

APPENDIX F

OUC Lakeland-Taft Transmission Line Lake Agnes to McIntosh Segment

Compensating Floodplain Storage Design

The work proposed will result in approximately 16,010 cubic yards of impact to floodplain areas. Compensating storage areas, located as shown on the drawings, will be constructed to offset this floodplain impact. A summary of the floodplain impacts and compensating floodplain storage that will be created is summarized below.

Compensating Storage Area	Area Floodplain Impact (Cu. Yds.)	Compensating Floodplain Created (Cu. Yds.)
AOC – 1	801	812
AOC – 2	1,768	1,793
AOC – 3	693	693
AOC – 4	1,152	1,158
AOC – 5	1,045	1,053
AOC – 6	101	104
AOC – 7	6,490	6,526
AOC – 8	375	381
AOC – 9	2,309	2,320
AOC – 10	811	815
AOC – 11	<u>465</u>	<u>466</u>
Totals	16,010	16,121

Drawings of each proposed Compensating Storage Area and supporting calculations are included. For AOC-3 refer to the attached permit no 44011896.039

Flood Zone

The following FEMA Flood Insurance Rate Map (FIRM) panels were used in the compensation design:

- 12105C0175F
- 12105C0190F
- 12105C0310F
- 12097C0040F

Seasonal High Water Table (SHWT)

The Seasonal High Water Table is based on the information received from the United States Department of Agriculture Natural Resources Conservation Service at structure locations and the area of compensation.

OUC
Lake Agnes Sub - McIntosh Sub
Flood Compensation Designs

AOC-1 (Refer Drawing-AOC-1, Sht 1 of 1)

Structure	Flood Plain Impact		Base Flood Elevation, BFE, ft	Seasonal High Water Table,SHWT,ft	SHWT Elevation, ft
	Road	Compensating Volume, cu.yds			
60		801	160.75	1.0	159.46

Area and Volume Calculation:

Station	Total Area, cu.ft	Area Above BFE, sq.ft	Area between BFE & SHWT, sq.ft	Average Area, btwn BFE & SHWT, sq.ft	Comp. Storage Length Reqrd, ft, Comp Vol / Avg Area	Total Length Provided, ft	Total Volume Created, cu.yds
22+00							
North	115.40	62.08	53.32				
23+00							
North	109.67	56.06	53.61				
24+00							
North	82.97	24.64	58.33	56.18	384.98	390.00	812.00
25+00							
North	60.98	1.53	59.45				

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Lake Agnes Sub - McIntosh Sub
Flood Compensation Designs

AOC-2 (Refer Drawing-AOC-2, Sht 1 of 1)

Flood Plain Impact Structure	Road	Compensating Volume, cu.yds	Compensating Volume, cu.ft	Base Flood Elevation, BFE, ft	Seasonal High Water Table,SHWT,ft	SHWT Elevation, ft
	49	50 - 49	1768			
			47736	138.04	4	131.88

Area and Volume Calculation:

Station	Total Area,	Area Above BFE, sq.ft	Area between BFE & SHWT, sq.ft	Average Area, btwn BFE & SHWT, sq.ft	Comp. Storage Length Reqrd, ft, Comp Vol / Avg	Total Length Provided, ft	Total Volume Created, cu.yds
114+15				169.85	281.05	285.00	1793
North	195.02	15.86	179.16				
115+00							
North	208.87	36.93	171.94				
115+50							
North	205.83	32.07	173.76				
116+00							
North	197.59	17.24	180.34				
116+50							
North	196.26	13.96	182.30				
117+5.24							
North	203.66	72.06	131.60				

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Lake Agnes Sub - McIntosh Sub

Flood Compensation Designs

AOC-4 (Refer Drawing-AOC-4, Sht 1 of 2 and 2 of 2)

Structure	Flood Plain Impact		Compensating Volume, cu.yds	Compensating Volume, cu.ft	Base Flood Elevation, BFE-West, ft	Seasonal High Water Table,SHWT,ft	SHWT Elevation- West, ft	Base Flood Elevation, BFE- East, ft	SHWT Elevation- East, ft
	Road								
41	41 - 40		1152	31104	133.96	1	132.96	137.04	136.04

Area and Volume Calculation:

Station	Total Area, cu.ft	Area Above BFE, sq.ft	Area between BFE & SHWT, sq.ft	Average Area, btwn BFE & SHWT, sq.ft	Comp. Storage Length Reqrd, ft, Comp Vol / Avg Area	Total Length Provided, ft	Total Volume Created, cu.yds
195+50							
South	210.70	123.29	87.41				
196+00							
South	265.22	150.65	114.56				
196+50							
South	292.23	210.79	81.44				
197+00							
Center	261.33	222.35	38.98				
188+00							
Center	66.51	0.98	65.53				
187+50							
Center	88.36	23.65	64.71				
187+00							
Center	116.37	54.75	61.62				
186+50							
Center	149.83	87.48	62.35				
186+00							
Center	162.75	104.25	58.50				
185+50							
Center	145.70	85.91	59.78				
				69.49	447.62	450.00	1158

OUC
Lake Agnes Sub - McIntosh Sub
Flood Compensation Designs

AOC-5 (Refer Drawing-AOC-5, Sht 1 of 1)

Flood Plain Impact		Compensating Volume, cu.yds	Compensating Volume, cu.ft	Base Flood Elevation, BFE, ft	Seasonal High Water Table,SHWT,ft	SHWT Elevation, ft
Structure	Road					
36		1045	28215	134.74	1	131.89

Area and Volume Calculation:

Station	Total Area,	Area Above BFE, sq.ft	Area between BFE & SHWT, sq.ft	Average Area, btwn BFE & SHWT, sq.ft	Comp. Storage Length Reqrd, ft, Comp Vol / Avg	Total Length Provided, ft	Total Volume Created, cu.yds
223+00							
North	87.56	21.18	66.38				
224+00							
North	84.75	10.86	73.89				
225+00							
North	95.44	22.92	72.52				
228+00							
North	39.13	0.00	39.13				
228+50							
North	59.08	0.00	59.08				
229+00							
North	51.95	0.00	51.95	60.49	466.44	470.00	1053.0

OUC
Lake Agnes Sub - McIntosh Sub
Flood Compensation Designs

AOC-6 (Refer Drawing-AOC-6, Sht 1 of 1)

Flood Plain Impact		Compensating Volume, cu.yds	Compensating Volume, cu.ft	Base Flood Elevation, BFE, ft	Seasonal High Water Table,SHWT,ft	SHWT Elevation, ft
Structure	Road					
33		101	2727	137.92	4	130.68

Area and Volume Calculation:

Station	Total Area,	Area Above BFE, sq.ft	Area between BFE & SHWT, sq.ft	Average Area, btwn BFE & SHWT, sq.ft	Comp. Storage Length Reqrd, ft, Comp Vol / Avg	Total Length Provided, ft	Total Volume Created, cu.yds
256+50							
South	80.48	0.00	80.48	80.48	33.88	35.00	104

OUC

Lake Agnes Sub - McIntosh Sub

Flood Compensation Designs

AOC-7 (Refer Drawing-AOC-7, Sht 1 of 1)

Flood Plain Impact		Compensating Volume, cu.yds	Compensating Volume, cu.ft	Base Flood Elevation, BFE, ft	Seasonal High Water Table,SHWT,ft	SHWT Elevation, ft
Structure	Road					
33		6490	175230	136.43'	4	125.18'

Area and Volume Calculation:

Station	Total Area,	Area Above BFE, sq.ft	Area between BFE & SHWT, sq.ft	Average Area, btwn BFE & SHWT, sq.ft	Comp. Storage Length Reqrd, ft, Comp Vol / Avg	Total Length Provided, ft	Total Volume Created, cu.yds
262+00							
South	547.68	70.11	477.57				
263+00							
South	562.41	112.14	450.27	469.84	372.95	375.00	6526
264+00							
South	557.43	75.74	481.69				

AOC-8 (Refer Drawing-AOC-8, Sht 1 of 1)

Flood Plain Impact		Compensating Volume, cu.yds	Compensating Volume, cu.ft	Base Flood Elevation, BFE, ft	Seasonal High Water Table,SHWT,ft	SHWT Elevation, ft	
Structure	Road						
20		375	10125	140.88	1.5	139.38	
Area and Volume Calculation:							
Station	Total Area,	Area Above BFE, sq.ft	Area between BFE & SHWT, sq.ft	Average Area, btwn BFE & SHWT, sq.ft	Comp. Storage Length Reqrd, ft, Comp Vol / Avg	Total Length Provided, ft	Total Volume Created, cu.yds
357+00				41.12	246.21	250.00	381
West	194.96	156.95	38.01				
358+00							
West	186.39	148.99	37.39				
358+50							
West	161.78	113.81	47.97				

OUC
Lake Agnes Sub - McIntosh Sub
Flood Compensation Designs

AOC-9 (Refer Drawing-AOC-9, Sht 1 of 2, 2 of 2)
FEMA Flood Insurance Rate Map (FIRM) -

Flood Plain Impact		Compensating Volume, cu.yds	Compensating Volume, cu.ft	Base Flood Elevation, BFE, ft	Seasonal High Water Table,SHWT,ft	SHWT Elevation, ft	
Structure	Road						
18, 17	17 - 16	2309	62343	138.72'	3.5	134.55'	
Area and Volume Calculation:							
Station	Total Area,	Area Above BFE, sq.ft	Area between BFE & SHWT, sq.ft	Average Area, btwn BFE & SHWT, sq.ft	Comp. Storage Length Reqrd, ft, Comp Vol / Avg	Total Length Provided, ft	Total Volume Created, cu.yds
370+00				134.69	462.88	465.00	2320
West	221.93	93.97	127.96				
EAST	211.94	94.83	117.12				
271+00							
West	201.70	68.95	132.75				
EAST	214.21	90.87	123.34				
272+00							
West	174.65	11.71	162.94				
EAST	187.21	43.21	144.00				

OUC
Lake Agnes Sub - McIntosh Sub
Flood Compensation Designs

AOC-10 (Refer Drawing-AOC-10, Sht 1 of 1)

Flood Plain Impact		Compensating Volume, cu.yds	Compensating Volume, cu.ft	Base Flood Elevation, BFE, ft	Seasonal High Water Table,SHWT,ft	SHWT Elevation, ft	
Structure	Road						
13		811	21897	132.07	3.0' FROM LWST PNT	126.96	
Area and Volume Calculation:							
Station	Total Area,	Area Above BFE, sq.ft	Area between BFE & SHWT, sq.ft	Average Area, btwn BFE & SHWT, sq.ft	Comp. Storage Length Reqrd, ft, Comp Vol / Avg	Total Length Provided, ft	Total Volume Created, cu.yds
423+50				176.05	124.38	125.00	815
East	301.89	55.67	246.22				
424+50							
East	386.83	226.71	160.12				
426+00							
East	409.74	287.93	121.81				

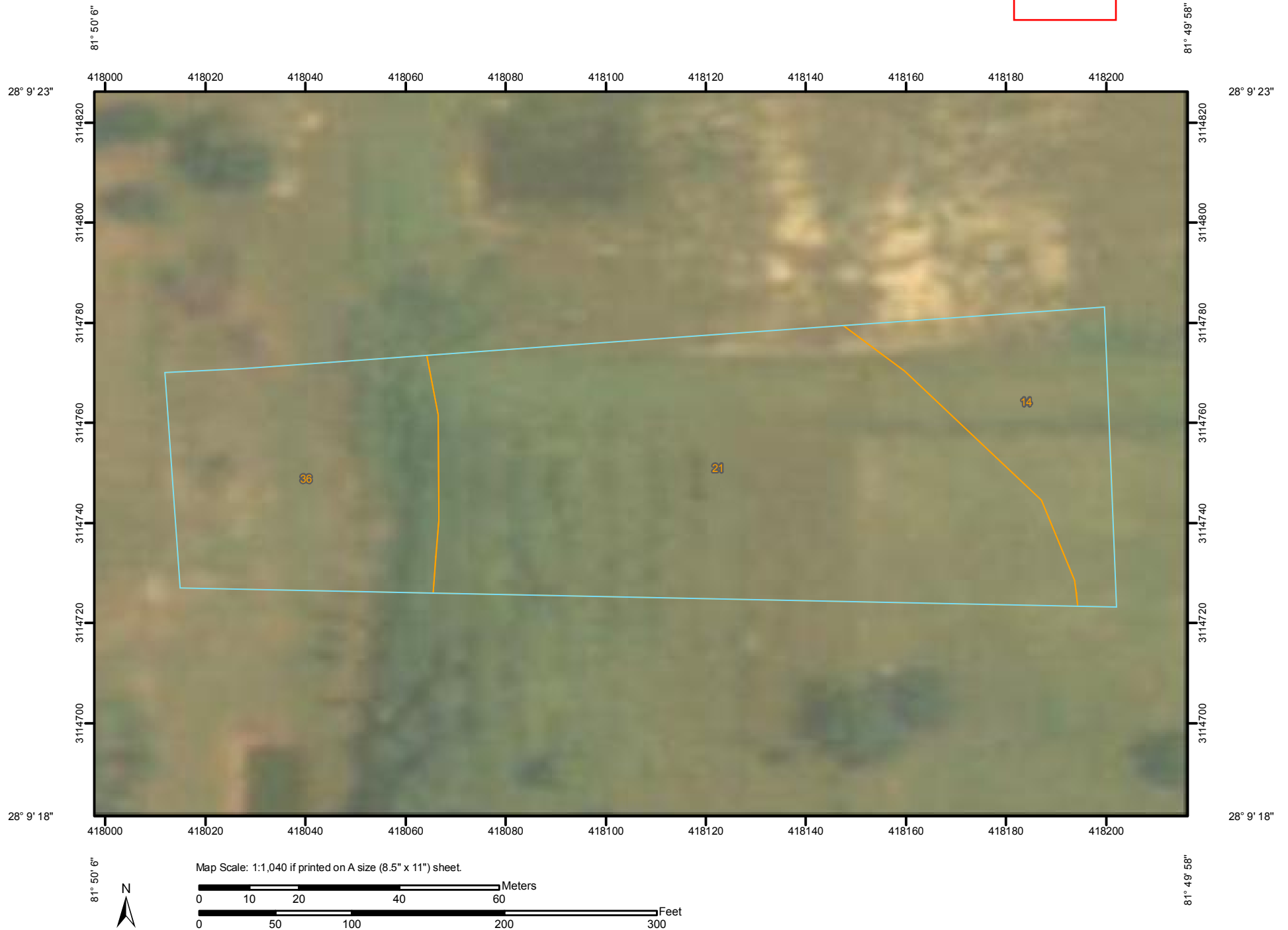
OUC
Lake Agnes Sub - McIntosh Sub
Flood Compensation Designs

AOC-11 (Refer Drawing-AOC-11, Sht 1 of 1)

Flood Plain Impact		Compensating Volume, cu.yds	Compensating Volume, cu.ft	Base Flood Elevation, BFE, ft	Seasonal High Water Table,SHWT,ft	SHWT Elevation, ft	
Structure	Road						
177	176-177	465	12555	108.38'	3.5' FROM LWST PNT	104.88'	
Area and Volume Calculation:							
Station	Total Area,	Area Above BFE, sq.ft	Area between BFE & SHWT, sq.ft	Average Area, btwn BFE & SHWT, sq.ft	Comp. Storage Length Reqrd, ft, Comp Vol / Avg	Total Length Provided, ft	Total Volume Created, cu.yds
974+00				83.79	149.84	150.00	466
NORTH	101.99	0.00	101.99				
975+00							
NORTH	202.36	96.67	105.7				
976+50							
NORTH	238.14	194.45	43.69				

Soil Map—Polk County, Florida

AOC-1



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot



Very Stony Spot



Wet Spot



Other

Special Line Features



Gully



Short Steep Slope



Other

Political Features



Cities

Water Features



Oceans



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

MAP INFORMATION

Map Scale: 1:1,040 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010

Date(s) aerial images were photographed: 8/11/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Polk County, Florida (FL105)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
14	Sparr sand, 0 to 5 percent slopes	0.4	15.0%
21	Immokalee sand	1.4	60.3%
36	Basinger mucky fine sand, depressional	0.6	24.7%
Totals for Area of Interest		2.4	100.0%

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Report—Water Features

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
14—Sparr sand, 0 to 5 percent slopes										
Sparr	A	Low	July	1.5-3.5	>6.0	—	—	None	—	None
	A	Low	August	1.5-3.5	>6.0	—	—	None	—	None
	A	Low	September	1.5-3.5	>6.0	—	—	None	—	None
	A	Low	October	1.5-3.5	>6.0	—	—	None	—	None
21—Immokalee sand										
Immokalee, non-hydric	B/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Immokalee, hydric	B/D	High	June	0.0-1.0	>6.0	—	—	None	—	None
	B/D	High	July	0.0-1.0	>6.0	—	—	None	—	None
	B/D	High	August	0.0-1.0	>6.0	—	—	None	—	None
	B/D	High	September	0.0-1.0	>6.0	—	—	None	—	None
	B/D	High	October	0.0-1.0	>6.0	—	—	None	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
36—Basinger mucky fine sand, depressional										
Basinger, depressional	A/D	High	January	0.0	>6.0	0.0-2.0	Long	Frequent	—	None
	A/D	High	February	0.0	>6.0	0.0-2.0	Long	Frequent	—	None
	A/D	High	June	0.0	>6.0	0.0-2.0	Long	Frequent	—	None
	A/D	High	July	0.0	>6.0	0.0-2.0	Long	Frequent	—	None
	A/D	High	August	0.0	>6.0	0.0-2.0	Long	Frequent	—	None
	A/D	High	September	0.0	>6.0	0.0-2.0	Long	Frequent	—	None
	A/D	High	October	0.0	>6.0	0.0-2.0	Long	Frequent	—	None
	A/D	High	November	0.0	>6.0	0.0-2.0	Long	Frequent	—	None
	A/D	High	December	0.0	>6.0	0.0-2.0	Long	Frequent	—	None

Data Source Information

Soil Survey Area: Polk County, Florida
 Survey Area Data: Version 7, Jan 26, 2010



AOC-2



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot



Very Stony Spot



Wet Spot



Other

Special Line Features



Gully



Short Steep Slope



Other

Political Features



Cities

Water Features



Oceans



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

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Map Unit Legend

Polk County, Florida (FL105)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
9	Lynne sand	0.5	14.2%
68	Arents, 0 to 5 percent slopes	3.0	85.8%
Totals for Area of Interest		3.6	100.0%

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

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Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Report—Water Features



Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
9—Lynne sand										
Lynne, non-hydric	C/D	Very high	July	0.5-1.5	>6.0	—	—	None	—	None
	C/D	Very high	August	0.5-1.5	>6.0	—	—	None	—	None
	C/D	Very high	September	0.5-1.5	>6.0	—	—	None	—	None
	C/D	Very high	October	0.5-1.5	>6.0	—	—	None	—	None
Lynne, hydric	C/D	Very high	June	0.0-1.0	>6.0	—	—	None	—	None
	C/D	Very high	July	0.0-1.0	>6.0	—	—	None	—	None
	C/D	Very high	August	0.0-1.0	>6.0	—	—	None	—	None
	C/D	Very high	September	0.0-1.0	>6.0	—	—	None	—	None
	C/D	Very high	October	0.0-1.0	>6.0	—	—	None	—	None
Felda	A/D	High	January	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	February	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	March	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	July	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	August	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	September	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	October	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	November	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	December	0.0-1.0	>6.0	—	—	None	—	None
Immokalee, non-hydric	B/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	October	0.5-1.5	>6.0	—	—	None	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
Myakka	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Pomona, non-hydric	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Wauchula, non-hydric	C/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
68—Arents, 0 to 5 percent slopes										
Arents	A	Negligible	January	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	June	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	July	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	August	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	September	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	October	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	November	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	December	2.0-4.0	>6.0	—	—	None	—	None

Data Source Information

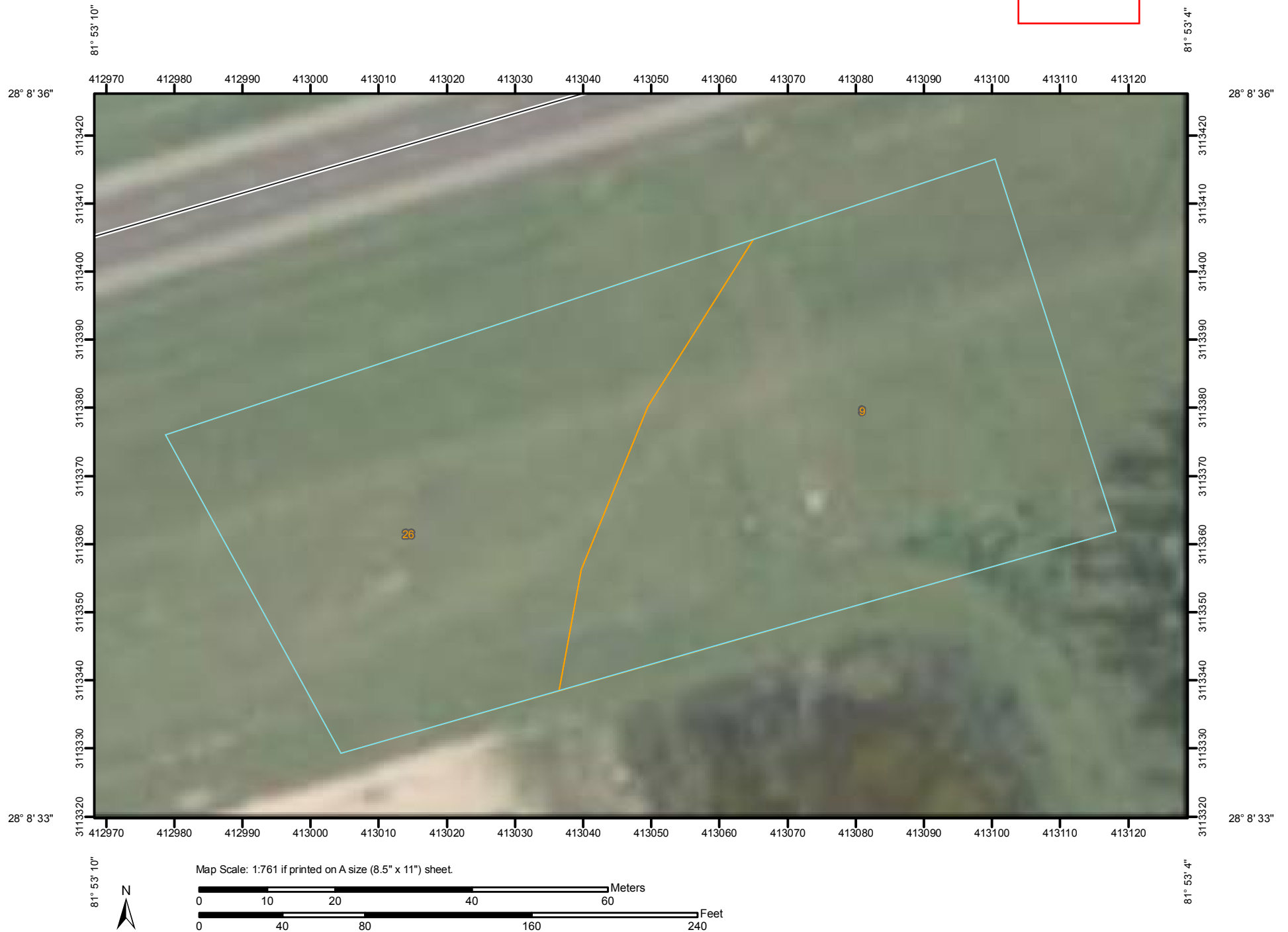
Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010



Soil Map—Polk County, Florida

AOC-4



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot



Very Stony Spot



Wet Spot



Other

Special Line Features



Gully



Short Steep Slope



Other

Political Features



Cities

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

MAP INFORMATION

Map Scale: 1:761 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010

Date(s) aerial images were photographed: 8/11/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Polk County, Florida (FL105)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
9	Lynne sand	0.9	54.1%
26	Lochloosa fine sand	0.8	45.9%
Totals for Area of Interest		1.7	100.0%

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Report—Water Features

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
9—Lynne sand										
Lynne, non-hydric	C/D	Very high	July	0.5-1.5	>6.0	—	—	None	—	None
	C/D	Very high	August	0.5-1.5	>6.0	—	—	None	—	None
	C/D	Very high	September	0.5-1.5	>6.0	—	—	None	—	None
	C/D	Very high	October	0.5-1.5	>6.0	—	—	None	—	None
Lynne, hydric	C/D	Very high	June	0.0-1.0	>6.0	—	—	None	—	None
	C/D	Very high	July	0.0-1.0	>6.0	—	—	None	—	None
	C/D	Very high	August	0.0-1.0	>6.0	—	—	None	—	None
	C/D	Very high	September	0.0-1.0	>6.0	—	—	None	—	None
	C/D	Very high	October	0.0-1.0	>6.0	—	—	None	—	None
26—Lochloosa fine sand										
Lochloosa	C	Low	July	2.5-5.0	>6.0	—	—	None	—	None
	C	Low	August	2.5-5.0	>6.0	—	—	None	—	None
	C	Low	September	2.5-5.0	>6.0	—	—	None	—	None
	C	Low	October	2.5-5.0	>6.0	—	—	None	—	None

Data Source Information

Soil Survey Area: Polk County, Florida
 Survey Area Data: Version 7, Jan 26, 2010

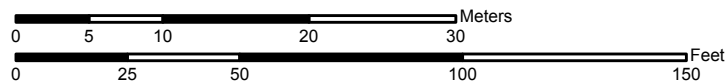


Soil Map—Polk County, Florida

AOC-5



Map Scale: 1:534 if printed on A size (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot



Very Stony Spot



Wet Spot



Other

Special Line Features



Gully



Short Steep Slope



Other

Political Features



Cities

Water Features



Oceans



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

MAP INFORMATION

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The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010

Date(s) aerial images were photographed: 8/11/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Polk County, Florida (FL105)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7	Pomona fine sand	0.7	100.0%
Totals for Area of Interest		0.7	100.0%

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

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Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

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Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

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Report—Water Features



Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
7—Pomona fine sand										
Pomona, non-hydric	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Pomona, hydric	A/D	High	June	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	July	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	August	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	September	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	October	0.0-1.0	>6.0	—	—	None	—	None
Myakka	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Smyrna, non-hydric	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Wauchula, non-hydric	C/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	August	0.5-1.5	>6.0	—	—	None	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
	C/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	October	0.5-1.5	>6.0	—	—	None	—	None

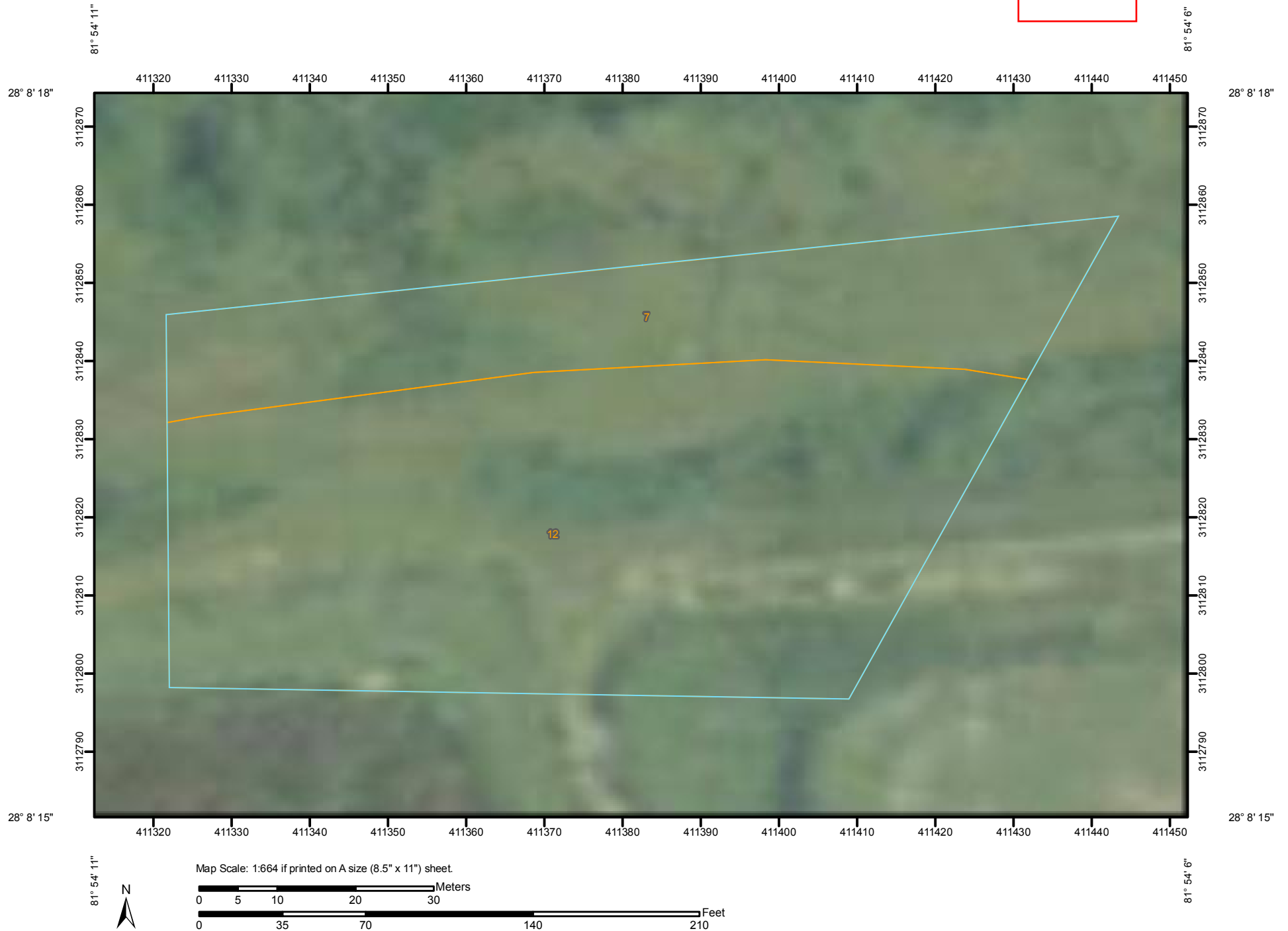
Data Source Information

Soil Survey Area: Polk County, Florida
 Survey Area Data: Version 7, Jan 26, 2010



Soil Map—Polk County, Florida

AOC-6



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot



Very Stony Spot



Wet Spot



Other

Special Line Features



Gully



Short Steep Slope



Other

Political Features



Cities

Water Features



Oceans



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

MAP INFORMATION

Map Scale: 1:664 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010

Date(s) aerial images were photographed: 8/11/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Polk County, Florida (FL105)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7	Pomona fine sand	0.4	29.5%
12	Neilhurst sand, 1 to 5 percent slopes	1.0	70.5%
Totals for Area of Interest		1.4	100.0%

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Report—Water Features



Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
7—Pomona fine sand										
Pomona, non-hydric	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Pomona, hydric	A/D	High	June	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	July	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	August	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	September	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	October	0.0-1.0	>6.0	—	—	None	—	None
Myakka	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Smyrna, non-hydric	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Wauchula, non-hydric	C/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	August	0.5-1.5	>6.0	—	—	None	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
	C/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
12—Neilhurst sand, 1 to 5 percent slopes										
Neilhurst	A	Negligible	Jan-Dec	—	—	—	—	None	—	—
Arents	A	Negligible	January	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	June	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	July	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	August	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	September	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	October	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	November	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	December	2.0-4.0	>6.0	—	—	None	—	None
Haplaquents, clayey	D	Very high	January	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	February	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	March	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	April	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	May	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	June	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	July	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	August	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	September	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	October	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	November	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	December	0.0	>6.0	0.0-1.0	Long	Frequent	—	None

Data Source Information

Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010



Soil Map—Polk County, Florida
(AOC-7)

AOC-7



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot



Very Stony Spot



Wet Spot



Other

Special Line Features



Gully



Short Steep Slope



Other

Political Features



Cities

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

MAP INFORMATION

Map Scale: 1:707 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010

Date(s) aerial images were photographed: 8/11/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Polk County, Florida (FL105)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7	Pomona fine sand	0.3	39.7%
12	Neilhurst sand, 1 to 5 percent slopes	0.5	60.3%
Totals for Area of Interest		0.8	100.0%

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

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Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Report—Water Features



Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
7—Pomona fine sand										
Pomona, non-hydric	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Pomona, hydric	A/D	High	June	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	July	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	August	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	September	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	October	0.0-1.0	>6.0	—	—	None	—	None
Myakka	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Smyrna, non-hydric	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Wauchula, non-hydric	C/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	August	0.5-1.5	>6.0	—	—	None	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
	C/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	C/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
12—Neilhurst sand, 1 to 5 percent slopes										
Neilhurst	A	Negligible	Jan-Dec	—	—	—	—	None	—	—
Arents	A	Negligible	January	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	June	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	July	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	August	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	September	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	October	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	November	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	December	2.0-4.0	>6.0	—	—	None	—	None
Haplaquents, clayey	D	Very high	January	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	February	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	March	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	April	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	May	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	June	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	July	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	August	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	September	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	October	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	November	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	December	0.0	>6.0	0.0-1.0	Long	Frequent	—	None

Data Source Information

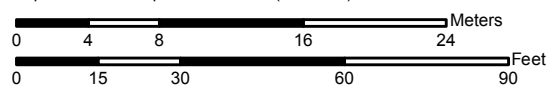
Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010





Map Scale: 1:419 if printed on A size (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot



Very Stony Spot



Wet Spot



Other

Special Line Features



Gully



Short Steep Slope



Other

Political Features



Cities

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

MAP INFORMATION

Map Scale: 1:419 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010

Date(s) aerial images were photographed: 8/11/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Polk County, Florida (FL105)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
12	Neilhurst sand, 1 to 5 percent slopes	0.0	1.2%
17	Smyrna and Myakka fine sands	0.5	98.8%
Totals for Area of Interest		0.5	100.0%

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Report—Water Features



Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
12—Neilhurst sand, 1 to 5 percent slopes										
Neilhurst	A	Negligible	Jan-Dec	—	—	—	—	None	—	—
Arents	A	Negligible	January	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	June	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	July	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	August	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	September	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	October	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	November	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	December	2.0-4.0	>6.0	—	—	None	—	None
Haplaquents, clayey	D	Very high	January	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	February	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	March	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	April	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	May	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	June	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	July	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	August	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	September	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	October	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	November	0.0	>6.0	0.0-1.0	Long	Frequent	—	None
	D	Very high	December	0.0	>6.0	0.0-1.0	Long	Frequent	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
17—Smyrna and Myakka fine sands										
Myakka	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Smyrna, non-hydric	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Smyrna, hydric	A/D	High	June	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	July	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	August	0.0-1.0	>6.0	—	—	None	—	None
	A/D	High	September	0.0-1.0	>6.0	—	—	None	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
	A/D	High	October	0.0-1.0	>6.0	—	—	None	—	None
Basinger	A/D	Very high	January	0.0-1.0	>6.0	—	—	None	—	None
	A/D	Very high	February	0.0-1.0	>6.0	—	—	None	—	None
	A/D	Very high	June	0.0-1.0	>6.0	—	—	None	—	None
	A/D	Very high	July	0.0-1.0	>6.0	—	—	None	—	None
	A/D	Very high	August	0.0-1.0	>6.0	—	—	None	—	None
	A/D	Very high	September	0.0-1.0	>6.0	—	—	None	—	None
	A/D	Very high	October	0.0-1.0	>6.0	—	—	None	—	None
	A/D	Very high	November	0.0-1.0	>6.0	—	—	None	—	None
	A/D	Very high	December	0.0-1.0	>6.0	—	—	None	—	None
Immokalee, non-hydric	B/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Ona, non-hydric	B/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	September	0.5-1.5	>6.0	—	—	None	—	None
	B/D	High	October	0.5-1.5	>6.0	—	—	None	—	None
Pomona, non-hydric	A/D	High	June	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	July	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	August	0.5-1.5	>6.0	—	—	None	—	None
	A/D	High	September	0.5-1.5	>6.0	—	—	None	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
	A/D	High	October	0.5-1.5	>6.0	—	—	None	—	None

Data Source Information

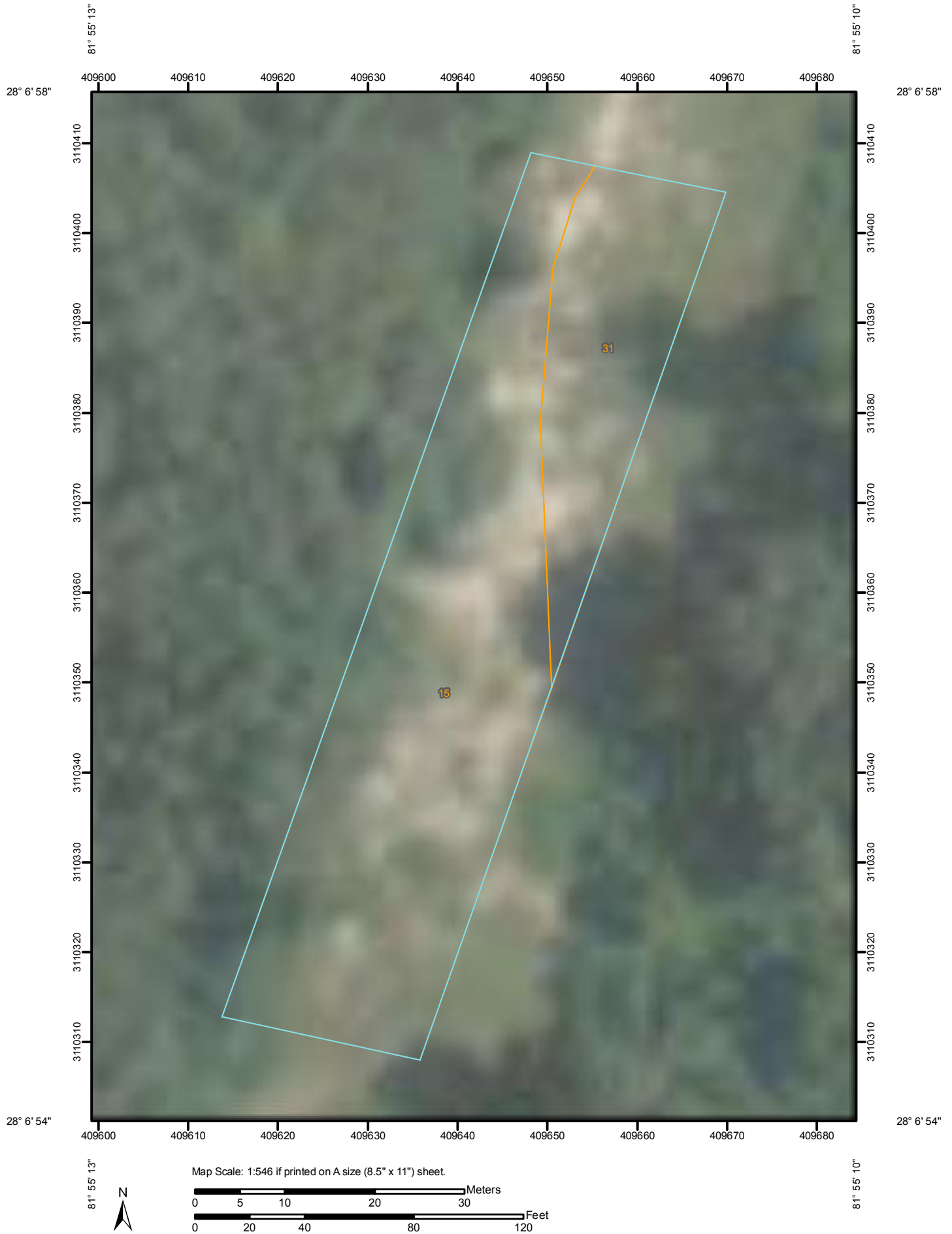
Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010



Soil Map—Polk County, Florida
(AOC-9)

AOC-9



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot



Very Stony Spot



Wet Spot



Other

Special Line Features



Gully



Short Steep Slope



Other

Political Features



Cities

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010

Date(s) aerial images were photographed: 8/11/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Polk County, Florida (FL105)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
15	Tavares fine sand, 0 to 5 percent slopes	0.4	74.6%
31	Adamsville fine sand	0.1	25.4%
Totals for Area of Interest		0.6	100.0%

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

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Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

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Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Report—Water Features



Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
15—Tavares fine sand, 0 to 5 percent slopes										
Tavares	A	Negligible	June	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	July	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	August	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	September	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	October	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	November	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	December	3.5-6.0	>6.0	—	—	None	—	None
Adamsville	A	Negligible	June	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	July	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	August	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	September	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	October	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	November	2.0-3.5	>6.0	—	—	None	—	None
Candler	A	Negligible	Jan-Dec	—	—	—	—	None	—	—
Millhopper	A	Negligible	July	3.5-6.0	4.0-6.5	—	—	None	—	None
	A	Negligible	August	3.5-6.0	4.0-6.5	—	—	None	—	None
	A	Negligible	September	3.5-6.0	4.0-6.0	—	—	None	—	None
	A	Negligible	October	3.5-6.0	4.0-6.5	—	—	None	—	None
	A	Negligible	November	3.5-6.0	4.0-6.5	—	—	None	—	None
	A	Negligible	December	3.5-6.0	4.0-6.5	—	—	None	—	None
Narcoossee	B	Medium	June	2.0-3.5	>6.0	—	—	None	—	None
	B	Medium	July	2.0-3.5	>6.0	—	—	None	—	None
	B	Medium	August	2.0-3.5	>6.0	—	—	None	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
	B	Medium	September	2.0-3.5	>6.0	—	—	None	—	None
	B	Medium	October	2.0-3.5	>6.0	—	—	None	—	None
	B	Medium	November	2.0-3.5	>6.0	—	—	None	—	None
Zolfo	A	Negligible	June	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	July	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	August	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	September	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	October	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	November	2.0-3.5	>6.0	—	—	None	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
31—Adamsville fine sand										
Adamsville	A	Negligible	June	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	July	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	August	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	September	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	October	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	November	2.0-3.5	>6.0	—	—	None	—	None
Satellite	A	Negligible	June	1.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	July	1.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	August	1.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	September	1.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	October	1.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	November	1.0-3.5	>6.0	—	—	None	—	None
Tavares	A	Negligible	June	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	July	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	August	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	September	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	October	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	November	3.5-6.0	>6.0	—	—	None	—	None

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
	A	Negligible	December	3.5-6.0	>6.0	—	—	None	—	None
Zolfo	A	Negligible	June	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	July	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	August	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	September	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	October	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	November	2.0-3.5	>6.0	—	—	None	—	None

Data Source Information

Soil Survey Area: Polk County, Florida
 Survey Area Data: Version 7, Jan 26, 2010





MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot



Very Stony Spot



Wet Spot



Other

Special Line Features



Gully



Short Steep Slope



Other

Political Features



Cities

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

MAP INFORMATION

Map Scale: 1:621 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Florida

Survey Area Data: Version 7, Jan 26, 2010

Date(s) aerial images were photographed: 8/11/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Polk County, Florida (FL105)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
68	Arents, 0 to 5 percent slopes	0.7	100.0%
Totals for Area of Interest		0.7	100.0%

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

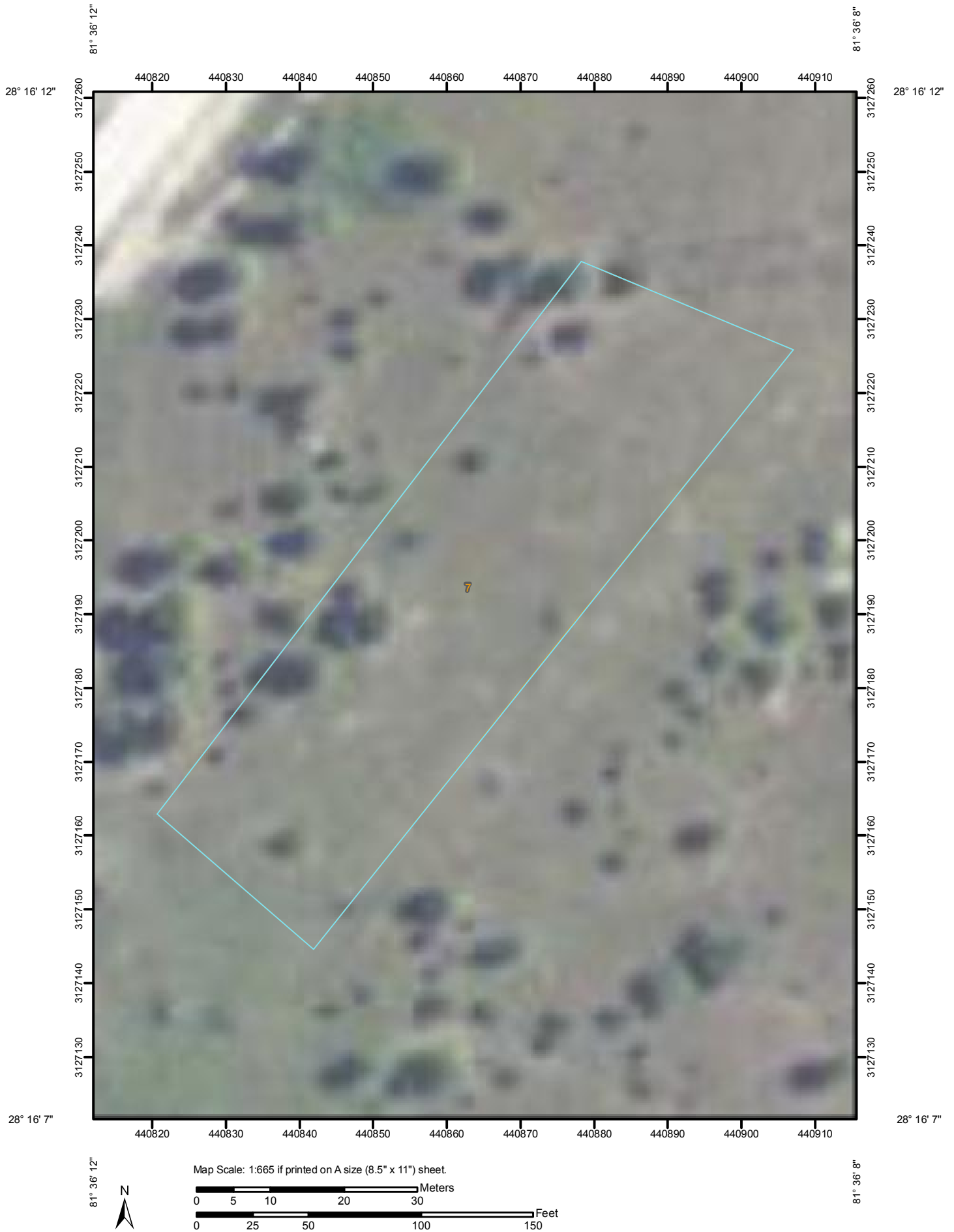
Report—Water Features

Water Features— Polk County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
68—Arents, 0 to 5 percent slopes										
Arents	A	Negligible	January	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	June	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	July	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	August	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	September	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	October	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	November	2.0-4.0	>6.0	—	—	None	—	None
	A	Negligible	December	2.0-4.0	>6.0	—	—	None	—	None

Data Source Information

Soil Survey Area: Polk County, Florida
 Survey Area Data: Version 7, Jan 26, 2010





MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

 Very Stony Spot

 Wet Spot

 Other

Special Line Features

-  Gully
-  Short Steep Slope
-  Other

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

Map Scale: 1:665 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Osceola County, Florida

Survey Area Data: Version 7, Apr 27, 2011

Date(s) aerial images were photographed: 8/12/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Osceola County, Florida (FL097)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7	Candler sand, 0 to 5 percent slopes	0.7	100.0%
Totals for Area of Interest		0.7	100.0%



Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

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Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Report—Water Features



Water Features— Osceola County, Florida										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
7—Candler sand, 0 to 5 percent slopes										
Candler	A	Negligible	Jan-Dec	—	—	—	—	None	—	—
Candler, 5 to 12% slopes	A	Negligible	Jan-Dec	—	—	—	—	None	—	—
Cassia	A	Low	June	1.5-3.5	>6.0	—	—	None	—	None
	A	Low	July	1.5-3.5	>6.0	—	—	None	—	None
	A	Low	August	1.5-3.5	>6.0	—	—	None	—	None
	A	Low	September	1.5-3.5	>6.0	—	—	None	—	None
	A	Low	October	1.5-3.5	>6.0	—	—	None	—	None
	A	Low	November	1.5-3.5	>6.0	—	—	None	—	None
	A	Low	December	1.5-3.5	>6.0	—	—	None	—	None
Pomello	A	Negligible	July	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	August	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	September	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	October	2.0-3.5	>6.0	—	—	None	—	None
	A	Negligible	November	2.0-3.5	>6.0	—	—	None	—	None
Tavares	A	Negligible	June	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	July	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	August	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	September	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	October	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	November	3.5-6.0	>6.0	—	—	None	—	None
	A	Negligible	December	3.5-6.0	>6.0	—	—	None	—	None

Data Source Information

Soil Survey Area: Osceola County, Florida

Survey Area Data: Version 7, Apr 27, 2011

