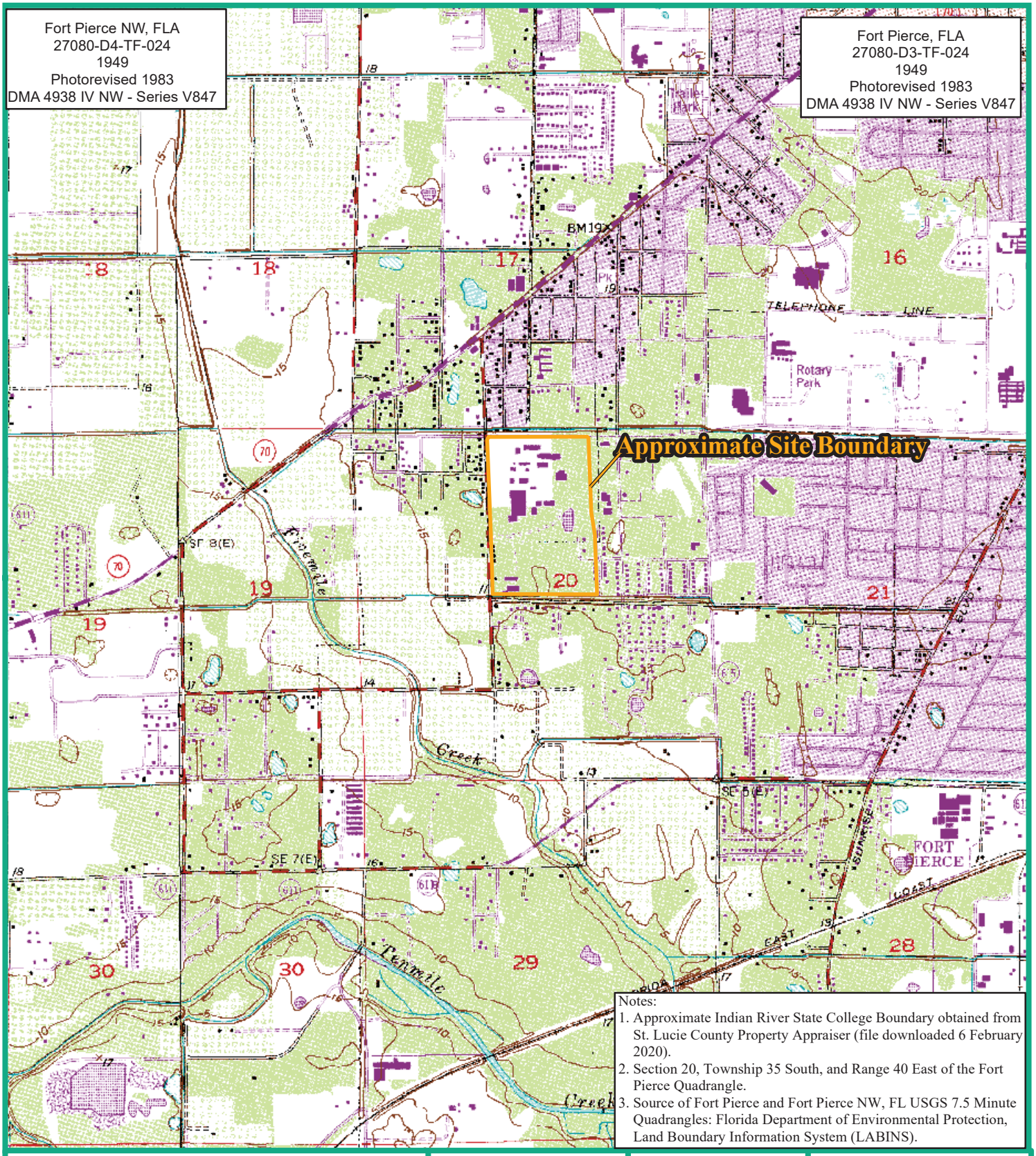


Notes:
1. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
2. Section 20, Township 35 South, and Range 40 East of the Fort Pierce Quadrangle.
3. Source of Fort Pierce and Fort Pierce NW, FL USGS 7.5 Minute Quadrangles: Florida Department of Environmental Protection, Land Boundary Information System (LABINS).

Figure 1
USGS Site Topographic Map
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

2,000 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Date: June 09, 2020

T:\0GIS\FR3781_Former_IRSC\MXDs\Topo.mxd 2/10/2020 1:12:01 PM MAH

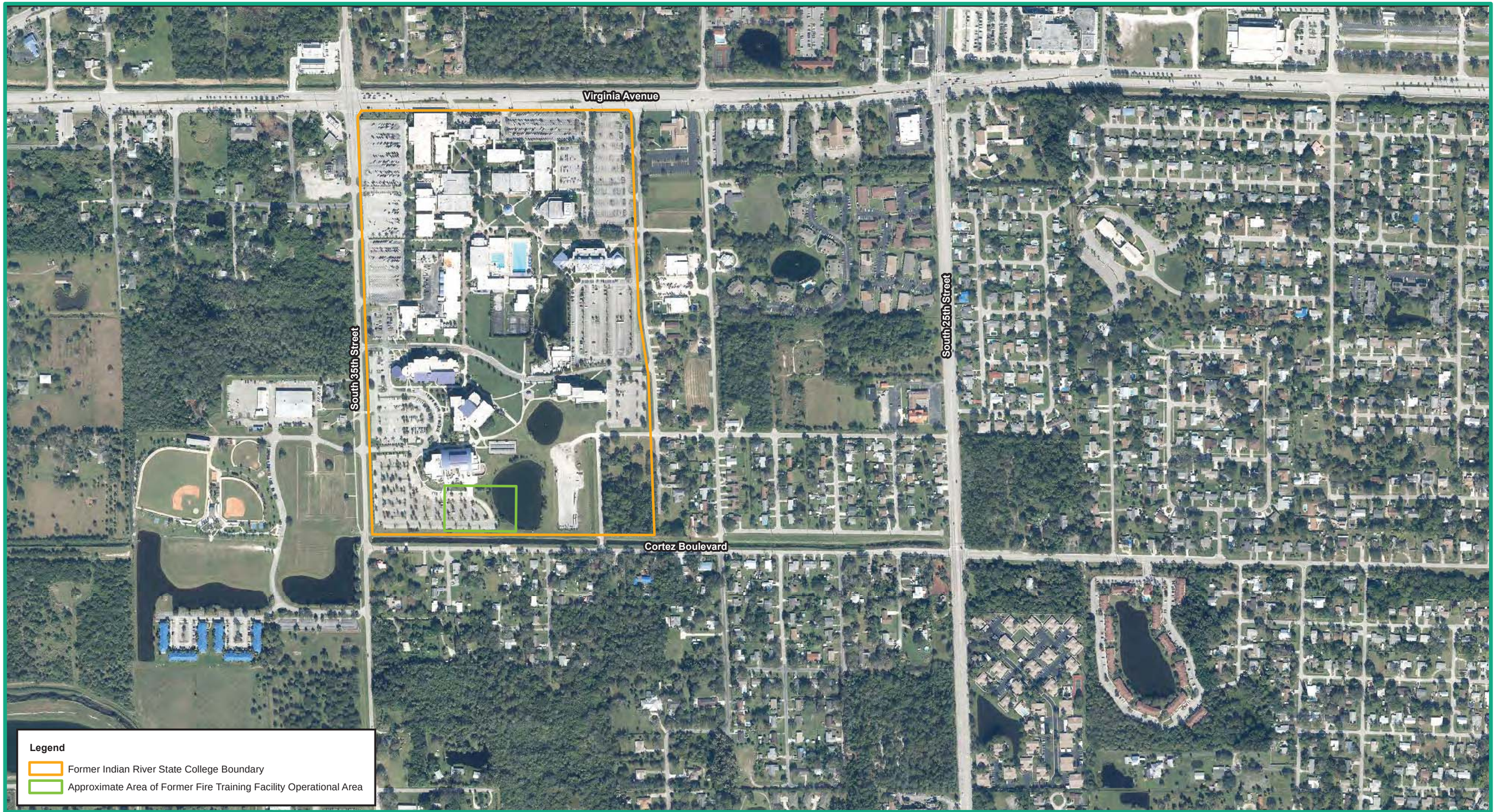


Figure 2
Site Vicinity Map
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
2. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Date: June 16, 2020

N

600 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\SiteVicinity.mxd 16 June 2020 MAH

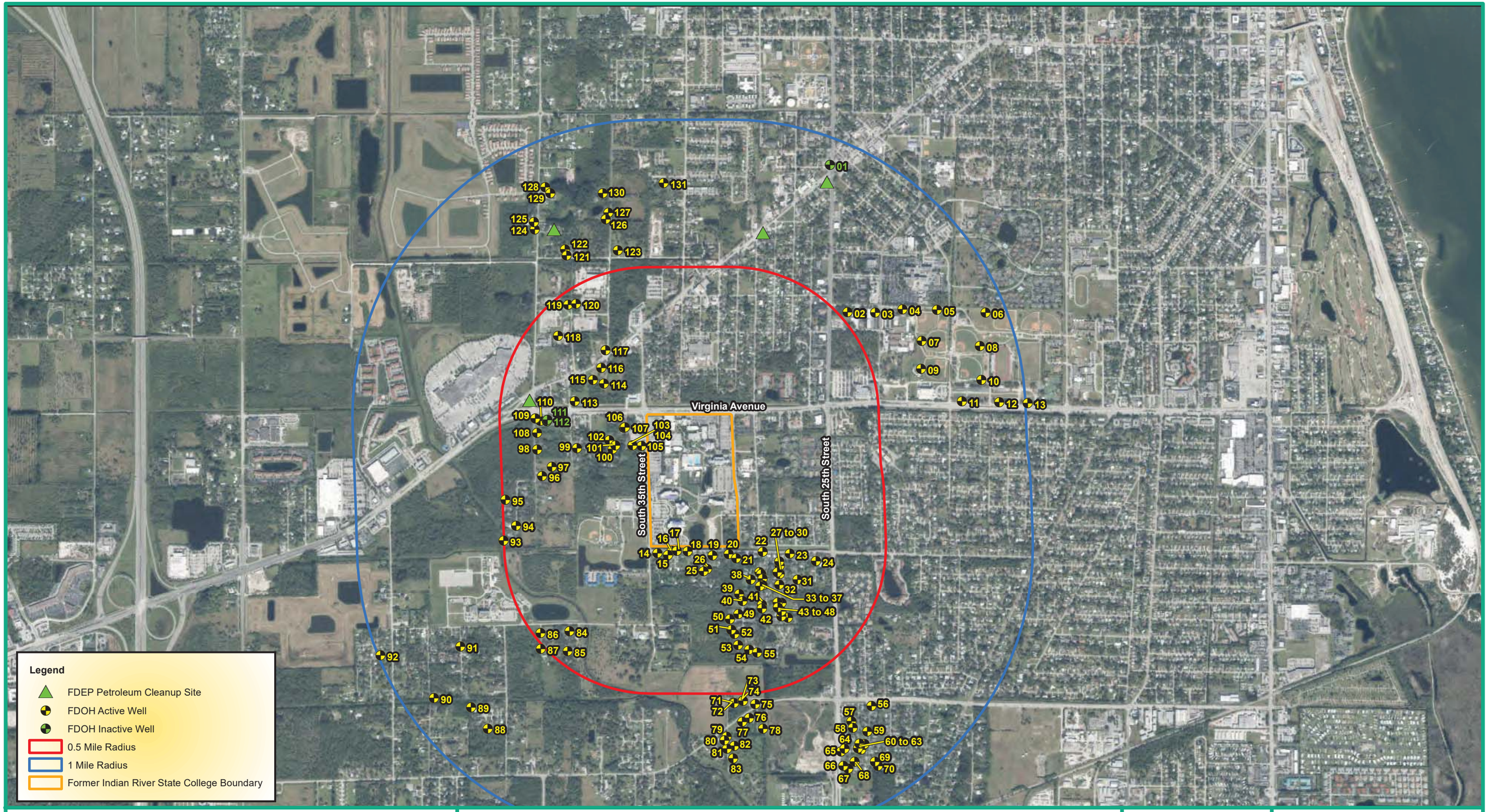


Figure 3
Water Wells within a 1-mile Radius
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. Source of Florida Department of Health (FDOH) wells: well surveillance program data download dated 13 April 2020.
2. Active indicates the well is used on a regular basis or will be used within a reasonable period of time (2-3 months). Inactive indicates the well has not been regularly used within the past 6-12 months but is maintained in such a state that it could be used.
3. Source of Florida Department of Environmental Protection (FDEP) Petroleum Cleanup Sites: Map Direct: Contamination Locator Map data download dated 4 June 2020.
4. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
5. 2017 World Imagery Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

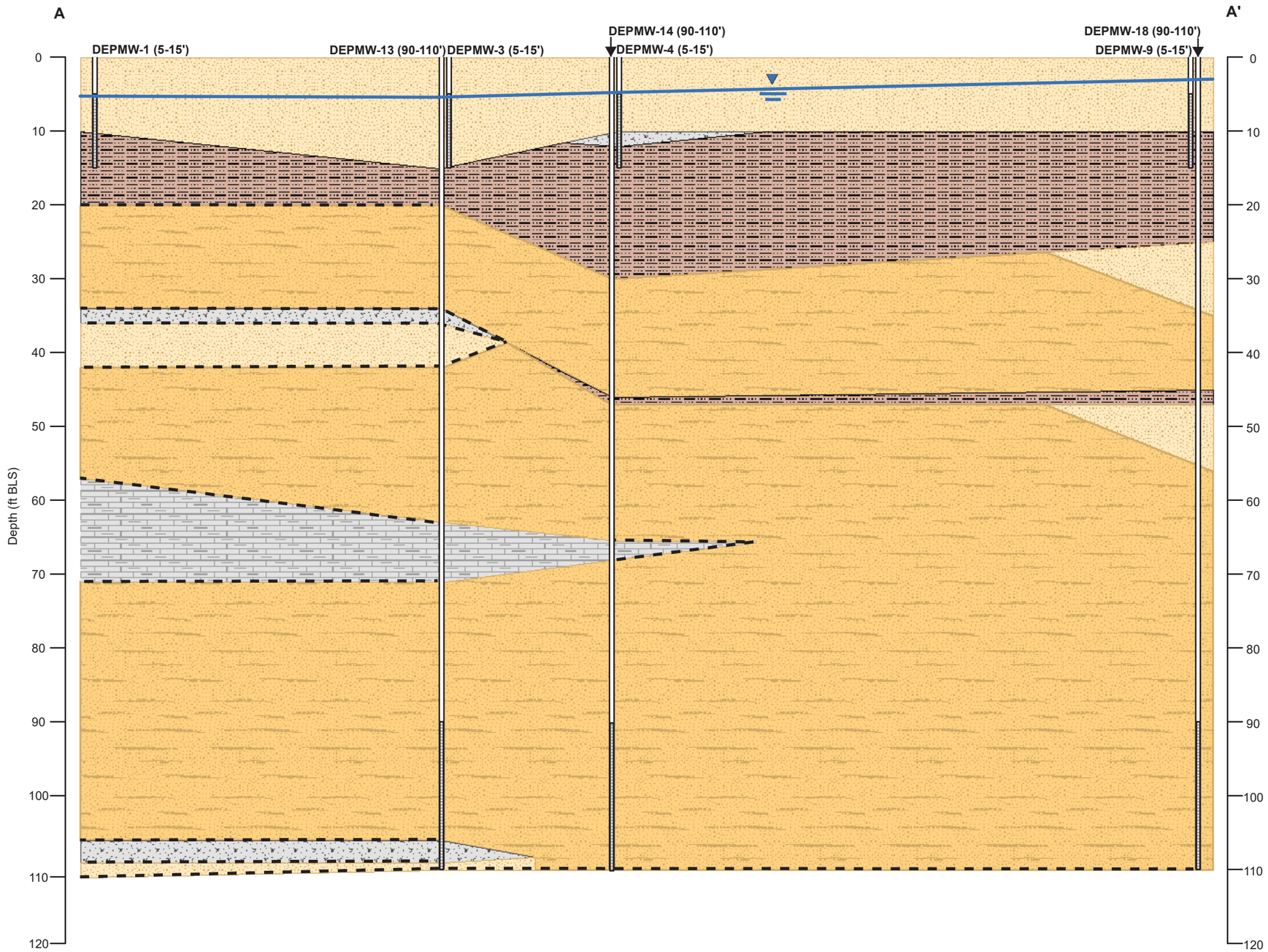
Date: June 16, 2020

N

1,600 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\WellSurvey.mxd 16 June 2020 AL



Legend

- Water Table
- Inferred Lithology

Lithology

- Poorly graded SAND
- Poorly graded SAND with shell fragments
- Silty CLAY/Clayey SILT/Sandy CLAY/Sandy SILT
- Silty SAND/Clayey SAND
- Limestone with shell fragments

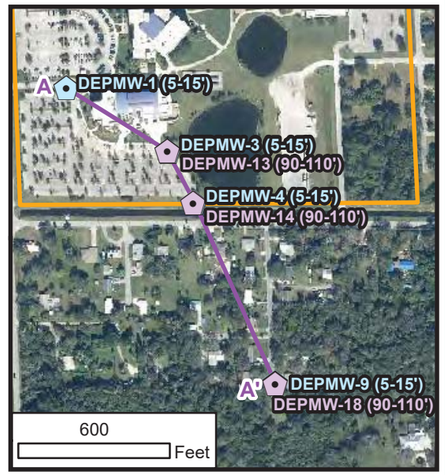


Figure 4
Cross Section A-A'
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. ft BLS indicates feet below land surface.
2. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website

Date: June 16, 2020

Monitoring Well

N

150 Feet

Vertical Exaggeration = 10

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\FIRSC_CrossSection_AA.mxd 16 June 2020 AL

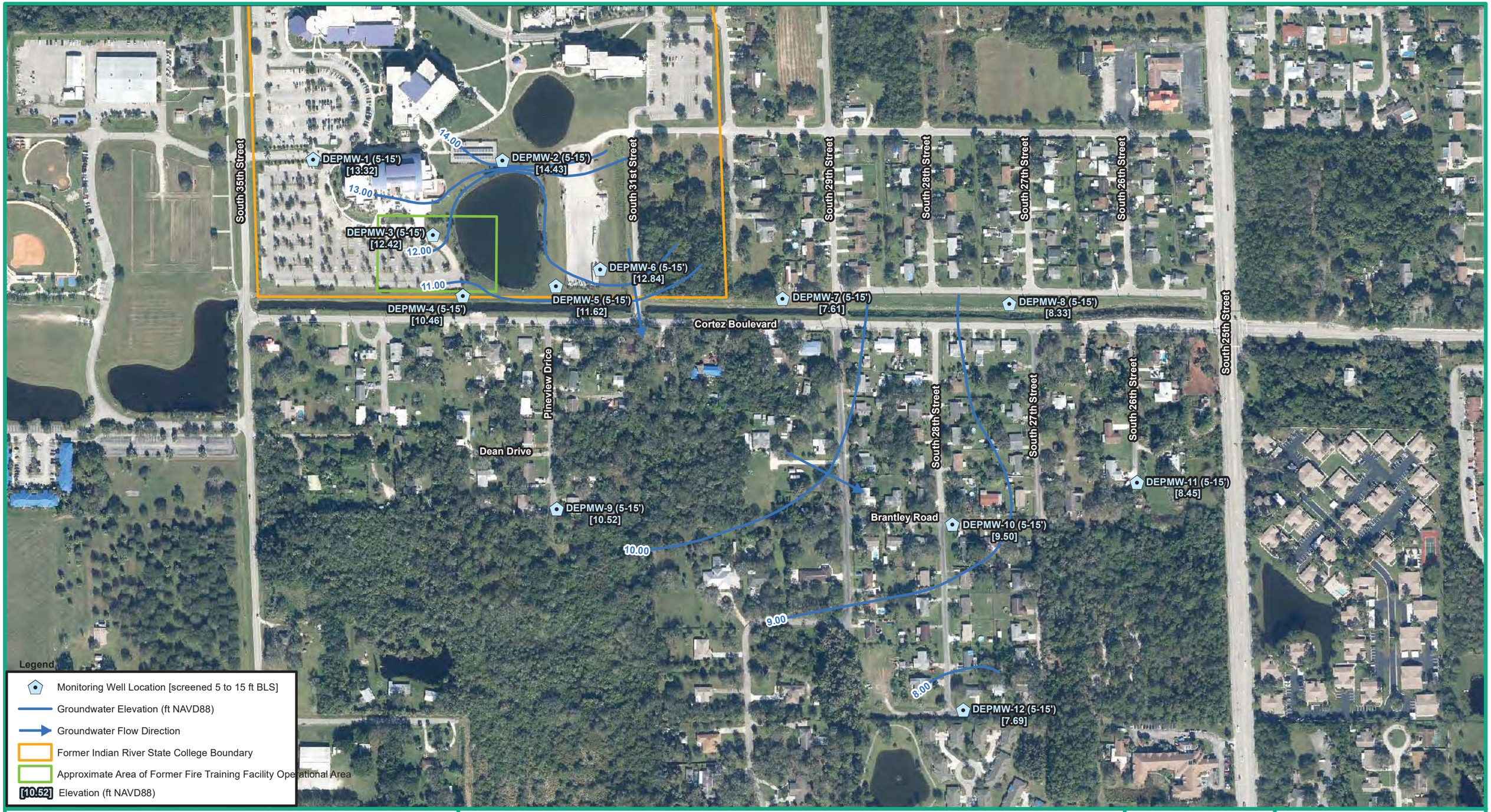


Figure 5
Groundwater Elevation Contour Map 5 to 15 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. NAVD88 indicates North American Vertical Datum of 1988.
2. ft BLS indicates feet below land surface.
3. Depth-to-water measurements were collected 18 May 2020.
4. Water level of the ditch parallel to Cortez Boulevard was not considered when developing groundwater elevation contours.
5. Water level elevation of retention poind was assumed approximately 11.5 feet based on field observation.
6. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
7. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Date: June 17, 2020

N

300 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\202006\GW_elev_5_to_15ftBLS.mxd 17 June 2020 MAH

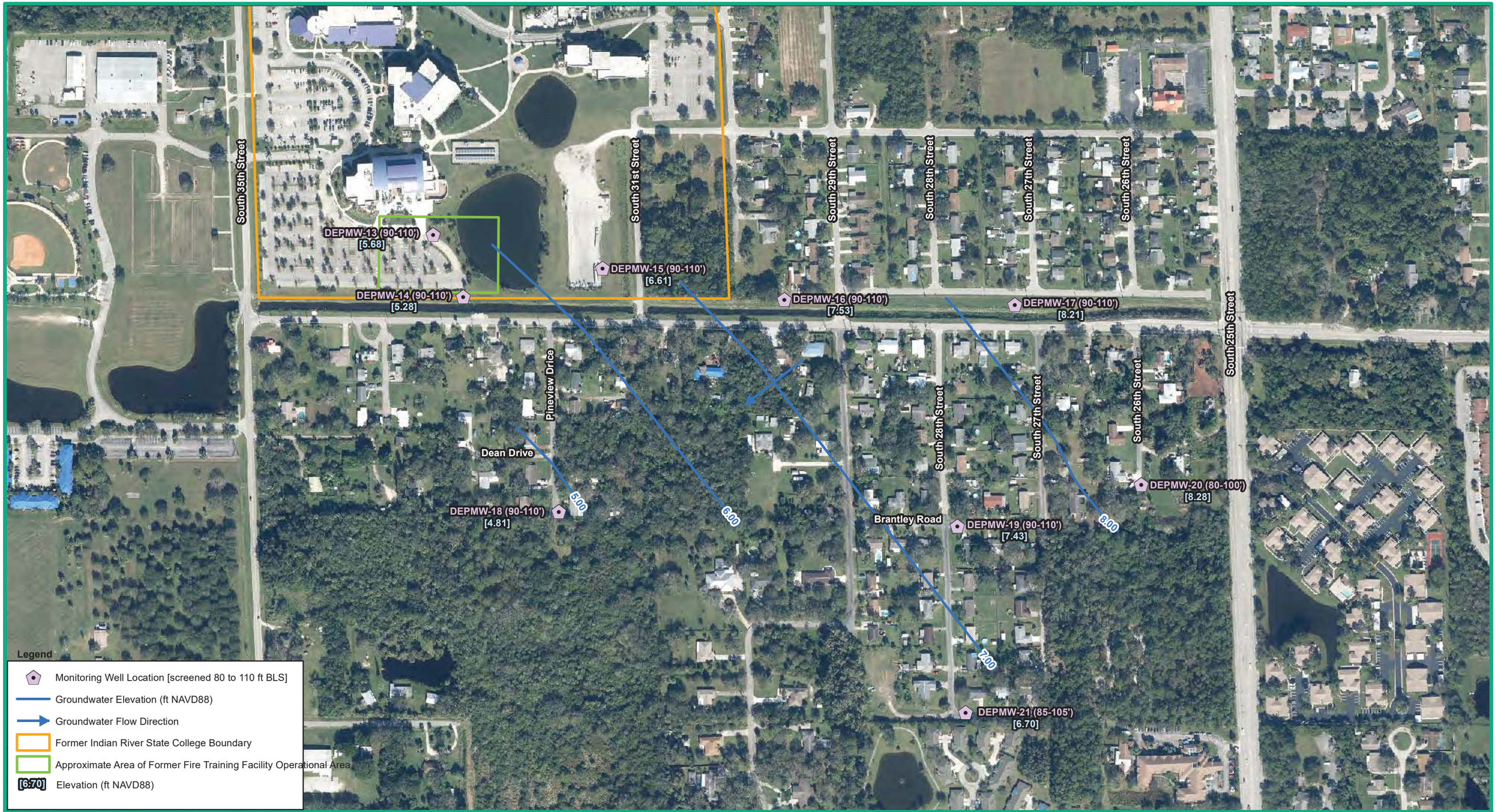


Figure 6
Groundwater Elevation Contour Map 80 to 110 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. NAVD88 indicates North American Vertical Datum of 1988.
2. ft BLS indicates feet below land surface.
3. Depth-to-water measurements were collected 18 May 2020.
4. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
5. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Date: June 17, 2020

N

300 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\202006\GW_elev_80_to_110ftBLS.mxd 17 June 2020 AL

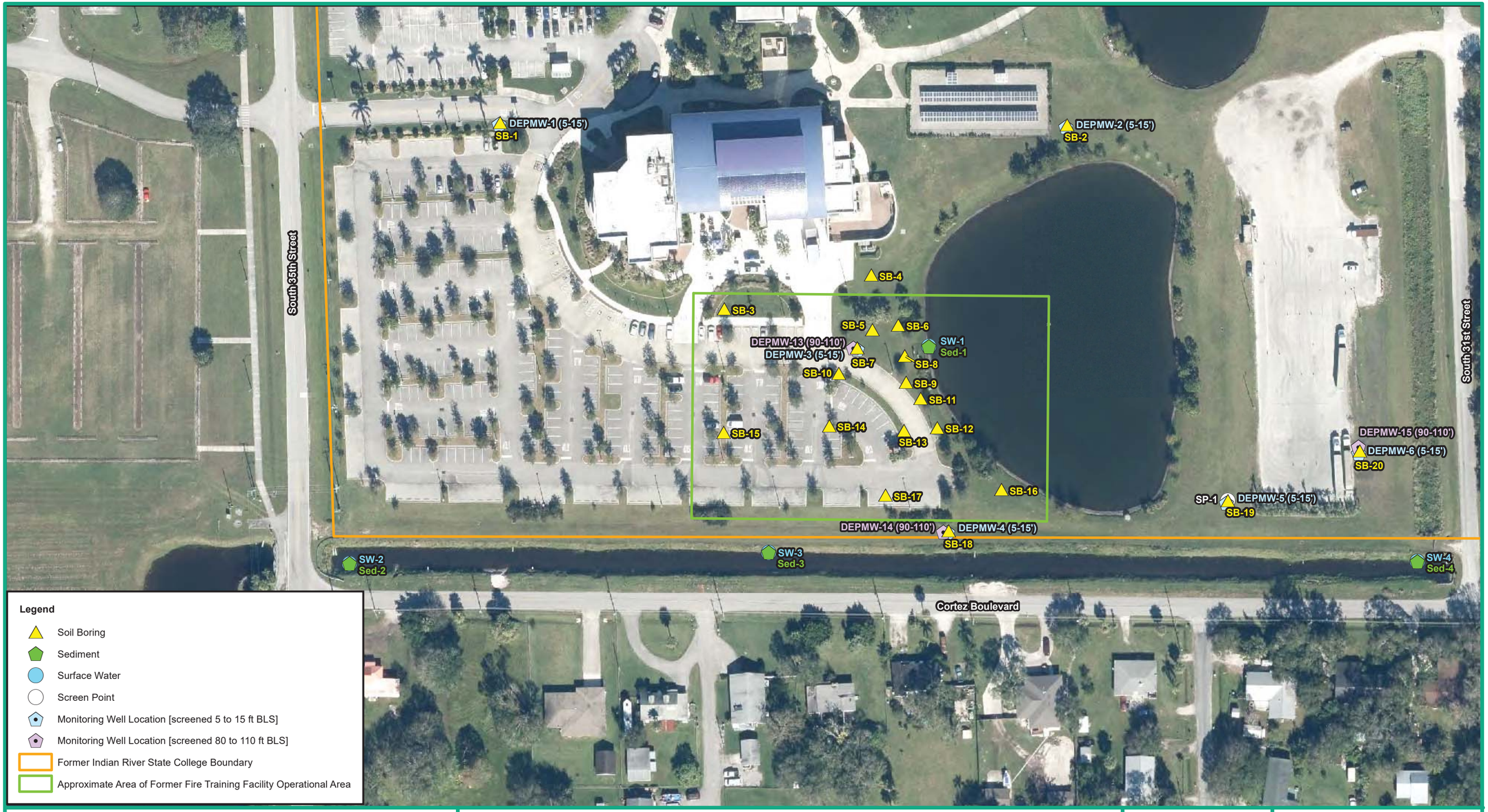


Figure 7
On-Site Sampling Locations
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. ft BLS indicates feet below land surface.
2. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
3. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Date: June 16, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202005\Collected_Locs_onsite_20200515.mxd 16 June 2020 AL

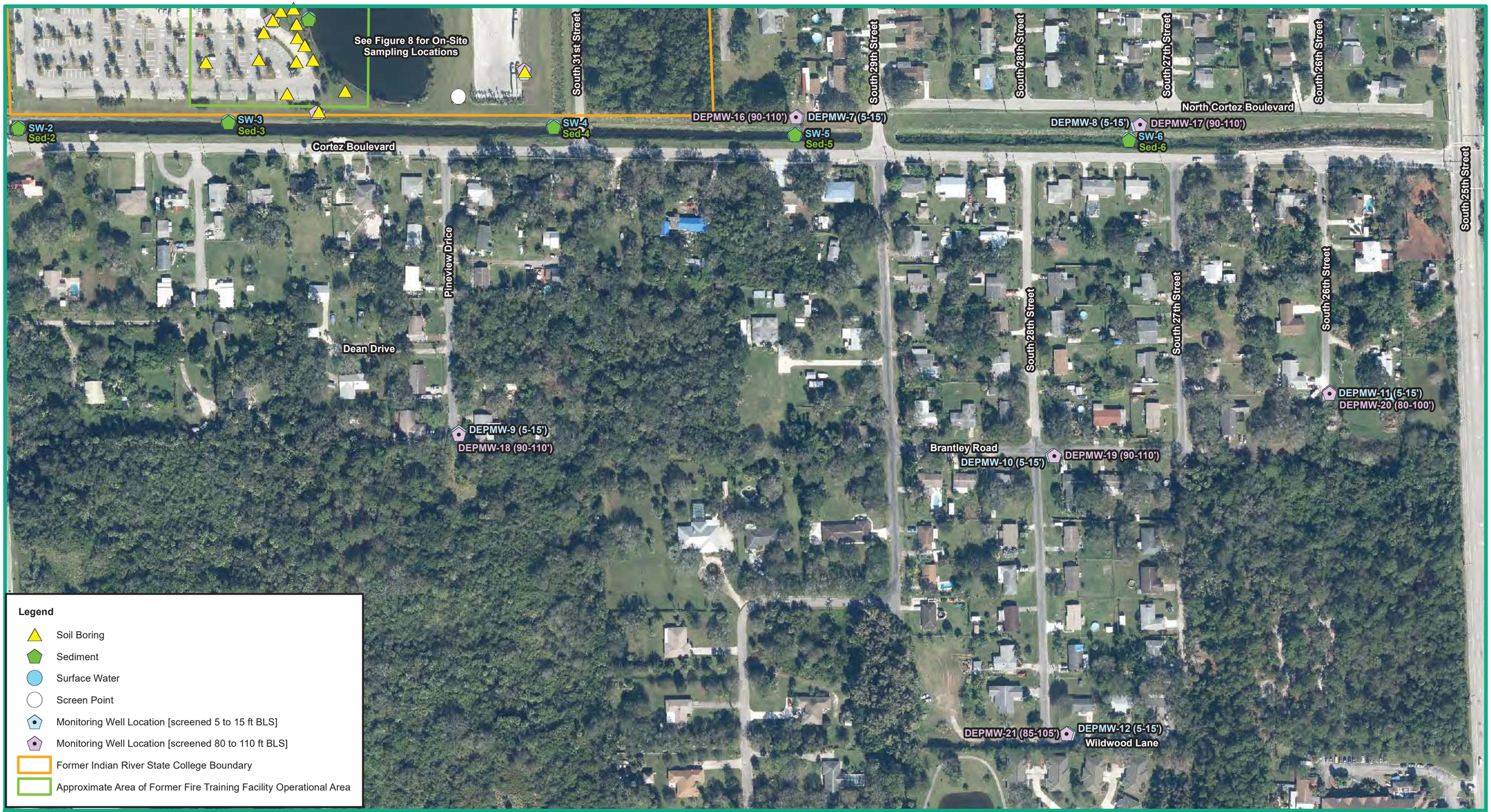


Figure 8
Off-Site Sampling Locations
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

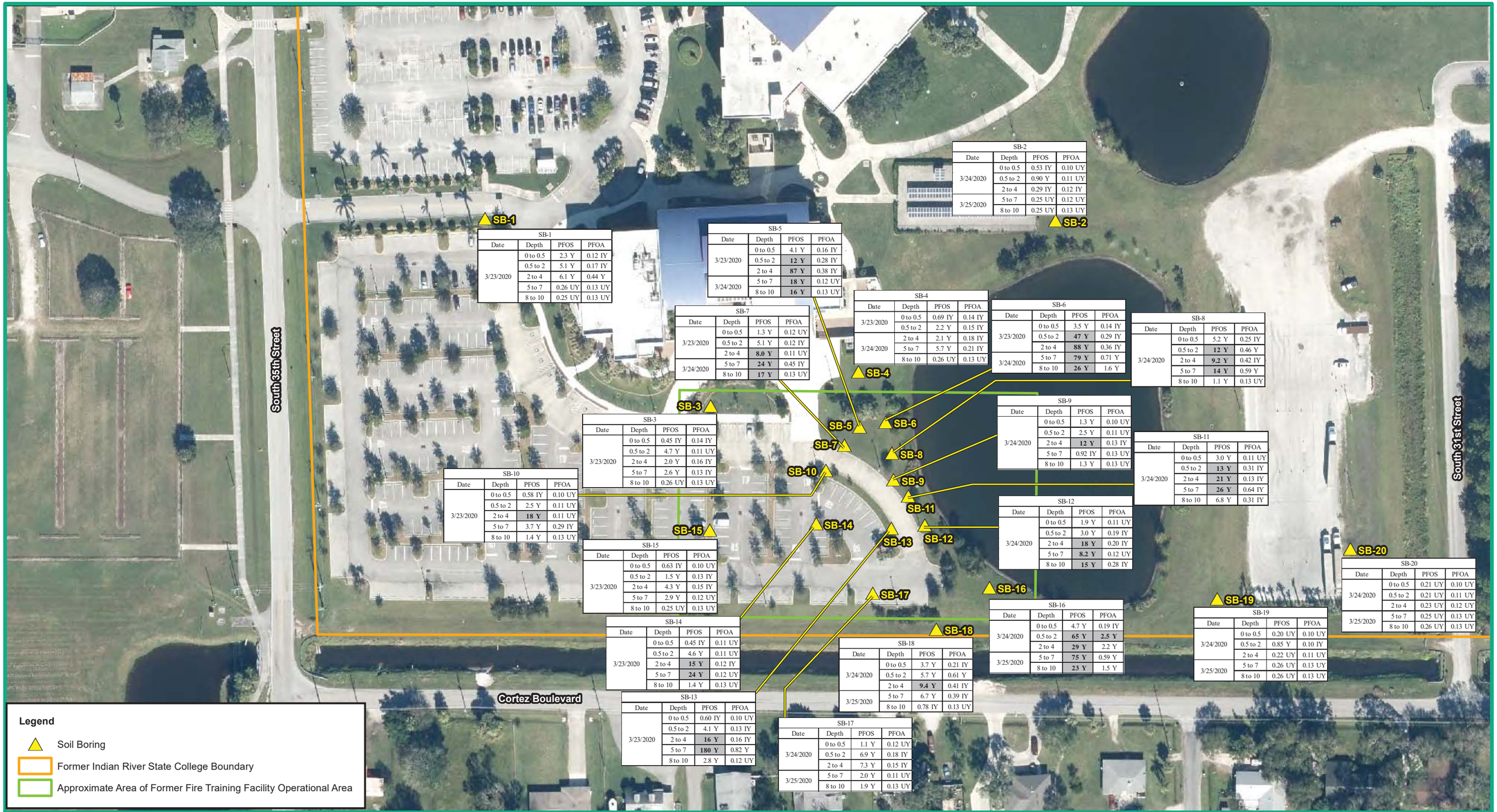
Notes:
1. ft BLS indicates feet below land surface.
2. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
3. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Date: June 17, 2020

N

200 Feet

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\202005\Collected_Locs_offsite_20200515.mxd 17 June 2020 AL



SB-1			
Date	Depth	PFOS	PFOA
3/23/2020	0 to 0.5	2.3 Y	0.12 IY
	0.5 to 2	5.1 Y	0.17 IY
	2 to 4	6.1 Y	0.44 Y
	5 to 7	0.26 UY	0.13 UY
	8 to 10	0.25 UY	0.13 UY

SB-2			
Date	Depth	PFOS	PFOA
3/24/2020	0 to 0.5	0.53 IY	0.10 UY
	0.5 to 2	0.90 Y	0.11 UY
	2 to 4	0.29 IY	0.12 IY
3/25/2020	5 to 7	0.25 UY	0.12 UY
	8 to 10	0.25 UY	0.13 UY

SB-3			
Date	Depth	PFOS	PFOA
3/23/2020	0 to 0.5	0.45 IY	0.14 IY
	0.5 to 2	4.7 Y	0.11 UY
	2 to 4	2.0 Y	0.16 IY
	5 to 7	2.6 Y	0.13 IY
	8 to 10	0.26 UY	0.13 UY

SB-4			
Date	Depth	PFOS	PFOA
3/23/2020	0 to 0.5	0.69 IY	0.14 IY
	0.5 to 2	2.2 Y	0.15 IY
	2 to 4	2.1 Y	0.18 IY
3/24/2020	5 to 7	5.7 Y	0.21 IY
	8 to 10	0.26 UY	0.13 UY

SB-5			
Date	Depth	PFOS	PFOA
3/23/2020	0 to 0.5	4.1 Y	0.16 IY
	0.5 to 2	**12 Y**	0.28 IY
	2 to 4	**87 Y**	0.38 IY
3/24/2020	5 to 7	**18 Y**	0.12 UY
	8 to 10	**16 Y**	0.13 UY

SB-6			
Date	Depth	PFOS	PFOA
3/23/2020	0 to 0.5	3.5 Y	0.14 IY
	0.5 to 2	**47 Y**	0.29 IY
	2 to 4	**88 Y**	0.36 IY
3/24/2020	5 to 7	**79 Y**	0.71 Y
	8 to 10	**26 Y**	1.6 Y

SB-7			
Date	Depth	PFOS	PFOA
3/23/2020	0 to 0.5	1.3 Y	0.12 UY
	0.5 to 2	5.1 Y	0.12 IY
	2 to 4	**8.0 Y**	0.11 UY
3/24/2020	5 to 7	**24 Y**	0.45 IY
	8 to 10	**17 Y**	0.13 UY

SB-8			
Date	Depth	PFOS	PFOA
3/24/2020	0 to 0.5	5.2 Y	0.25 IY
	0.5 to 2	**12 Y**	0.46 Y
	2 to 4	**9.2 Y**	0.42 IY
	5 to 7	**14 Y**	0.59 Y
	8 to 10	1.1 Y	0.13 UY

SB-9			
Date	Depth	PFOS	PFOA
3/24/2020	0 to 0.5	1.3 Y	0.10 UY
	0.5 to 2	2.5 Y	0.11 UY
	2 to 4	**12 Y**	0.13 IY
	5 to 7	0.92 IY	0.13 UY
	8 to 10	1.3 Y	0.13 UY

SB-10			
Date	Depth	PFOS	PFOA
3/23/2020	0 to 0.5	0.58 IY	0.10 UY
	0.5 to 2	2.5 Y	0.11 UY
	2 to 4	**18 Y**	0.11 UY
	5 to 7	3.7 Y	0.29 IY
	8 to 10	1.4 Y	0.13 UY

SB-11			
Date	Depth	PFOS	PFOA
3/24/2020	0 to 0.5	3.0 Y	0.11 UY
	0.5 to 2	**13 Y**	0.31 IY
	2 to 4	**21 Y**	0.13 IY
	5 to 7	**26 Y**	0.64 IY
	8 to 10	6.8 Y	0.31 IY

SB-12			
Date	Depth	PFOS	PFOA
3/24/2020	0 to 0.5	1.9 Y	0.11 UY
	0.5 to 2	3.0 Y	0.19 IY
	2 to 4	**18 Y**	0.20 IY
	5 to 7	**8.2 Y**	0.12 UY
	8 to 10	**15 Y**	0.28 IY

SB-13			
Date	Depth	PFOS	PFOA
3/23/2020	0 to 0.5	0.60 IY	0.10 UY
	0.5 to 2	4.1 Y	0.13 IY
	2 to 4	**16 Y**	0.16 IY
	5 to 7	**180 Y**	0.82 Y
	8 to 10	2.8 Y	0.12 UY

SB-14			
Date	Depth	PFOS	PFOA
3/23/2020	0 to 0.5	0.45 IY	0.11 UY
	0.5 to 2	4.6 Y	0.11 UY
	2 to 4	**15 Y**	0.12 IY
	5 to 7	**24 Y**	0.12 UY
	8 to 10	1.4 Y	0.13 UY

SB-15			
Date	Depth	PFOS	PFOA
3/23/2020	0 to 0.5	0.63 IY	0.10 UY
	0.5 to 2	1.5 Y	0.13 IY
	2 to 4	4.3 Y	0.15 IY
	5 to 7	2.9 Y	0.12 UY
	8 to 10	0.25 UY	0.13 UY

SB-16			
Date	Depth	PFOS	PFOA
3/24/2020	0 to 0.5	4.7 Y	0.19 IY
	0.5 to 2	**65 Y**	**2.5 Y**
	2 to 4	**29 Y**	2.2 Y
3/25/2020	5 to 7	**75 Y**	0.59 Y
	8 to 10	**23 Y**	1.5 Y

SB-17			
Date	Depth	PFOS	PFOA
3/24/2020	0 to 0.5	1.1 Y	0.12 UY
	0.5 to 2	6.9 Y	0.18 IY
	2 to 4	7.3 Y	0.15 IY
3/25/2020	5 to 7	2.0 Y	0.11 UY
	8 to 10	1.9 Y	0.13 UY

SB-18			
Date	Depth	PFOS	PFOA
3/24/2020	0 to 0.5	3.7 Y	0.21 IY
	0.5 to 2	5.7 Y	0.61 Y
	2 to 4	**9.4 Y**	0.41 IY
3/25/2020	5 to 7	6.7 Y	0.39 IY
	8 to 10	0.78 IY	0.13 UY

SB-19			
Date	Depth	PFOS	PFOA
3/24/2020	0 to 0.5	0.20 UY	0.10 UY
	0.5 to 2	0.85 Y	0.10 IY
	2 to 4	0.22 UY	0.11 UY
3/25/2020	5 to 7	0.26 UY	0.13 UY
	8 to 10	0.26 UY	0.13 UY

SB-20			
Date	Depth	PFOS	PFOA
3/24/2020	0 to 0.5	0.21 UY	0.10 UY
	0.5 to 2	0.21 UY	0.11 UY
	2 to 4	0.23 UY	0.12 UY
3/25/2020	5 to 7	0.25 UY	0.13 UY
	8 to 10	0.26 UY	0.13 UY

Legend

- Soil Boring
- Former Indian River State College Boundary
- Approximate Area of Former Fire Training Facility Operational Area

Figure 9
Summary of Analytical Results in Soil
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:

1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
3. U indicates that the compound was analyzed for but not detected (the MDL is shown).
4. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
5. Depth is presented in feet (ft) below land surface (BLS).
6. Gray shaded, bold text indicates an exceedance of the Florida Department of Environmental Protection provisional leachability soil cleanup target level (SCTL).
7. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
6. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)
Leachability SCTL	7	2
Residential SCTL	1300	1300
Industrial SCTL	25000	25000

Date: June 16, 2020

N

100 Feet

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_Spiders.mxd 16 June 2020 AL

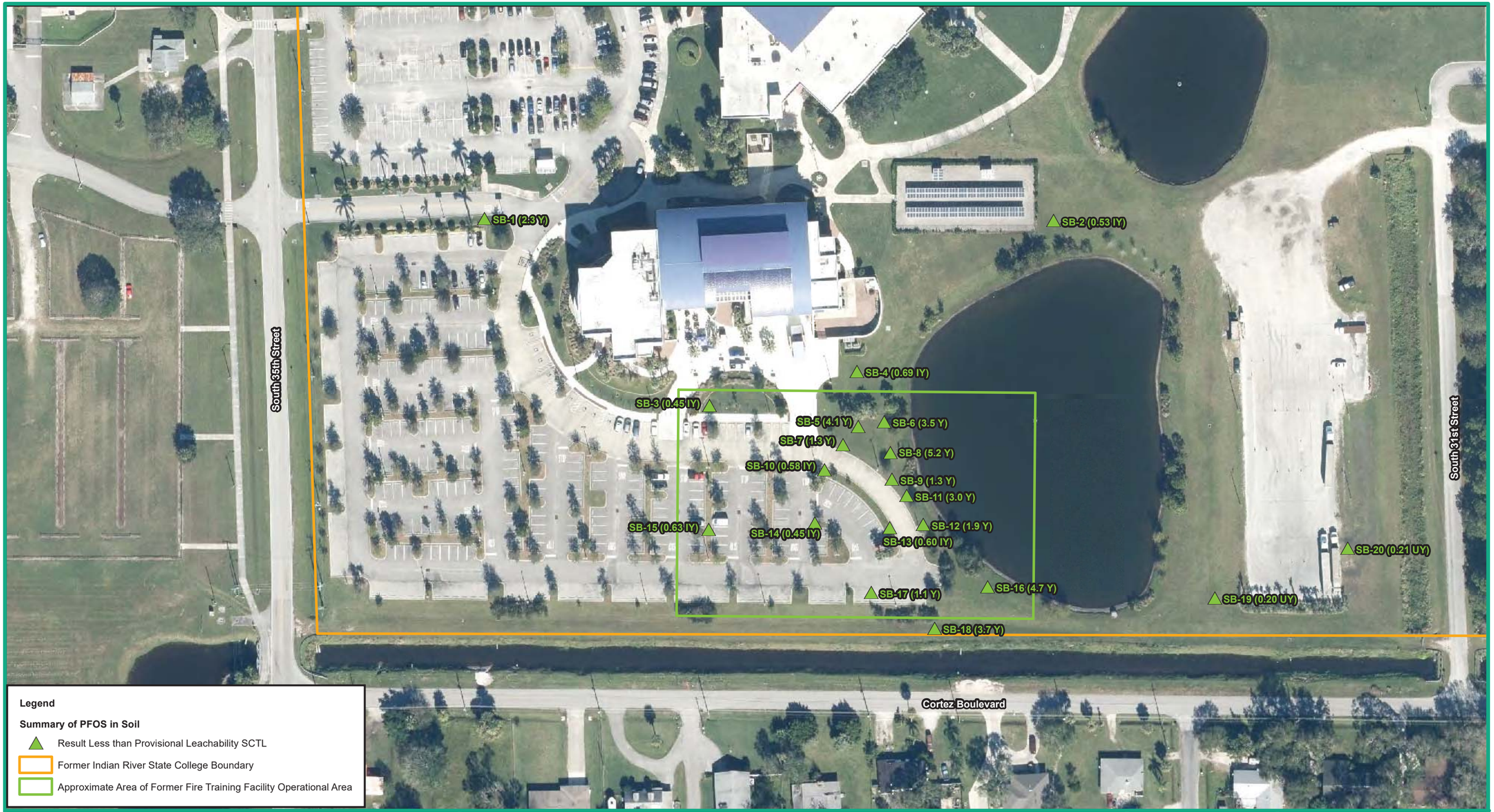


Figure 10
PFOS Results in Soil from 0 to 0.5 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
3. U indicates that the compound was analyzed for but not detected (the MDL is shown).
4. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
5. ft BLS indicates feet below land surface.
6. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
7. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanesulfonic acid (PFOS)
Leachability SCTL	7
Residential SCTL	1,300
Industrial SCTL	25,000

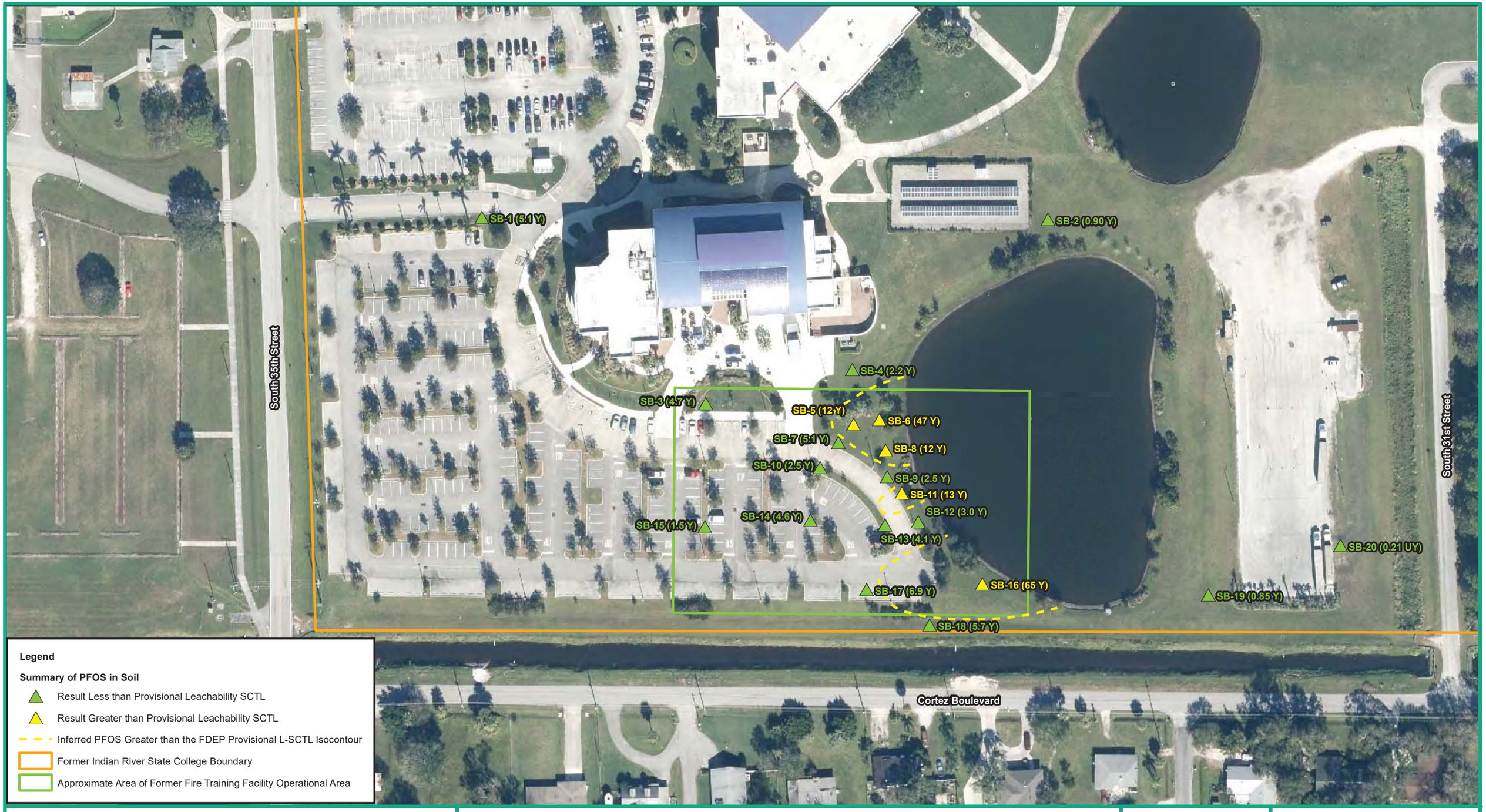
Date: June 16, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_PFOS_0to0_5.mxd 16 June 2020 AL



Legend

Summary of PFOS in Soil

- Result Less than Provisional Leachability SCTL
- Result Greater than Provisional Leachability SCTL
- Inferred PFOS Greater than the FDEP Provisional L-SCTL Isocontour
- Former Indian River State College Boundary
- Approximate Area of Former Fire Training Facility Operational Area

Figure 11
PFOS Results in Soil from 0.5 to 2 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:

1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. U indicates that the compound was analyzed for but not detected (the method detection limit is shown).
3. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
4. ft BLS indicates feet below land surface.
5. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
6. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanesulfonic acid (PFOS)
Leachability SCTL	7
Residential SCTL	1,300
Industrial SCTL	25,000

Date: June 16, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_PFOS_0_5_to_2.mxd 16 June 2020 AL

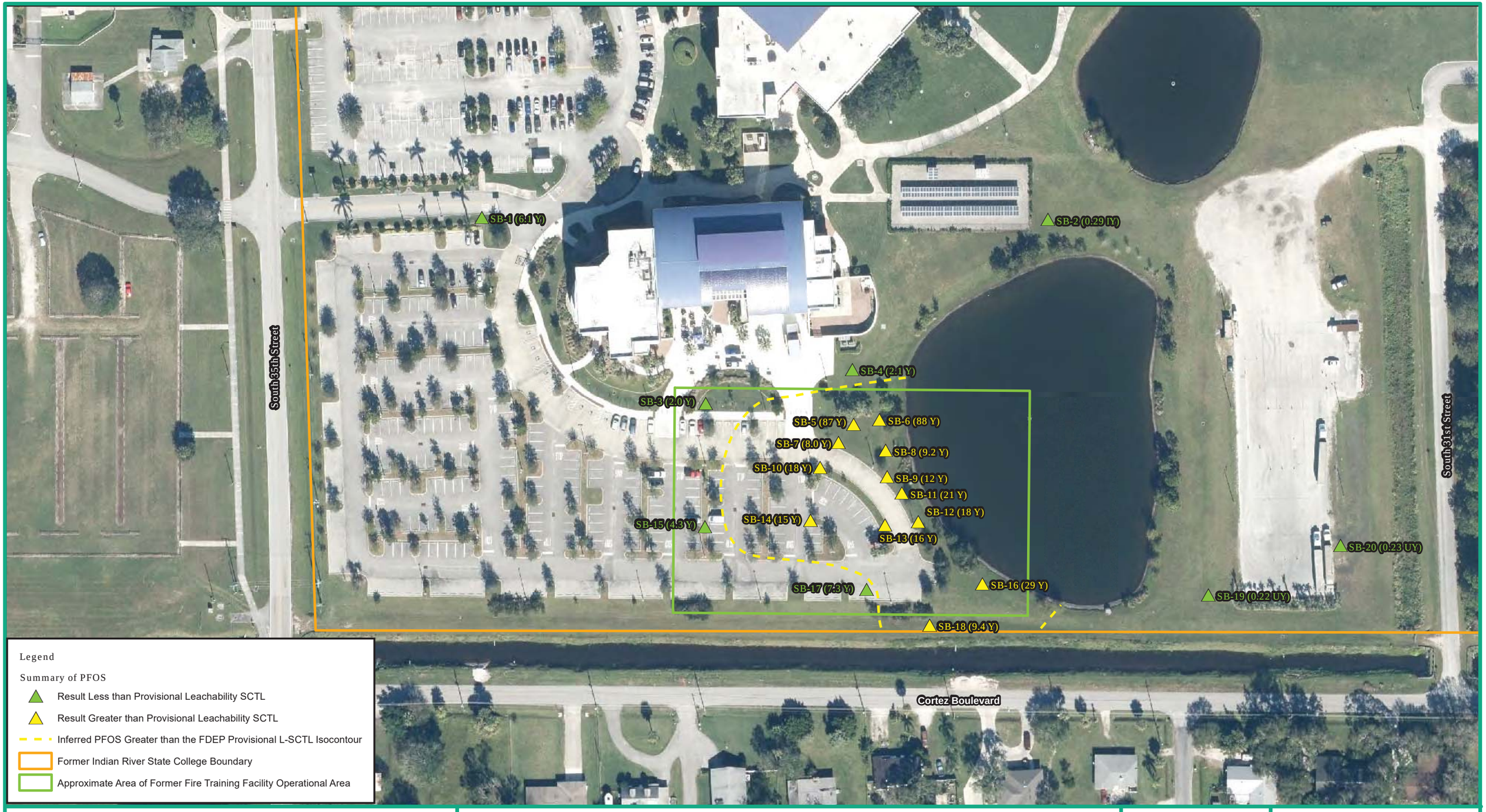


Figure 12
PFOS Results in Soil from 2 to 4 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
3. U indicates that the compound was analyzed for but not detected (the MDL is shown).
4. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
5. ft BLS indicates feet below land surface.
6. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
7. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanesulfonic acid (PFOS)
Leachability SCTL	7
Residential SCTL	1,300
Industrial SCTL	25,000

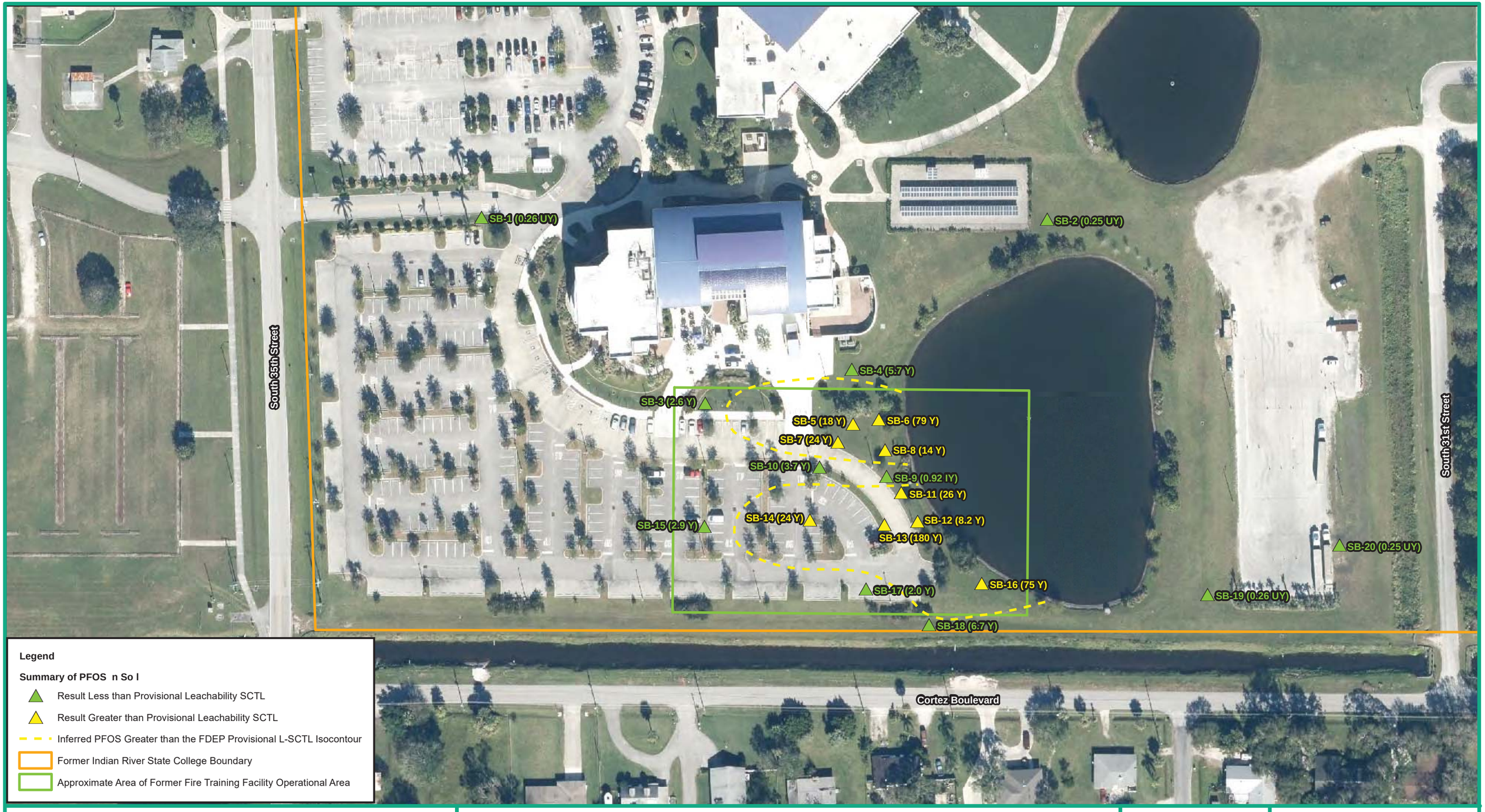
Date: June 17, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_PFOS_2_to_4.mxd 17 June 2020 MAH



Legend

Summary of PFOS n So l

- Result Less than Provisional Leachability SCTL
- Result Greater than Provisional Leachability SCTL
- Inferred PFOS Greater than the FDEP Provisional L-SCTL Isocontour
- Former Indian River State College Boundary
- Approximate Area of Former Fire Training Facility Operational Area

Figure 13
PFOS Results in Soil from 5 to 7 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:

1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
3. U indicates that the compound was analyzed for but not detected (the MDL is shown).
4. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
5. ft BLS indicates feet below land surface.
6. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
7. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanesulfonic acid (PFOS)
Leachability SCTL	7
Residential SCTL	1,300
Industrial SCTL	25,000

Date: June 16, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_PFOS_5_to_7.mxd 16 June 2020 AL

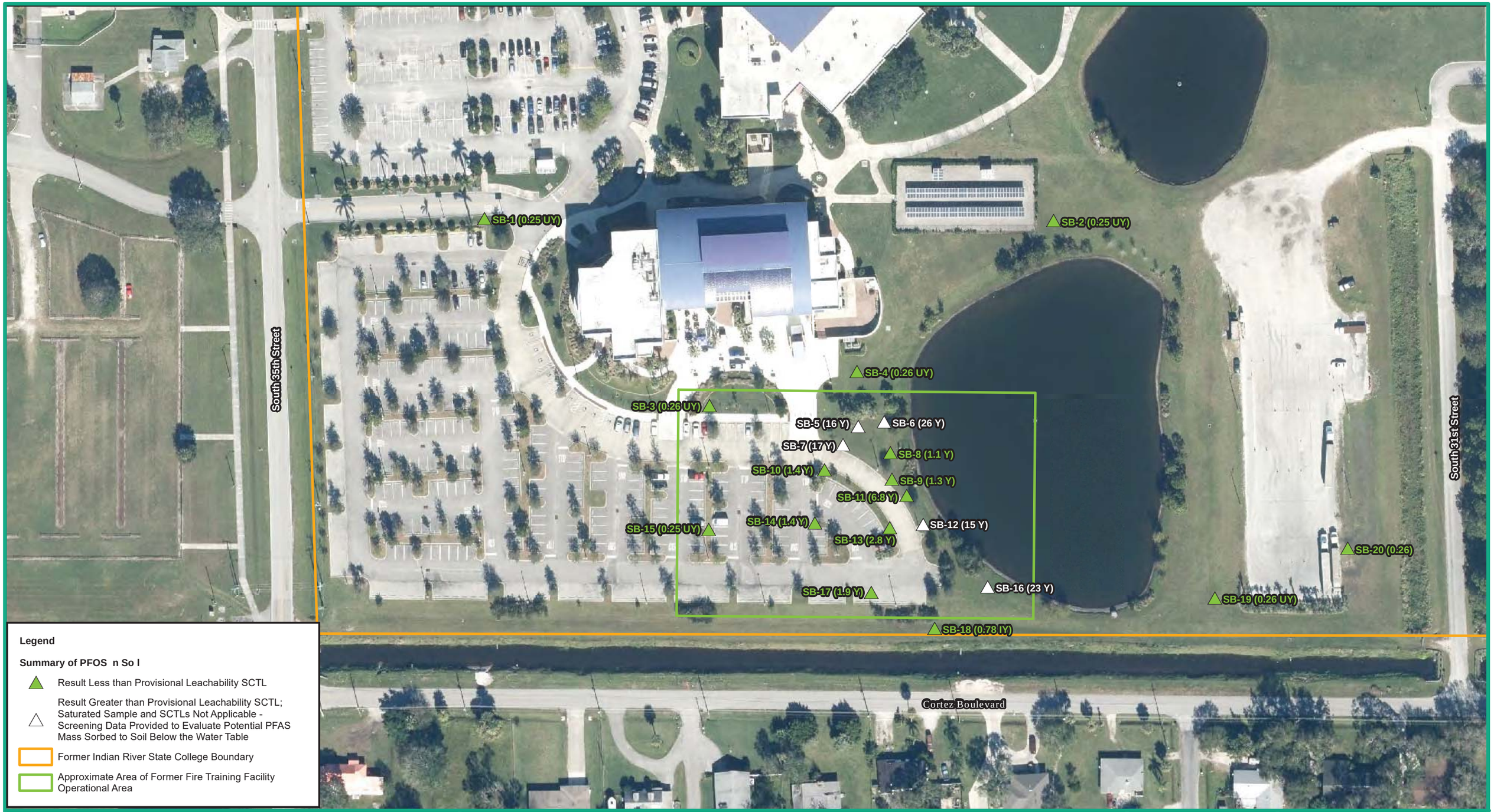


Figure 14
PFOS Results in Soil from 8 to 10 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
3. U indicates that the compound was analyzed for but not detected (the MDL is shown).
4. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
5. ft BLS indicates feet below land surface.
6. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
7. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanesulfonic acid (PFOS)
Leachability SCTL	7
Residential SCTL	1,300
Industrial SCTL	25,000

Date: June 16, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_PFOS_8_to_10.mxd 16 June 2020 AL

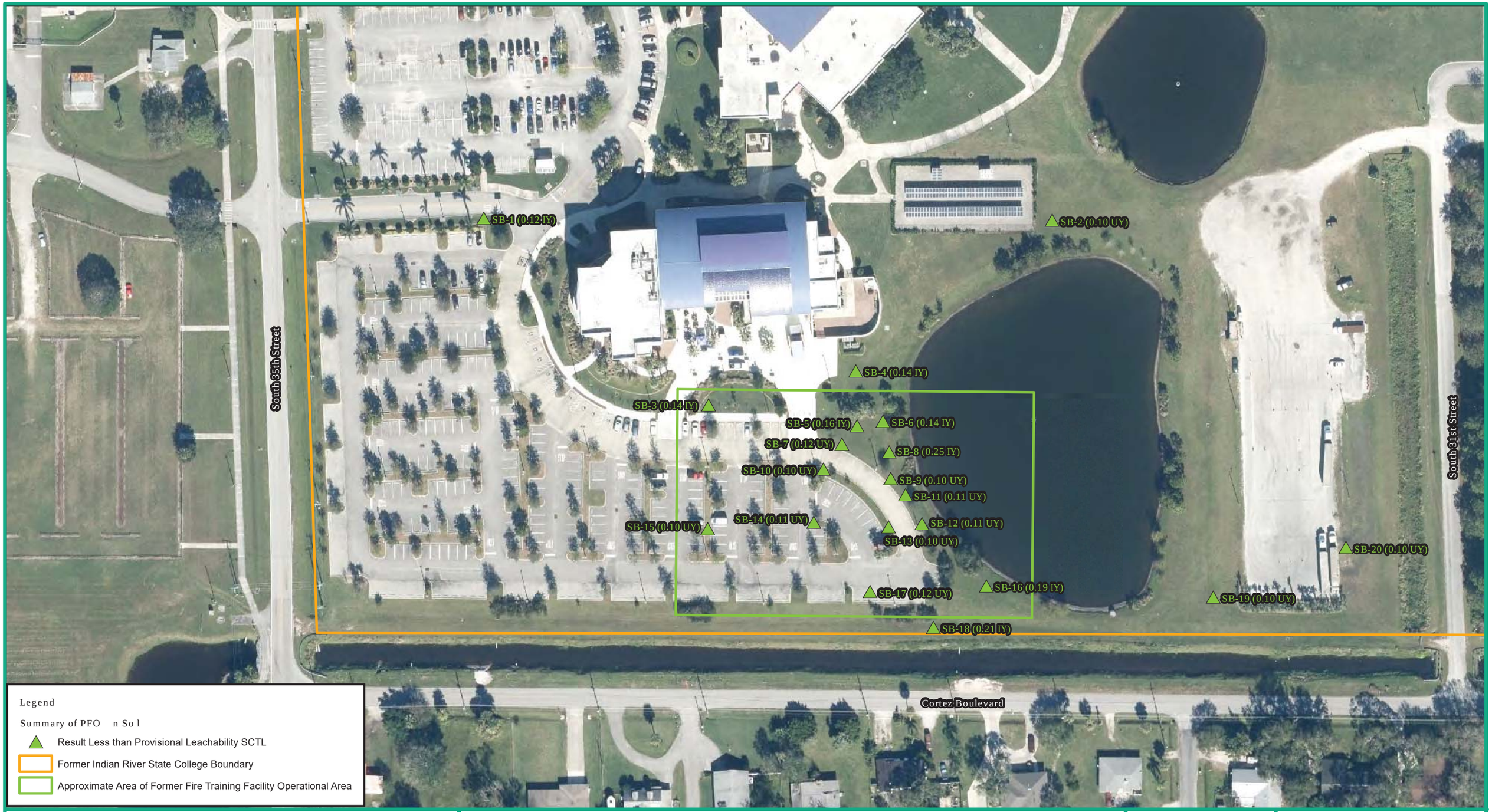


Figure 15
PFOA Results in Soil from 0 to 0.5 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
3. U indicates that the compound was analyzed for but not detected (the MDL is shown).
4. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
5. ft BLS indicates feet below land surface.
6. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
7. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanoic acid (PFO)
Leachability SCTL	2
Residential SCTL	1,300
Industrial SCTL	25,000

Date: June 16, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_PFOA_0to0_5.mxd 16 June 2020 AL

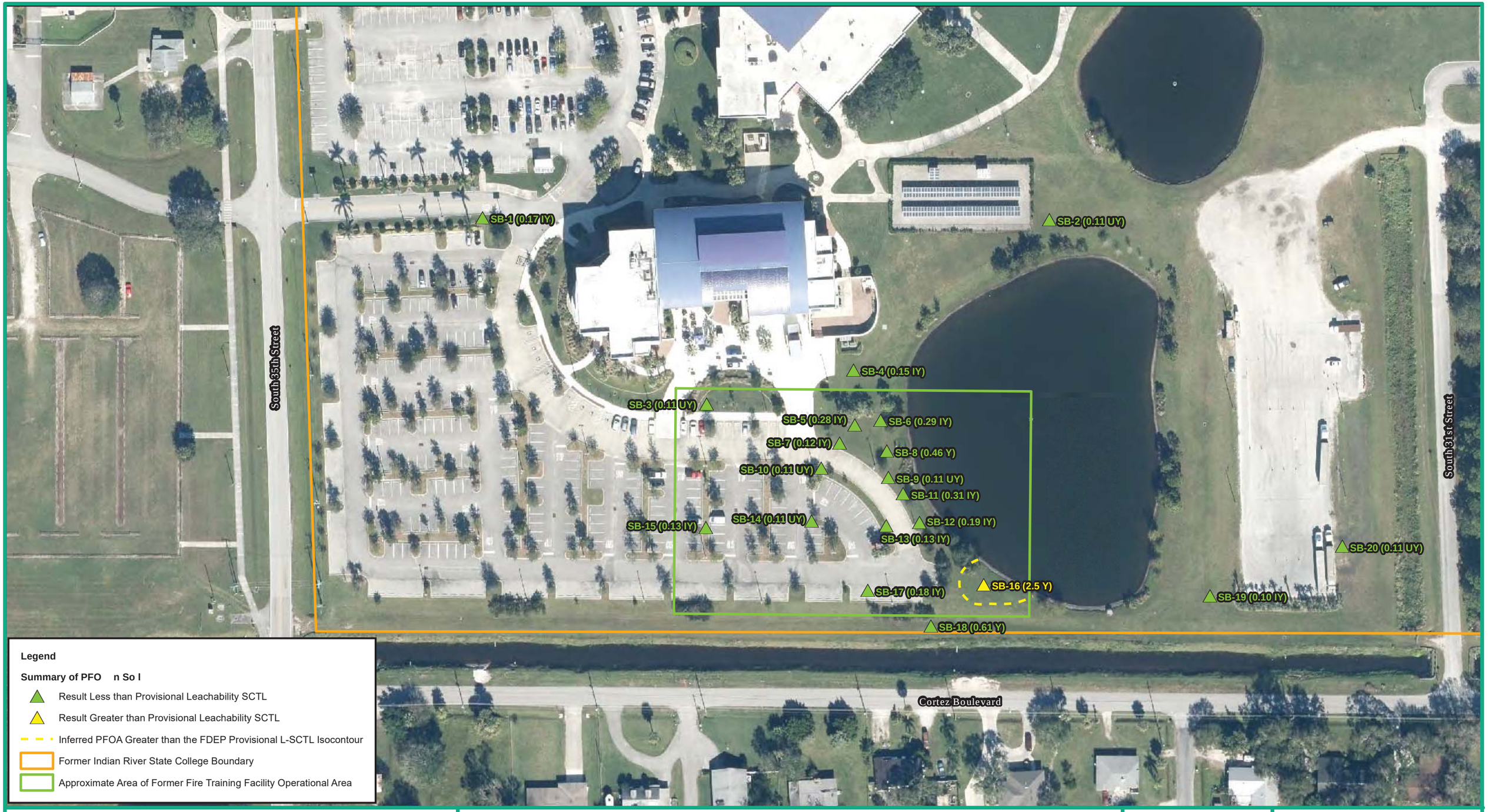


Figure 16
PFOA Results in Soil from 0.5 to 2 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
3. U indicates that the compound was analyzed for but not detected (the MDL is shown).
4. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
5. ft BLS indicates feet below land surface.
6. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
7. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanoic acid (PFO)
Leachability SCTL	2
Residential SCTL	1,300
Industrial SCTL	25,000

Date: June 16, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_PFOA_0_5_to_2.mxd 16 June 2020 AL

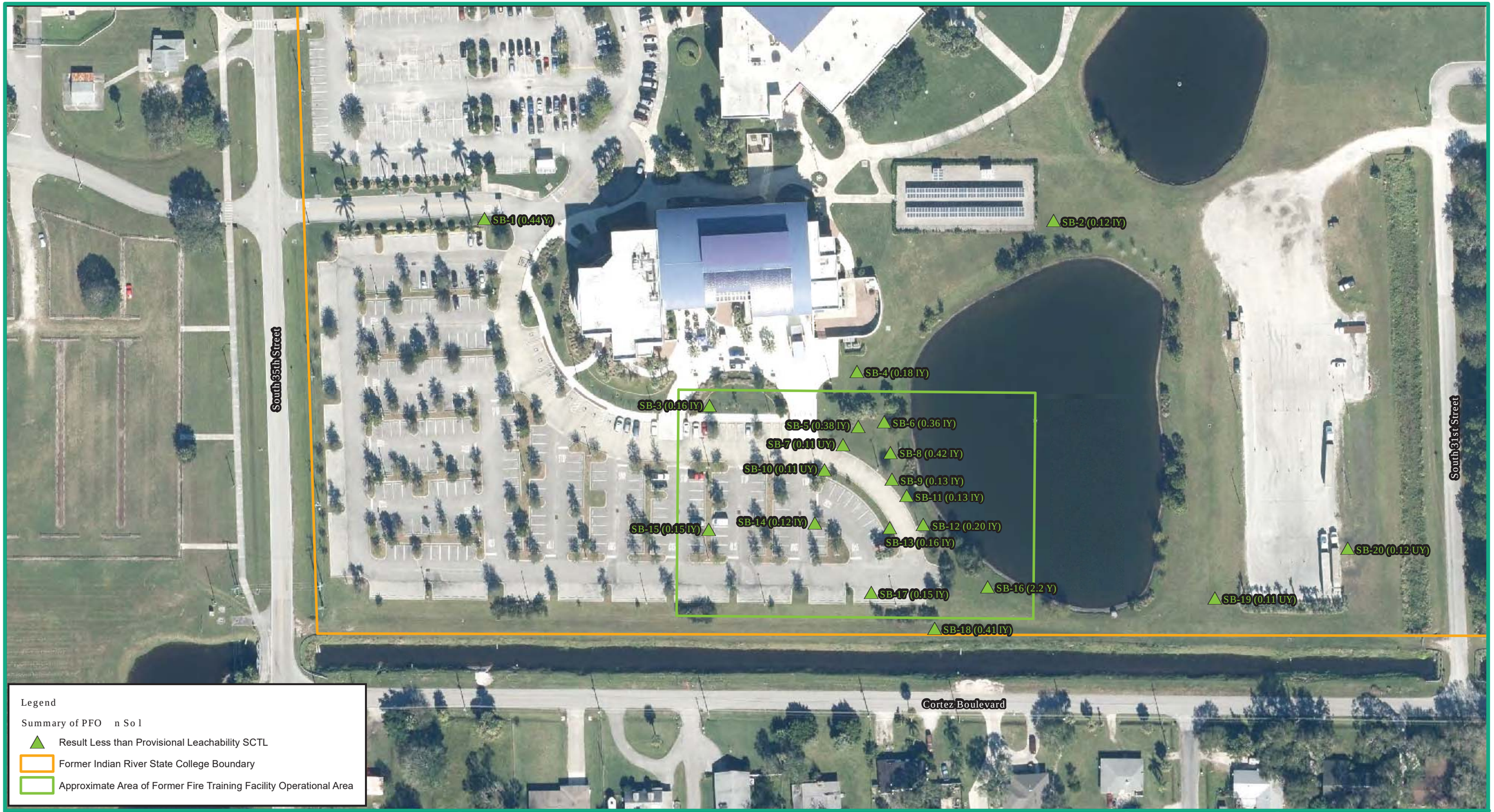


Figure 17
PFOA Results in Soil from 2 to 4 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:

1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
3. U indicates that the compound was analyzed for but not detected (the MDL is shown).
4. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
5. ft BLS indicates feet below land surface.
6. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
7. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanoic acid (PFO)
Leachability SCTL	2
Residential SCTL	1,300
Industrial SCTL	25,000

Date: June 17, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_PFOA_2_to_4.mxd 17 June 2020 AL

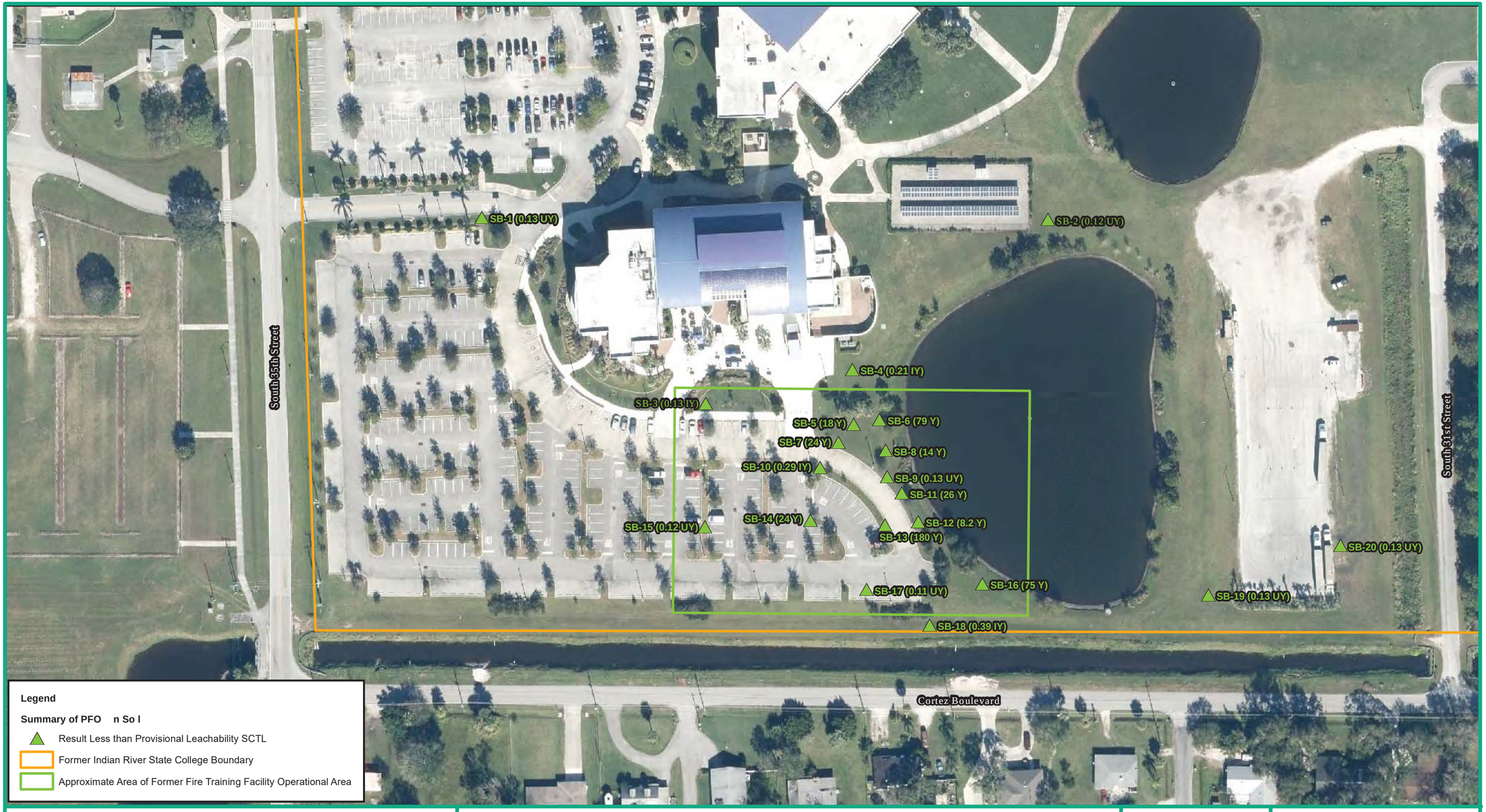


Figure 18
PFOA Results in Soil from 5 to 7 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
3. U indicates that the compound was analyzed for but not detected (the MDL is shown).
4. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
5. ft BLS indicates feet below land surface.
6. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
7. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanoic acid (PFO)
Leachability SCTL	2
Residential SCTL	1,300
Industrial SCTL	25,000

Date: June 16, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_PFOA_5_to_7.mxd 16 June 2020 AL

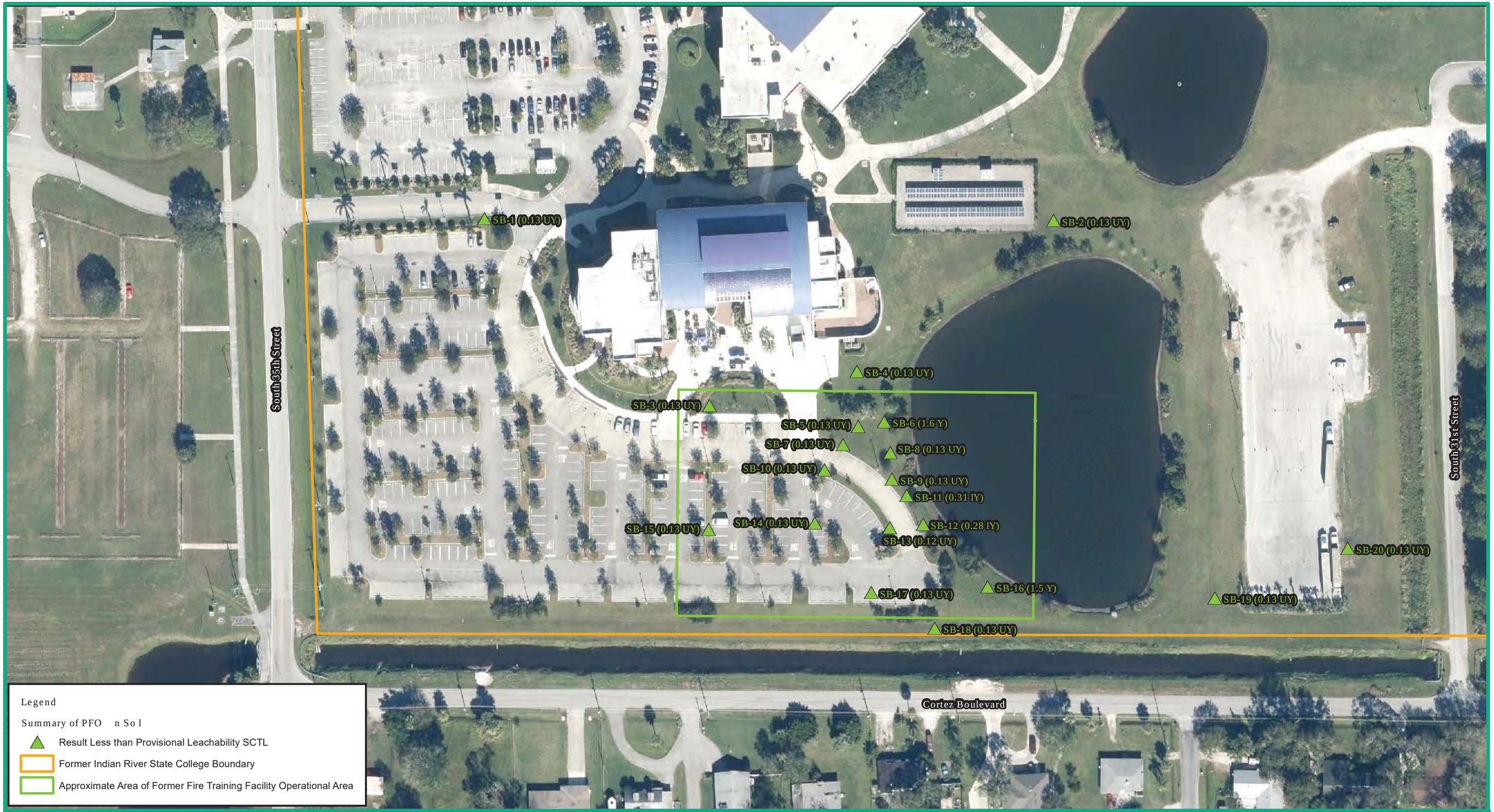


Figure 19
PFOA Results in Soil from 8 to 10 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:

1. Results and screening critiera are presented in micorgrams per kilogram (µg/Kg).
2. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
3. U indicates that the compound was analyzed for but not detected (the MDL is shown).
4. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
5. ft BLS indicates feet below land surface.
6. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
7. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Provisional Cleanup Target Level	Perfluorooctanoic acid (PFO)
Leachability SCTL	2
Residential SCTL	1,300
Industrial SCTL	25,000

Date: June 16, 2020

N

100 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) P:\0GIS\FR3781_Former_IRSC\MXDs\202006\Soil_Results_JUN2020_PFOA_8_to_10.mxd 16 June 2020 AL

DEPMW-1 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	5 to 15	4.4 I	9.9	14.3 I

DEPMW-1 (5-15')

DEPMW-2 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	5 to 15	9.3	13	22.3

DEPMW-2 (5-15')

DEPMW-3 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	5 to 15	**12,000**	**360**	**12,360**
5/19/2020 (DUP)		**14,000**	**340**	**14,340**

DEPMW-3 (5-15')

DEPMW-4 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	5 to 15	**420**	16	**436**

DEPMW-4 (5-15')

DEPMW-5 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	5 to 15	14	3.0 I	17 I

DEPMW-5 (5-15')

DEPMW-6 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	5 to 15	2.2 I	1.0 U	2.7 I

DEPMW-6 (5-15')

DEPMW-7 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	5 to 15	44	7.0	51

DEPMW-7 (5-15')

DEPMW-8 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	5 to 15	12	4.3	16.3

DEPMW-8 (5-15')

DEPMW-9 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	5 to 15	3.9 I	1.0 U	4.4 I

DEPMW-9 (5-15')

DEPMW-10 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/18/2020	5 to 15	33	10	43

DEPMW-10 (5-15')

DEPMW-11 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/18/2020	5 to 15	29	12	41

DEPMW-11 (5-15')

DEPMW-12 (5-15')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/18/2020	5 to 15	14	16	30

DEPMW-12 (5-15')

South 35th Str
South 31st Str
South 29th Street
South 28th Street
South 27th Street
South 26th Street
South 25th Street
Pineview Drice
Dean Drive
Brantley Road

Legend

- Monitoring Well Location

Symbology Shading

- Results Less than Provisional GCTL (70 ng/L)
- At Least One Result Greater than Provisional GCTL (70 ng/L)
- Former Indian River State College Boundary
- Approximate Area of Former Fire Training Facility Operational Area

Figure 20
Summary of Analytical Results in Groudwater from 5 to to 15 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. Results are provided in nanograms per liter (ng/L).
2. Depth is provided in feet below land surface (ft BLS).
3. I indicates result is between the laboratory method detection limit and the laboratory practical quantitation limit.
4. DUP indicates duplicate sample.
5. PFOS + PFOA indicates the summation of perfluorooctanesulfonic acid (PFOS) and perfluorooctanic acid (PFOA).
6. Blue shaded, bold text indicates an exceedance of the Florida Department of Environmental Protection provisional groundwater cleanup target level (GCTL) of 70 ng/L.
7. Contours were generated using the summation concentration of PFOS + PFOA. The higher concentration between a sample and its duplicate was utilized.
8. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
9. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Date: June 17, 2020

N

300 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\202006\GW_Results_5_to_15ftBLS.mxd 17 June 2020 MAH

South 35th Street

South 29th Street

South 28th Street

South 27th Street

South 26th Street

South 25th Street

Pineview Drice

Dean Drive

Brantley Road

SP-1				
Date	Depth	PFOS	PFOA	PFOA + PFOS
3/23/2020	16 to 20	6.8 IY	3.4 IY	10.2 IY
	26 to 30	9.1 Y	1.7 IY	10.8 IY
	36 to 40	10 Y	2.3 IY	12.3 IY
3/23/2020 (DUP)	36 to 40	9.3 Y	2.4 IY	11.7 IY
3/23/2020	46 to 50	18 Y	5.1 Y	23.1 Y
3/24/2020	56 to 60	33 Y	7.6 Y	40.6 Y
	66 to 70	70 Y	15 Y	**85 Y**
	76 to 80	**150 Y**	30 Y	**180 Y**
	86 to 90	68 Y	11 Y	**79 Y**

SP-1

DEPMW-13 (90-110')

DEPMW-13 (90-110')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	90 to 110	2.0 U	1.0 U	1.5 U
5/19/2020 (DUP)		2.0 U	1.0 U	1.5 U

DEPMW-14 (90-110')

DEPMW-14 (90-110')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	90 to 110	2.0 U	1.0 U	1.5 U

DEPMW-15 (90-110')

DEPMW-15 (90-110')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	90 to 110	2.0 U	3.6 I	4.6 I

DEPMW-16 (90-110')

DEPMW-16 (90-110')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	90 to 110	2.3 I	3.3 I	5.6 I

DEPMW-17 (90-110')

DEPMW-17 (90-110')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	90 to 110	2.0 U	1.0 U	1.5 U

DEPMW-18 (90-110')

DEPMW-18 (90-110')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/19/2020	90 to 110	2.0 U	1.0 U	1.5 U

DEPMW-19 (90-110')

DEPMW-19 (90-110')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/18/2020	90 to 110	2.0 U	1.0 U	1.5 U

DEPMW-20 (80-100')

DEPMW-20 (80-100')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/18/2020	80 to 100	2.0 U	1.0 U	1.5 U

DEPMW-21 (85-105')

DEPMW-21 (85-105')				
Date	Depth	PFOS	PFOA	PFOA + PFOS
5/18/2020	85 to 105	2.0 U	1.0 U	1.5 U

Legend

- Monitoring Well Location
- Screen Point Location

Symbology Shading

- Results Less than Provisional GCTL (70 ng/L)
- Results Greater than Provisional GCTL (70 ng/L)
- Former Indian River State College Boundary
- Approximate Area of Former Fire Training Facility Operational Area

Figure 21
Summary of Analytical Results in Groudwater from 80 to to 110 ft BLS
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:

1. Results are provided in nanograms per liter (ng/L).
2. Depth is provided in feet below land surface (ft BLS).
3. I indicates result is between the laboratory method detection limit and the laboratory practical quantitation limit.
4. U indicates that the compound was analyzed for but not detected (the laboratory MDL is shown).
5. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
6. DUP indicates duplicate sample.
7. PFOS + PFOA indicates the summation of perfluorooctanesulfonic acid (PFOS) and perfluorooctanic acid (PFOA).
8. Blue shaded, bold text indicates an exceedance of the Florida Department of Environmental Protection provisional groundwater cleanup target level (GCTL) of 70 ng/L.
9. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
10. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

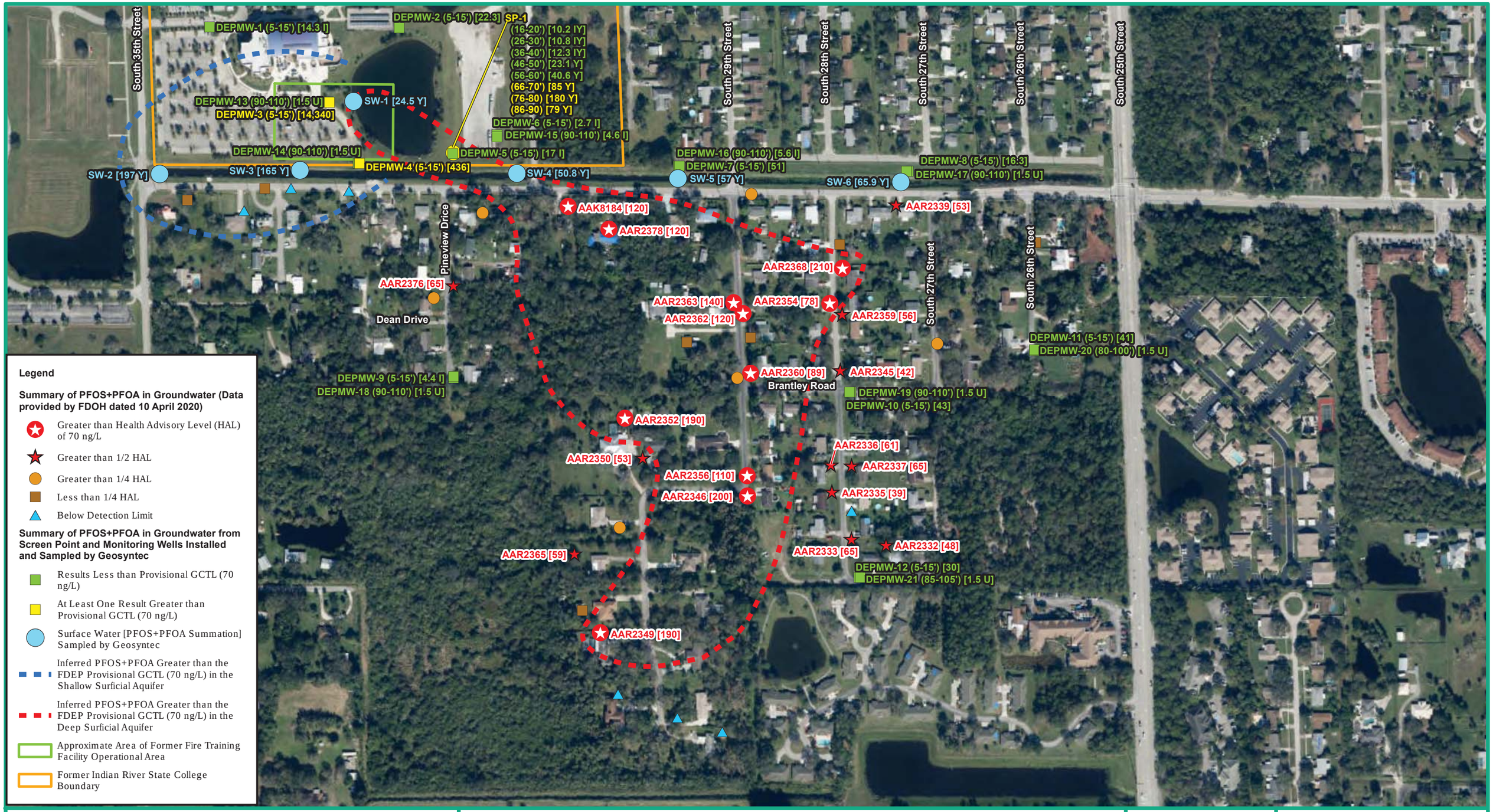
Date: June 17, 2020

N

300 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\202006\GW_Results_80_to_110ftBLS.mxd 17 June 2020 AL



Legend

Summary of PFOS+PFOA in Groundwater (Data provided by FDOH dated 10 April 2020)

- Greater than Health Advisory Level (HAL) of 70 ng/L
- Greater than 1/2 HAL
- Greater than 1/4 HAL
- Less than 1/4 HAL
- Below Detection Limit

Summary of PFOS+PFOA in Groundwater from Screen Point and Monitoring Wells Installed and Sampled by Geosyntec

- Results Less than Provisional GCTL (70 ng/L)
- At Least One Result Greater than Provisional GCTL (70 ng/L)
- Surface Water [PFOS+PFOA Summation] Sampled by Geosyntec
- Inferred PFOS+PFOA Greater than the FDEP Provisional GCTL (70 ng/L) in the Shallow Surficial Aquifer
- Inferred PFOS+PFOA Greater than the FDEP Provisional GCTL (70 ng/L) in the Deep Surficial Aquifer
- Approximate Area of Former Fire Training Facility Operational Area
- Former Indian River State College Boundary

Figure 22
Summary of PFOS+PFOA in Groundwater, Surface Water, and FDOH sampled wells within Site Vicinity
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

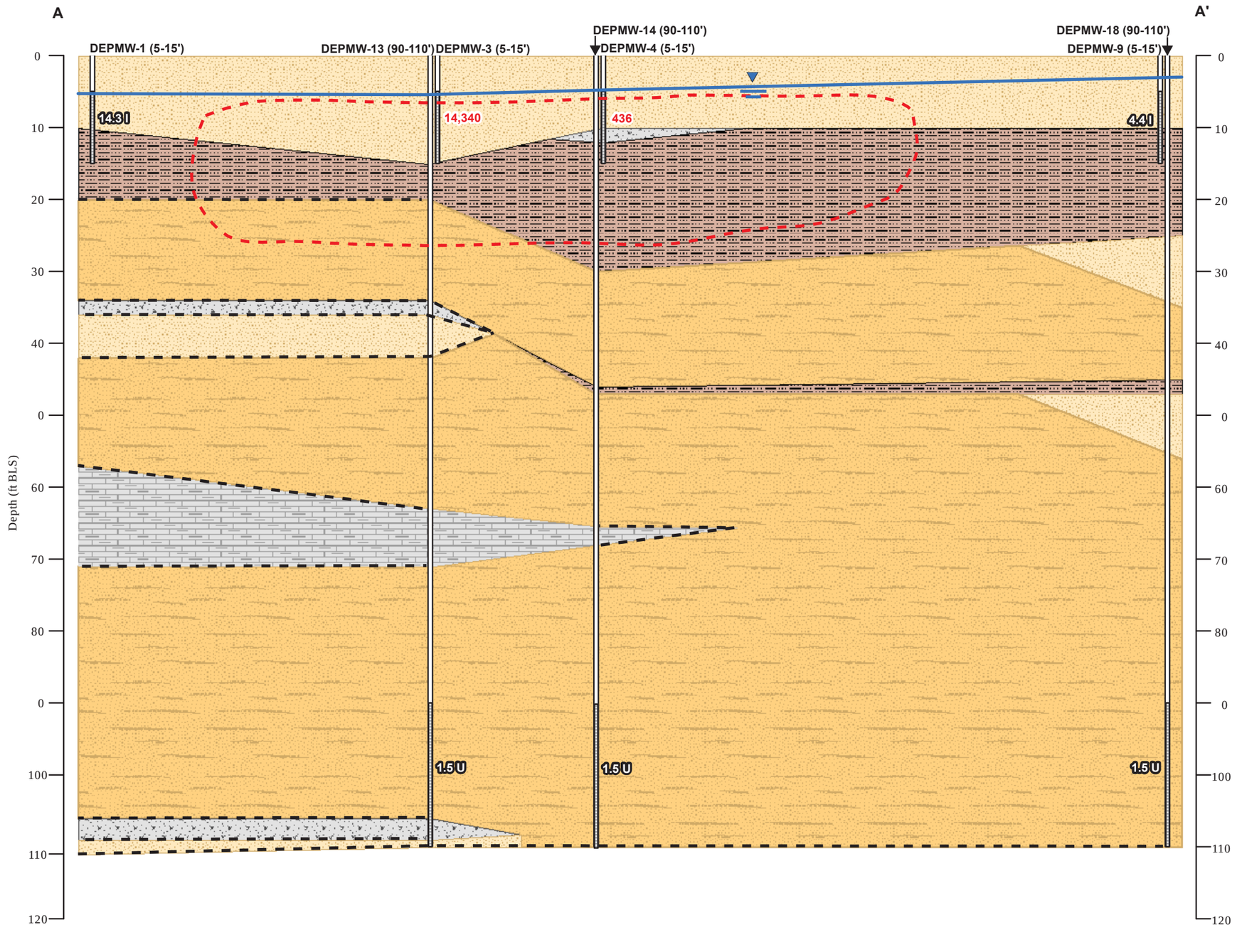
Notes:
1. Results are provided in nanograms per liter (ng/L).
2. Depth is provided in feet below land surface (ft BLS).
3. I indicates result is between the laboratory method detection limit and the laboratory practical quantitation limit.
4. U indicates that the compound was analyzed for but not detected (the laboratory MDL is shown).
5. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
6. PFOS + PFOA indicates the summation of perfluorooctanesulfonic acid (PFOS) and perfluorooctanic acid (PFOA).
7. Data presented for Florida Department of Health (FDOH) well locations was obtained from FDOH figures provided (figures dated 10 April 2020).
8. The Florida Department of Environmental Protection provisional groundwater cleanup target level (GCTL) is 70 ng/L [also known as the Health Advisory Level (HAL)].
9. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
10. 2017 World Imagery Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

Date: June 18, 2020

N

300 Feet

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\202006\GW_Results_80_to_110ftBLS_wFDOH.mxd 18 June 2020 AL



Legend

- Water Table
- PFOS+PFOA 70 ng/L Isopleth (dashed where inferred)
- Inferred Lithology

Lithology

- Poorly graded SA D
- Poorly graded SA D with shell fragments
- Silty CLA /Clayey SILT/Sandy CLA /Sandy SILT
- Silty SA D/Clayey SA D
- Limestone with shell fragments

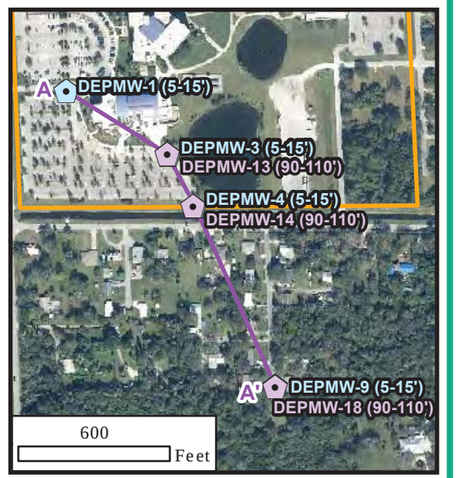


Figure 23
Vertical Extent of PFOS and PFOA
in Groundwater from A A
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. ft BLS indicates feet below land surface.
2. Results are provided in nanograms per liter (ng/L).
3. Analytical results are shown for the summation of perfluorooctanesulfonic acid (PFOS) and perfluorooctanic acid (PFOA).
4. I indicates result is between the laboratory method detection limit and the laboratory practical quantitation limit.
5. U indicates that the compound was analyzed for but not detected (the laboratory MDL is shown).
6. The Florida Department of Environmental Protection provisional groundwater cleanup target level (GCTL) for the summation of PFOS and PFOA is 70 ng/L.
7. Contours were generated using the summation concentration of PFOS + PFOA. The highest concentration between a sample and its duplicate was utilized.
8. Red text indicates result is greater than the PFOS+PFOA provisional GCTL
9. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website

Monitoring Well

Date: June 18, 2020

N

1 0
Feet

Vertical Exaggeration = 10

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\202006\FIRSC_CrossSection_AA_PFOS_PFOA.mxd 18 June 2020 AL

SW-1			
Date	PFOS	PFOA	PFOA + PFOS
3/25/2020	19 Y	5.5 Y	24.5 Y
3/25/2020 (DUP)	19 Y	5.1 Y	24.1 Y

Sed-1 (0-1')			
Date	Depth	PFOS	PFOA
3/25/2020	0 to 1	8.2 Y	0.16 UY

SW-2			
Date	PFOS	PFOA	PFOA + PFOS
3/25/2020	180 Y	17 Y	197 Y

Sed-2 (0-1')			
Date	Depth	PFOS	PFOA
3/25/2020	0 to 1	0.29 UY	0.15 UY

SW-3			
Date	PFOS	PFOA	PFOA + PFOS
3/25/2020	150 Y	15 Y	165 Y

Sed-3 (0-1')			
Date	Depth	PFOS	PFOA
3/25/2020	0 to 1	0.99 IY	0.13 UY

SW-4			
Date	PFOS	PFOA	PFOA + PFOS
3/25/2020	45 Y	5.8 Y	50.8 Y

Sed-4 (0-1')			
Date	Depth	PFOS	PFOA
3/25/2020	0 to 1	0.43 UY	0.21 UY

SW-5			
Date	PFOS	PFOA	PFOA + PFOS
3/25/2020	48 Y	9 Y	57 Y

Sed-5 (0-1')			
Date	Depth	PFOS	PFOA
3/25/2020	0 to 1	0.31 UY	0.16 UY

SW-6			
Date	PFOS	PFOA	PFOA + PFOS
3/25/2020	59 Y	6.9 Y	65.9 Y

Sed-6 (0-1')			
Date	Depth	PFOS	PFOA
3/25/2020	0 to 1	0.28 UY	0.14 UY

South 35th Street
South 31st Street
South 29th Street
South 28th Street
South 27th Street
South 26th Street
South 25th Street
Pineview Drive
Dean Drive
Brantley Road
SW-1
Sed-1
SW-2
Sed-2
SW-3
Sed-3
SW-4
Sed-4
SW-5
Sed-5
SW-6
Sed-6

Legend

- Sediment
- Surface Water
- Former Indian River State College Boundary
- Approximate Area of Former Fire Training Facility Operational Area

Figure 24
Summary of Analytical Results in Sediment and Surface Water
Former Indian River State College
Fort Pierce, St. Lucie County, Florida

Notes:
1. Surface water results are provided in nanograms per liter (ng/L). Sediment results are provided in micrograms per kilogram (µg/Kg).
2. Depth is provided in feet below land surface (ft BLS).
3. I indicates result is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit.
4. U indicates that the compound was analyzed for but not detected (the MDL is shown).
5. Y indicates the laboratory analysis was from an unpreserved or improperly preserved sample.
6. PFOS + PFOA indicates the summation of perfluorooctanesulfonic acid (PFOS) and perfluorooctanic acid (PFOA).
7. Provisional cleanup target levels have not been established for sediment or surface water.
8. Approximate Indian River State College Boundary obtained from St. Lucie County Property Appraiser (file downloaded 6 February 2020).
9. Source of 2017 aerial: Florida Department of Transportation Aerial Photo Look Up System website.

Date: June 17, 2020

N

300 Feet

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Path: (Titusville-01\DATA) T:\0GIS\FR3781_Former_IRSC\MXDs\202006\SW_SED_Results_JUN2020.mxd 17 June 2020 AL