

Field Personnel processing steps

- ☐ New Field IDs created (when using a new station) Date: _____ initials: _____ ☒ NA
- ☐ Create entry in SMPStationCreationFile if new station is used
- \\Fidep1\wqap\NW ROC\TMDL\WIN_Station Creation
- ☒ Date sampled Date: 08/07/2019 initials: FB
- ☐ Update MAT Date: N/A initials: _____
- ☒ Update "SMP Tracker" Date: 08/08/2019 initials: FB
- ☒ Photos put into archive Date: 08/26/2019 initials: FB ☐ NA
- ☒ RQ Sheet – from LIMS (display/print request)
- ☒ Field Sheets initialed/dated @ "Scan/Save Field Sheets" then scanned (with calibration logs) and saved into:
- Scans_ToBeProcessed* Date: 08/26/2019 initials: FB
- ☐ Update "Data Tracker"
- \\publicfiles\pubfds\DEAR\WQAPmonitoring\StrategicMonitoring\2019\21FLPNS
- Ready for folder system (top)*

LIMS processing (to be completed by LIMS data personnel) (MC)

- ☐ Field parameters entered into LIMS Date: _____ initials: _____
- ☐ Digital RQ packet put into
- SMP 2019/Data/Scanned Field Sheets Date: _____ initials: _____
- ☐ Digital field Sheets put into archive Date: _____ initials: _____
- ☐ Date submitted for QA/QC Date: _____ initials: _____
- ☐ Update "Data Tracker"

Database processing (Cheryl)

- ☐ Field parameters QA/QC in LIMS Date: _____ initials: _____
- ☐ Lab results put into archive (CB) Date: _____ initials: _____
- ☐ Data migrated to WINS Date: _____ initials: _____
- ☐ Update "Data Tracker"

Notes: Lake was sampled for Reference Lake Project, but data also needed for 2019 SMP. Biology

Date of Request: 18-JUN-2019
 Created By: KING_M On: 18-JUN-2019
 Modified By: JASROTIA_P On: 03-JUL-2019
 Customer: NW-DIST
 Project: LAKESREF
 Division: Division of Environmental Assessment and Restoration
 District: NW ROC
 Sampling Event: CASSIDY LAKE

Send Coolers To:

Phone: 850-595-0605
 160 Government Center
 Suite 208
 Pensacola, FL 32502-5794
 Attn: Michael King

Program Module Number:

Priority: 3
 Event Status: S
 Criminal Investigation: NO
 Chemistry Request Reviewed By: AYRES_J On: 03-JUL-2019
 Biology Request Reviewed By: JASROTIA_P On: 03-JUL-2019
 Sampling Kit Required: YES Ship on: 12-JUL-2019
 Sampling Kit Shipped: YES On: 10-JUL-2019
 Sampling Kit Packed By: REYNOLDS_T
 Preservatives Needed: NO
 Date to Receive Samples: 22-JUL-2019
 Received By:

Send Final Report To:

160 Government Center
 Suite 208
 Pensacola, FL 32502-5794
 Attn: Cheryl Bunch

Report Type: Final Only
 FTP Data: NO
 QC Report: YES
 Date Log: NO
 Authorization Log: NO

Comments: Group A: Nutrients, Metals, Phytoplankton

Packing Notes:**Bottle Group A (Water) With 1 Samples:**

Bottle Type: P-1L	Number of Bottles: 1	Preserved With: ICE
ALKALINITY	Template: DEFAULT	(SM 2320 B-97) Alkalinity in aqueous matrices as mg CaCO ₃ /L
Total Alkalinity		
TURBIDITY	Template: DEFAULT	(EPA 180.1 Rev. 2.0) Turbidity in aqueous matrices
Turbidity		
W-CL-IC	Template: DEFAULT	(EPA 300.0 Rev. 2.1) Chloride in aqueous matrices
Chloride		
W-COLOR	Template: DEFAULT	(SM 2120 B) True Color measured at 450 nm
Color (true)		
W-F	Template: DEFAULT	(SM 4500 F-C-97) Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)
Fluoride		
W-SO ₄ -IC	Template: DEFAULT	(EPA 300.0 Rev. 2.1) Sulfate in aqueous matrices
Sulfate		
W-TDS	Template: DEFAULT	(SM 2540 C-97) Total Dissolved Solids in aqueous matrices
TDS		
W-TSS	Template: DEFAULT	(SM 2540 D-97) Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample
TSS		
Bottle Type: BP-1L	Number of Bottles: 1	Preserved With: ICE
CHLSUITE-W	Template: DEFAULT	(SM 10200 H (mod.)) Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry
Chlorophyll-a, Corrected		
Chlorophyll-a, Uncorrected		
Phaeophytin-a		
Bottle Type: BP-1L	Number of Bottles: 1	Preserved With: Lugols

Bottle Group A (Water) With 1 Samples:

Bottle Type: BP-1L	Number of Bottles: 1	Preserved With: Lugols
DTY-QN-C	Template: DEFAULT (SOP-AB05_1)	No. of diatom taxa of quantitative phytoplankton sample.
*Phytoplankton-Quantitative-#Diatom Taxa		
PKD-QN-C	Template: DEFAULT (SOP-AB05)	No. of wet taxa of quantitative phytoplankton sample.
*Phytoplankton-Quantitative-# Wet Taxa		
Bottle Type: P-500ML	Number of Bottles: 1	Preserved With: HNO3
W-ICP	Template:	(EPA 200.7 Rev. 4.4) Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects
Barium		
Calcium		
Iron		
Magnesium		
Potassium		
Sodium		
Zinc		
W-ICPMS	Template:	(EPA 200.8 Rev. 5.4) Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects
*Boron		
Aluminum		
Antimony		
Arsenic		
Cadmium		
Chromium		
Copper		
Lead		
Nickel		
Selenium		
Silver		
Thallium		
Bottle Type: P-500ML	Number of Bottles: 1	Preserved With: ICE And H2SO4
W-NH3	Template: DEFAULT	(EPA 350.1 Rev. 2.0) Ammonia in aqueous matrices as mg N/L
Ammonia-N		
W-NO2NO3	Template: DEFAULT	(EPA 353.2 Rev. 2.0) Nitrite/Nitrate in aqueous matrices as mg N/L
NO2NO3-N		
W-S-A-TP	Template: DEFAULT	(EPA 365.1 Rev. 2.0) Total Phosphorus in aqueous matrices as mg P/L
Total-P		
W-TKN	Template: DEFAULT	(EPA 351.2 Rev. 2.0) Total Kjeldahl Nitrogen in aqueous matrices
Kjeldahl Nitrogen		
W-TOC	Template: DEFAULT	(SM 5310 B-00) Nonpurgeable Organic Carbon in aqueous matrices
Organic Carbon		
Bottle Type: P-125ML	Number of Bottles: 1	Preserved With: FILTER-ICE
W-PO4-F	Template: DEFAULT	(EPA 365.1 Rev. 2.0) Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L
O-Phosphate-P		

* - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.

Group: A	Bottle Type:	P-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab
	ALKALINITY					
	TURBIDITY					
	W-CL-IC					
	W-COLOR					
	W-F					
	W-SO4-IC					
	W-TDS					
	W-TSS					
Group: A	Bottle Type:	BP-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab
	CHLSUTE-W					
Group: A	Bottle Type:	BP-1L	# of Bottles: 1	Preservative:	Lugols	Enter Number of Bottles Sent to Lab
	DTY-QN-C					
	PKD-QN-C					
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	HNO3	Enter Number of Bottles Sent to Lab
	W-ICP					
	W-ICPMS					
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab
	W-NH3					
	W-NO2NO3					
	W-S-A-TP					
	W-TKN					
	W-TOC					
Group: A	Bottle Type:	P-125ML	# of Bottles: 1	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab
	W-PO4-F					

H2SO4
LOT # S89010030
Exp: 04/18/2020

HNO3
LOT # NA9099030
Exp: 04/09/20

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Meter ID: 155077

RQ: 2019-07-22-17

Project: SMP/Ref Lake

Boldly "X" this box if there are qualified data on this page.

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 06/13/19

DO DEP SOP FT 1500	Name	Date	Time GT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.											P / F	L / F
ICV											P / F	L / F
CCV	<u>F. Butler</u>	<u>8/7/19</u>	<u>7:30</u>	<u>25.3</u>	<u>760.3</u>	<u>8.2</u>	<u>8.28</u>	<u>100.8</u>			<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>
CCV	<u>M. Clark</u>	<u>8/7/19</u>	<u>15:51</u>	<u>25.3</u>	<u>759</u>	<u>7.8</u>	<u>7.82</u>	<u>100.6</u>			<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>

DO Acceptance criteria from Table ± 0.3 mg/L. Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.
 Optical: DO gain range 0.85 to 1.15 (Pro-DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec Cond. FT 1200	Name	Date	Time GT-ET	Lot #	Expir. Date	Standard μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	<u>F. Butler</u>	<u>8/7/19</u>	<u>7:34</u>	<u>190116A</u>	<u>6/2020</u>	<u>1000</u>	<u>1000</u>	<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>
ICV	<u>↓</u>	<u>↓</u>	<u>7:39</u>	<u>190116A</u>	<u>6/2020</u>	<u>1000</u>	<u>104.2</u>	<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>
CCV	<u>M. Clark</u>	<u>8/7/19</u>	<u>15:53</u>	<u>170116A</u>	<u>6/2020</u>	<u>1000</u>	<u>104.7</u>	<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>
CCV								P / F	L / F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time GT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	<u>F. Butler</u>	<u>8/7/19</u>	<u>7:45</u>	<u>2811803</u>	<u>10/20</u>	<u>7.</u>	<u>24.8</u>	<u>7.0</u>	<u>-38.5</u>	<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>
Calibr.	<u>↓</u>	<u>↓</u>	<u>7:00</u>	<u>2902818</u>	<u>01/21</u>	<u>4.</u>	<u>24.8</u>	<u>4.0</u>	<u>-44.2</u>	<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>
Calibr.	<u>↓</u>	<u>↓</u>	<u>7:52</u>	<u>4904509</u>	<u>9/20</u>	<u>10.</u>	<u>24.8</u>	<u>10.0</u>	<u>-209.8</u>	<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>
ICV			<u>7:55</u>	<u>2902818</u>	<u>1/21</u>	<u>4.0</u>	<u>25.1</u>	<u>4.04</u>	<u>111.9</u>	<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>
CCV	<u>M. Clark</u>	<u>8/7/19</u>	<u>15:55</u>	<u>2811803</u>	<u>10/20</u>	<u>7.0</u>	<u>25.4</u>	<u>7.15</u>	<u>-39.2</u>	<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 $\pm$ 50; mV pH 4 Range $\pm 180 \pm 50$; mV pH 10 Range -180 ± 50 ;
 If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 6/13/19

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time GT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	<u>F. Butler</u>	<u>8/7/19</u>	<u>0.00</u>	<u>0.000</u>	<u>0.00</u>	<u>P</u> / <u>F</u>	<u>P</u> / <u>F</u>

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

Site Name Cassidy Lake Center

Date: 08/07/2019

Field ID G3NW0183 Storet G3NW0183

Project: Reference Lakes / SMP

Visit ID ~~800064~~ Visit ID 80064

RQ: ~~2019-06-10-30~~

VPDB ID 11464

LIMS ID: 2109723

HA ID 16170

WBID: 966

RQ-2019-07-22-17 FB

☒ LVI

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO Initial FB

☐ Date and Initial QA: SS, 09/04/2019

☐ RPS entered in SBIO Initial

☐ Date and Initial QA:

☒ LVI entered in SBIO Initial FB

☐ Date and Initial QA: SS, 09/04/2019

☐ Plants getting verified

Date submitted:

☐ Plants verified

Date returned: In House

☐ VPDB authorized in SBIO

☐ Date and Initial: FB, 09/05/2019

☐ VPDB score: 95

☒ If SMP, scanned into database



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes ☒ No ☐

WIN Station Name: Cassidy Lake Center

Date: 08/07/2019
(mm/dd/yyyy)

WIN/ Field ID: G3NW0183

WBID: 226

Latitude: 30.81620

County: Holmes

ORG ID: 21FLPNS

Longitude: 86.031136

(Decimal Degrees)

(Decimal Degrees)

Receiving Body of Water: Anderson Mill Creek

RQ-2019- 07-22-17

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment		
Frank Butera		☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole
Myranda Clark		☒	☒	☒	☒	☒	☐ Carboy	☒ Syringe	
							☐ Dipper	☐ Other	
							Depth Measured with <u>YSI</u>		
							Equipment ID		
							Collection Method		
							☐ Wading	☐ Canoe/Kayak	
							☐ From Shore	☐ Electric Motor	
							☐ Other	☒ Gasoline Motor	

Water Level: Dry/ Pooled/ Low / Normal High Flooded Meter ID# 155077 Matrix: Fresh / Marine / DI

Photos: Yes / No Flow: No Flow / Intestinal / Flowing NA Tide: Rising/ Falling/ Slack NA Tide Times: High Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTH)	Sp COND (µmhos/cm)	Temp. (C°)
EST	13:00	10.3	0.3	5.3	7.01	95.0	5.57	0.01	15.4	31.0
CEN			9.7		0.17	2.1	4.95	0.01	19.9	22.3

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other:

SBIO ID Numbers: SBIO-ID: 80064 HA-ID: 16174 RPS-ID: MA Macrophyte-ID: 11464 LIMS#: 2109723

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☐ Ice ☒ H2SO4	SA9010030	04/10/20	☒ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	NA9099030	04/09/20	☒ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	16570048		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci	☐ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Notes:

Field/WIN ID



G3NW0183

Location:



CASSIDY LAKE CENTER

Signature: Frank Butera

Date: 08/07/2019

LIMS EVENT ID: WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:

Scan/Save Field Sheets Migrate Data to WIN: Verify Data In WIN:

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: B0064 MACROPHYTE ID: 11464 LATITUDE: N 30.816195
 COUNTY: Holmes (Ponce De Leon) STORET #: G3NW0183 LONGITUDE: W -86.03114
 DATE: 07/09/2019 TIME: 13:40 SAMPLING AGENCY: FL DEP - NWROC
 SITE NAME: Cassidy Lake Center, RA-2019-07-22-17 WBID: 226
 FIELD ID/NAME: G3NW0183 LAKE SIZE: 330 RQ: 2019-07-22-17

WATERSHED / LAKESIDE FEATURES WBID 226 LIMS ID 2109723

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category - from GIS): Forest/Natural ☒ Silviculture ☒ Field/Pasture ☒ Agricultural ☒ Residential ☒ Commercial ☐ Industrial ☐ Other (Specify) ☐							LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: <u>1.0</u> 2016 SBIO Land Use Source & Year:		
Local Watershed Erosion (select one): ☐ None ☐ Slight ☒ Moderate ☐ Heavy					Artificially Impounded ☐ Yes ☒ No				
Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy									
STORMWATER INPUTS <u>18</u>		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 20 19 <u>18</u> 17 16		Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place 15 14 13 12 11		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 9 8 7 6		Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1	
LAKESIDE ALTERATIONS <u>18</u>		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected) 20 19 <u>18</u> 17 16		Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected) 15 14 13 12 11		Many structures, roads or other human disturbance visible (50%-70% lakeside affected) 10 9 8 7 6		Highly developed or disturbed (>70% of lakeside affected) 5 4 3 2 1	
BUFFER ZONE <u>18</u>		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18m buffer 20 19 <u>18</u> 17 16		89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer 15 14 13 12 11		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 10 9 8 7 6		< 29% of shoreline with >18m buffer 5 4 3 2 1	

WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: Nutrient Sample Taken? ☒ Yes ☐ No Preserved? ☐ Yes ☐ No pH < 2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # _____ Exp. Date: _____ Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High								Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____			
Meter Readings: Top: <u>03</u> <u>13:00</u> <u>31.0</u> <u>5.57</u> <u>7.01</u> <u>46.0</u> <u>15.4</u> <u>0.01</u> Mid-Depth: <u>5.33</u> <u>30.4</u> <u>5.51</u> <u>6.77</u> <u>90.5</u> <u>15.4</u> <u>0.01</u> Bottom: <u>9.7</u> <u>4.5</u> <u>22.3</u> <u>4.95</u> <u>0.17</u> <u>2.1</u> <u>19.9</u> <u>0.01</u> Meter ID: <u>155047</u>								Water Surface Oils: ☐ None ☐ Sheen/Slick ☐ Glob ☐ Other _____			
Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☒ Vegetated ☒ Sand/Silt ☒ Organic smooth (muck) ☐ Other (Specify): _____								Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green			
Biological Communities: LVI Conducted? ☒ Yes ☐ No Phytoplankton Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☒ No Lot #: _____ Exp Date: _____ Algal Bloom/Algal ID Sample Taken? Yes ☒ No Active Vegetation Mgmt? ☐ Yes ☐ No ☒ Don't Know								Abundance: Absent Rare Common Abundant Periphyton ☐ ☐ ☐ ☒ Nuisance Plants ☐ ☐ ☒ ☐ Submersed Plants ☐ ☐ ☐ ☒ Exotic Apple Snails ☒ ☐ ☐ ☐			
Weather Conditions: <u>Sunny. Very Hot - Heat Index projected 110°F.</u> <u>11:00</u>								Additional Notes: SBIO Project Reference Lakes. SMP 2019 <u>Vegetation to least 5.0 m depth.</u>			
SAMPLING TEAM: Frank Butera, Miranda Clark								SIGNATURE: <u>[Signature]</u> DATE: <u>07/09/2019</u>			

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Cassidy Lake Center				County: Holmes (Ponce De Leon)				Date: 08/07/2019			
Analyst: F. Butera				Signature: <i>[Signature]</i>				STORET: G3NW0183			
Except where noted as "sp." species level identification required. *Genera that may require lab verification* Plants in bold= FLEPPC invasive exotic. It is important to note dominant or co-dominant taxa (by areal extent) for each unit. Use "D" to denote dominant taxon, or "C" for the 2 co-dominant taxa.								Lake units sampled (circle one group): 1, 4, 7, 10 2, 5, 8, 11 3, 6, 9, 12			
SBIO ID B0064	2	5	8	11	Collect ed? (✓)	Macro ID _____	2	5	8	11	Collect ed? (✓)
SPECIES						SPECIES					
Acer rubrum						Habenaria repens					
Alternanthera philoxeroides						Hydrilla verticillata					
Andropogon sp.						Hydrocotyle sp.					
Azolla filiculoides (A. caroliniana)						Hygrophila polysperma					
Baccharis sp.						*Hypericum fasciculatum					
Bacopa caroliniana						*Hypericum hypericoides					
Bacopa monnieri						*Hypericum myrtifolium					
Bidens laevis						Ilex cassine					
Bidens mitis						Ipomoea aquatica					
Blechnum serrulatum						Ipomoea sagittata					
Boehmeria cylindrica						Itea virginica					
Brasenia schreberi	1	1	1	1		Juncus effusus					
Cabomba caroliniana	1	1	1	1		*Juncus marginatus					
Casuarina equisetifolia						*Juncus megacephalus					
Centella asiatica						Juncus repens					
Cephalanthus occidentalis			1			*Juncus scirpoides					
Ceratophyllum demersum						Lachnanthes caroliniana					
Chara sp.						Leersia hexandra					
Cladium jamaicense						Landoltia punctata (Spiro. punctata)					
Cliftonia monophylla				1		Lemna sp.					
Colocasia esculenta						Leucothoe racemosa (E. racemosa)					
*Commelina						Limnium spongia					
Crinum americanum						Limnophila sessiliflora					
*Cyperus alternifolius (C. involucratus)						Liquidambar styraciflua					
Cyperus articulatus						*Ludwigia arcuata					
Cyperus haspan						*Ludwigia leptocarpa					
*Cyperus lecontei						*Ludwigia linearis					
*Cyperus polystachyos						*Ludwigia octovalvis					
*Cyperus odoratus						*Ludwigia peruviana					
*Cyperus surinamensis						*Ludwigia repens					
Cyrtilla racemiflora	1					*Ludwigia					
Decodon verticillatus						Luziola fluitans (H. carolinensis)					
Diodia virginiana						Lyonia lucida					
*Echinochloa crus-galli						Magnolia virginiana					
*Echinochloa muricata						Mayaca fluviatilis	1	1	CC		
Echinochloa walteri						Melaleuca quinquenervia					
Eclipta prostrata (E. alba)						Micranthemum glomeratum					
Egeria densa						Micranthemum umbrosum					
Eichhornia crassipes						Mikania scandens					
*Eleocharis baldwinii						Mimosa pigra					
*Eleocharis						Myrica cerifera					
Eleocharis cellulosa						<i>Hypericum chapmanii</i>	1	1	1	✓	
Eleocharis equisetoides						<i>Eriocaulon lineare</i>					✓
Eleocharis interstincta						<i>Clethra</i>					
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium											
*Fuirena											
Fuirena scirpoides											
Gordonia lasianthus											

LIMS ID 2109723

80064

Date: 8/7/2019

SBIO ID 80064 Macro ID 11464

**Schoenoplectus tabernaemontani* = *Scirpus validus*

[illegible]

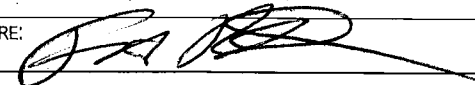
Station: Cassidy Lake Center
 GPS Dec. 30.81620 x -86.031136
 Storet: G3NW0183 WBID 226
 Sample ID : 80064
 Macro ID: 11464

Sampled : 08/07/2019
 Sampled By. F.Butera, M. Clark
 Location. Ponce de Leon, Holmes Co. FL
 Receiving Waters: Anderson Mill Creek
 LIMS ID: 2109723

	Taxa	2	5	8	11
1	<i>Brasenia schreberi</i>	1	1	1	1
2	<i>Cabomba caroliniana</i>	1	1	1	1
3	<i>Cephalanthus occidentalis</i>			1	
4	<i>Clethra alnifolia</i>			1	1
5	<i>Cliftonia monophylla</i>				1
6	<i>Cyrilla racemiflora</i>	1			
7	<i>Eriocaulon lineare</i>		1	1	
8	<i>Hypericum chapmani</i>	1	1	1	1
9	<i>Itea virginica</i>	1	1		
10	<i>Mayaca fluviatilis</i>	1	1	C	C
11	<i>Najas quadalupensis</i>	1	1	1	1
12	<i>Nuphar</i> sp.	1	1	1	1
13	<i>Nymphoides aquatica</i>	1			1
14	<i>Nymphoides cordata</i>	1	1	1	1
15	<i>Nyssa sylvatica</i> var. <i>biflora</i>	1	1	1	1
16	<i>Panicum hemitomon</i>	1	1	1	1
17	<i>Panicum repens</i>		1		
18	<i>Pontederia cordata</i>	1	1	1	1
19	<i>Taxodium</i> sp.	1	1	1	1
20	<i>Utricularia floridana</i>	D	P	C	C
21	<i>Websteria confervoides</i>	1	D	1	1
	Taxa per section	15	14	14	15
	Exotic Present	0	1	0	0
	Avg. taxa per section	15			
	sections with exotics	1			
	Exotic Taxa	1	Exotics per Section: 0.25		

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
Lake Habitat Assessment Field Sheet

STORET STATION NUMBER: G3NW0183	DATE (M/D/Y) 08/07/2019	LAKE NAME Cassidy Lake, Center		FIELD ID / NAME: G3NW0183
ECO-REGION: WBID 226	COUNTY: Holmes	SAMPLING LOCATION/DESCRIPTION: Cassidy Lake, Ponce De Leon		LAKE SIZE: 330
PARAMETER	No surface inflow or outflow present, very long water residence time, groundwater seepage dominates ☒	Surface water inflow present, but flow is rare, moderate to long water residence time ☐	Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time ☐	Impounded, hydrology of system artificially controlled ☐
HYDROLOGY				
Color	Very clear, uncolored water (benthic sampling appropriate) ☒	Water somewhat tannin stained (benthic sampling appropriate) ☐	Dark, discolored water (water color 20 PCU or higher) ☐	Visibility extremely reduced due to high color ☐
	Optimal	Suboptimal	Marginal	Poor
Secchi ☐ 20	Secchi > 3 m Or VOB ☐ 20 19 18 17 16	3 2.6 2.2 1.8 1.4 15 14 13 12 11	1.0 0.9 0.8 0.7 0.6 10 9 8 7 6	0.5 0.4 0.3 0.2 0.1 5 4 3 2 1
Vegetation Quality ☐ 17	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa 20 19 18 ☐ 17 16	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants 15 14 13 12 11	Large masses (21%- 40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats 10 9 8 7 6	Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed) 5 4 3 2 1
Stormwater Inputs ☐ 13 ☐ 16	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 20 19 ☐ 18 ☐ 17 ☐ 16	Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place 15 14 13 12 11	Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 9 8 7 6	Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1
Bottom Substrate Quality ☐ 17 ☐ 15	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present 20 19 18 ☐ 17 ☐ 16	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present 15 14 13 12 11	Moderate layer of CPOM/ mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom 10 9 8 7 6	Thick deposits of CPOM; or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom 5 4 3 2 1
Lakeside Adverse Human Alterations ☐ 13 ☐ 17	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) 20 19 ☐ 18 ☐ 17 ☐ 16	Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected 15 14 13 12 11	Many structures, roads or other human disturbance visible (50%-70%) lakeside affected 10 9 8 7 6	Highly developed or disturbed (>70% of lakeside affected) 5 4 3 2 1
Upland Buffer Zone ☐ 13	Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer 20 19 ☐ 18 ☐ 17 ☐ 16	89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer 15 14 13 12 11	50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 10 9 8 7 6	< 29% of shoreline with >18m buffer 5 4 3 2 1
Adverse Watershed Land Use ☐ 16	Score the potential effects from adverse human land uses, based on a continuum of amount and type, with least to most adverse as follows: Native vegetation, Silviculture, Pasture or Citrus, Low Density Residential, Row Crops, Commercial, High Density Residential, Urban, Industrial 20 19 18 17 ☐ 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1			
TOTAL SCORE ☐ 124	COMMENTS:			

ANALYSIS DATE: 08/07/19	ANALYST: Frank Burton	SIGNATURE: 
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SBIO ID: 30064

H.A. ID: 16170

DEP-SOP-001/01
FS 7000 General Biological Community Sampling

Form FD 9000-2: COMPOSITE LAKE SAMPLING SHEET (< 1000 ACRES)

Date: 08/07/19		Name of Lake: Cassidy Lake		Gear used: PONAR		EKMAN		OTHER	
Comments:									
Drop #	Depth (m)	Sediment Type (circle all that apply)		Drop #	Depth (m)	Sediment Type (circle all that apply)			
1	1.3	sand, silt/clay, CPOM, muck, SAV		7		sand, silt/clay, CPOM, muck, SAV			
2	7.0	sand, silt/clay, CPOM, muck, SAV		8		sand, silt/clay, CPOM, muck, SAV			
3		sand, silt/clay, CPOM, muck, SAV		9		sand, silt/clay, CPOM, muck, SAV			
4		sand, silt/clay, CPOM, muck, SAV		10		sand, silt/clay, CPOM, muck, SAV			
5	4.7	sand, silt/clay, CPOM, muck, SAV		11	9.4	sand, silt/clay, CPOM, muck, SAV			
6		sand, silt/clay, CPOM, muck, SAV		12		sand, silt/clay, CPOM, muck, SAV			

CPOM = coarse particulate organic matter; SAV = submerged aquatic vegetation

Storet G3NW0183 Field ID G3NW0183 Project. Reference Lakes
WBID 226

SBIO ID: 80064

Paste map here and show location of each dredge drop and where water chemistry parameters were collected.

Revision Date: February 1, 2004

G3NW0183. Cassidy Lake
330 Acres. WBID 226
30.81619 x -86.03114
Ponce De Leon, Holmes Co. FL

