMBER TYPES	
NSL-ST-PMR:	Regeneration condition Overstory condition Dominant Species
NSL-ST-MR:	Natural Slash-Seed tree-Merchantable Regeneration
NSL-ST-PMR	Natural Slash-Seed tree-Premerchantable Regeneration
NSL-ST-OR:	Natural Slash-Seed tree-Inadequate Regeneration
NSL-MRCH-OR:	Natural Slash-Merchantable-Inadequate Regeneration
NSL-PMRCH-OR:	Natural Slash-Premerchantable Overstory- Inadequate Regeneration
NSL-O-OR:	Natural Slash-No Overstory-Inadequate Regeneration
NPP-MRCH-OR:	Natural Pond Pine-Merchantable Overstory-Inadequate Regeneration
NSL-MRCH-PMR:	Natural Slash-Merchantable Overstory- Premerchantable Regeneration
HH:	Hardwood Hammock
SW:	Swamp

TRACT ACRES BY TYPE

STAND	TIMBER TYPE	ACRES
1	NSL-ST-PMR/HR	129.8
2	NSL-MRCH-PMR	40.1
3	NSL-ST-PMR	29.4
4	NSL-MRCH-OR	119.4
5	NSL-PMRCH-OR	24.5
6	NSL-ST-OR	8.9
7	NPP-MRCH-OR	41.3
8	NSL-O-OR	39.2
9	NSL-ST-PMR	59.0
10	NSL-ST-PMR/HR	48.8
11	HH	37.3
12	NSL-ST-OR	31.1
13	NSL-ST-PMR	412.6
14	NSL-MRCH-OR	14.3
	OPEN	785.2
	SV	736.0
	WP	3.5
	ROADS	75.8
TOTAL		2,636.4

ECOLOGICAL COMMUNITIES

	SOUTH FLORIDA FLATWOODS
	SWAMP HARDWOODS
	WETLAND HARDWOOD HAMMOCK



Insp 1 ↗



Date 5-31-11
 Taken D. Ammon / D. Baggett
 Vol CO Solid Waste - Tomoka Land fill - spray field
 The attached photos have not been altered



Insp 1 ↗



2/4



5/15/05
T. K. J.

Soils
Trap 1



Trap
2



4/14

Outside
field



relief pipe in berm ↗
↘

Inside
field



5/14

"road" into
wetlands



wetlands
refuge
P.R.



6/14



Inspect 4
Monitoring well
Road

Spill
Info 4



Monitoring
well



8/14



planted pines near transpec 3 from "road", S side



a/14



ATV & ditch going toward Insp 5





uplands
Insp 6

MAY 31 2011



Entrance to Trap 5

up ←
 ↑
 ATW/ditch
 → W. +

MAY 31 2011

n
14



Imp 7
wetlands



Imp 7
wetlands

12/14



INSP 7



INSP 7

13/14



Area
of old
bomb shelter
(removed, leveled,
filled)

MAY 31 2011

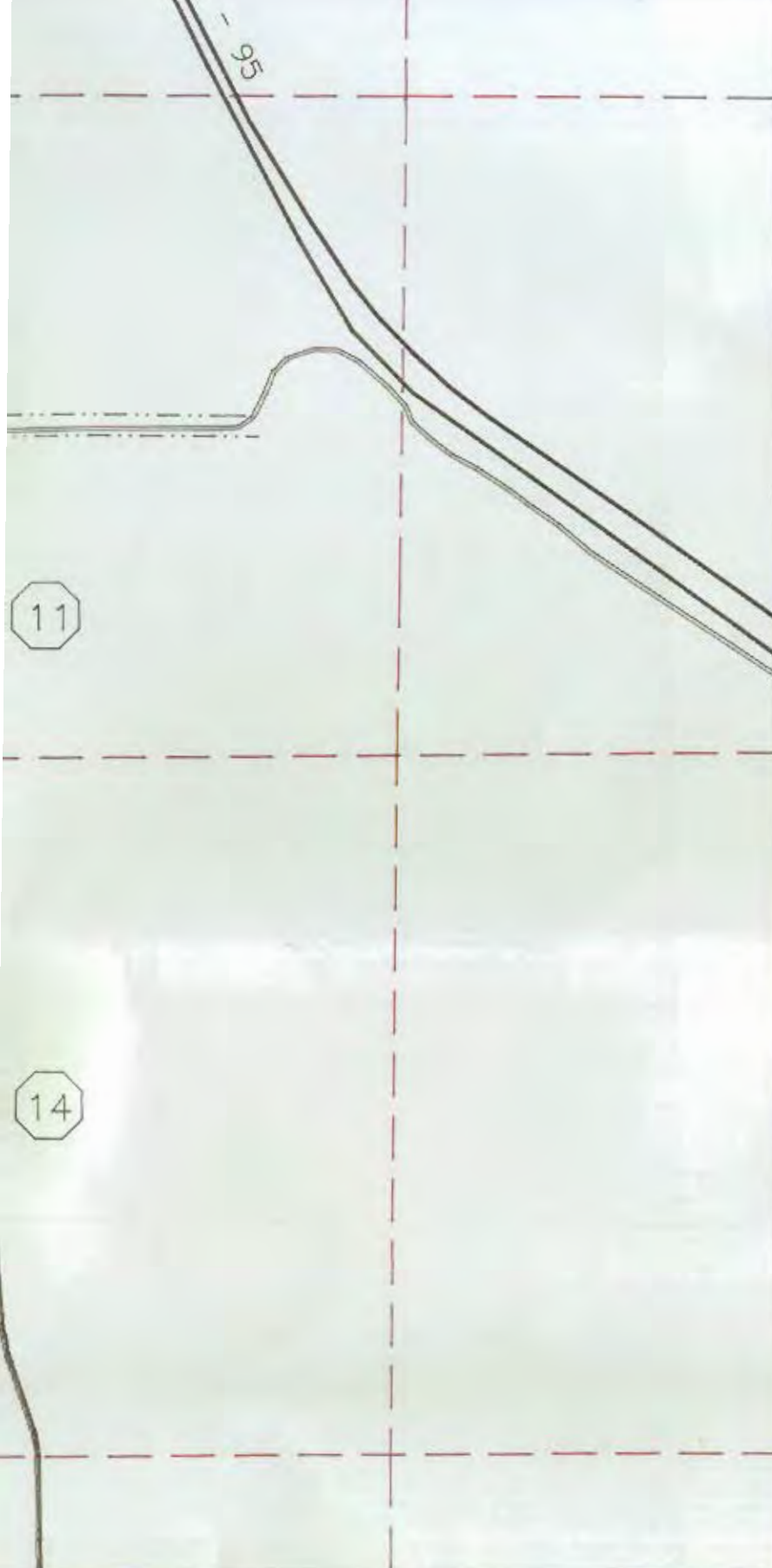


Tree 8




MAY 31 2011

14
14





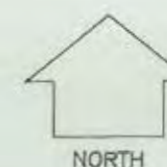
ECOLOGICAL COMMUNITIES

	SOUTH FLATW	SOUTH FLATWOOD
	CYPRESS	SWAMP HS
	UPLAND HAMMOCK	WETLAND HAMMOCK

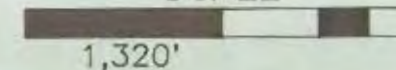
Based on 26 Ecological Communities of Florida - FLORIDA CHAPTER SOIL and WATER CONSERVATION SOCIETY.

TRACT ACRES BY TYPE

STAND	TIMBER TYPE	ACRES
①	NSL-ST-PMR/MR	129.8
②	NSL-MRCH-PMR	40.1
③	NSL-ST-PMR	29.4
④	NSL-MRCH-OR	119.4
⑤	NSL-PMRCH-OR	24.5
⑥	NSL-ST-OR	8.9
⑦	NPP-MRCH-OR	41.3
⑧	NSL-D-OR	39.2
⑨	NSL-ST-PMR	59.0
⑩	NSL-ST-PMR/MR	48.8
⑪	HH	37.3
⑫	NSL-ST-OR	31.1
⑬	NSL-ST-PMR	412.6
⑭	NSL-MRCH-OR	14.3
	OPEN	785.2
	SW	736.0
	BP	3.5
	ROADS	75.8
TOTAL		2,636.4



SCALE



SCALE: 1" = 1,320 Feet

DATE: 6/29/93

Township: 8S Range: 16E

Drawing File: TOMOKA

Map Prepared By:
NATURAL RESOURCE PLANNING SERVICES, INC.
Gainesville, FL 32608