

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

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

Meter ID: 154179

RQ: 2021-05-10-69

Project: Ref Lake

- 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 2/9/21

DO DEP SOP FT 1500	Name	Date	Time CT-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.	<u>S. Hode</u>	<u>5/19/21</u>	<u>0712</u>	<u>23.9</u>	<u>763.9</u>	<u>8.5</u>	<u>8.51</u>	<u>100.0</u>	<u>-</u>	<u>-</u>	<u>(P) F</u>	<u>(L) F</u>
ICV	<u>S. Hode</u>	<u>5/19/21</u>	<u>0714</u>	<u>23.9</u>	<u>764.0</u>	<u>8.5</u>	<u>8.53</u>	<u>100.1</u>	<u>-</u>	<u>-</u>	<u>(P) F</u>	<u>(L) F</u>
CCV	<u>S. Hode</u>	<u>5/19/21</u>	<u>1708</u>	<u>25.8</u>	<u>763.8</u>	<u>8.2</u>	<u>8.19</u>	<u>99.9</u>	<u>-</u>	<u>-</u>	<u>(P) F</u>	<u>(L) F</u>
CCV											<u>P / F</u>	<u>L / 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 CT-ET	Lot #	Expir. Date	Standard µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	<u>S. Hode</u>	<u>5/19/21</u>	<u>0716</u>	<u>210330B</u>	<u>04/2022</u>	<u>5000</u>	<u>5002</u>	<u>(P) F</u>	<u>(L) F</u>
ICV	<u>S. Hode</u>	<u>5/19/21</u>	<u>0718</u>	<u>200124B</u>	<u>08/2021</u>	<u>1000</u>	<u>979</u>	<u>(P) F</u>	<u>(L) F</u>
CCV	<u>S. Hode</u>	<u>5/19/21</u>	<u>1710</u>	<u>201013B</u>	<u>10/2022</u>	<u>100</u>	<u>99.7</u>	<u>(P) F</u>	<u>(L) F</u>
CCV								<u>P / F</u>	<u>L / F</u>

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	<u>S. Hode</u>	<u>5/19/21</u>	<u>0720</u>	<u>21142021</u>	<u>05/2022</u>	<u>7.</u>	<u>22.3</u>	<u>7.01</u>	<u>-36.4</u>	<u>(P) F</u>	<u>(L) F</u>
Calibr.	<u>S. Hode</u>	<u>5/19/21</u>	<u>0722</u>	<u>203620</u>	<u>06/2022</u>	<u>4.</u>	<u>22.6</u>	<u>4.00</u>	<u>142.5</u>	<u>(P) F</u>	<u>(L) F</u>
Calibr.	<u>S. Hode</u>	<u>5/19/21</u>	<u>0724</u>	<u>201473</u>	<u>05/2022</u>	<u>10.</u>	<u>23.8</u>	<u>10.01</u>	<u>-215.0</u>	<u>(P) F</u>	<u>(L) F</u>
ICV	<u>S. Hode</u>	<u>5/19/21</u>	<u>0726</u>	<u>203620</u>	<u>05/2022</u>	<u>4.0</u>	<u>22.5</u>	<u>3.95</u>	<u>145.8</u>	<u>(P) F</u>	<u>(L) F</u>
CCV	<u>S. Hode</u>	<u>5/19/21</u>	<u>1712</u>	<u>201473</u>	<u>05/2022</u>	<u>10.8</u>	<u>23.4</u>	<u>9.99</u>	<u>-214.4</u>	<u>(P) F</u>	<u>(L) F</u>
CCV										<u>P / F</u>	<u>L / F</u>

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 178.6, slope from 4 to 7 178.1 (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: 2/9/21

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 CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	<u>S. Hode</u>	<u>5/19/21</u>	<u>0727</u>	<u>0.000</u>	<u>0.000</u>	<u>(P) F</u>	<u>(L) 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:

32030097. Porter Lake

Site Name Porter Lake

Date: 05 /19 /2021

Field ID 32030097 Storet 32030097

Project: Reference Lakes

Visit ID 82228

RQ: 2021-05-10-69

Macro ID 11869

LIMS ID: 2248911

HA ID 16824

WBID: 682

☒ LVI

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO Initial FB, 05/27/2021 ☐ Date and Initial QA: 7/26/2021, SS HA Score: 119

☒ LVI entered in SBIO Initial FB, 07/20/2021 ☐ Date and Initial QA: _____

☒ Plants getting verified

☒ Date submitted: In Press 8/04/21

☐ Plants verified

☐ Date returned: _____

☐ Macro authorized in SBIO

☐ Date and Initial: _____

☐ Macro score: _____

☒ If SMP, scanned into database

Notes: Recent severe clear cutting in watershed.

08/24/2021 Waiting on plant specimens to be verified before finalizing LVI.

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 82228 MACROPHYTE ID: 11869 LATITUDE: N 30.50790
 COUNTY: Washington STORET #: 32030097 LONGITUDE: W 85.53850
 DATE: 05/19/2021 TIME: 11:00 → 14:40 SAMPLING AGENCY: FL DEP - NWROC
 SITE NAME: Porter Lake .6 MILE E of Greenhead/5 MIN of SR20 WBID: 682
 FIELD ID/NAME: PORTERREF LAKE SIZE: 800 RQ: 2021-05-10-69
 WATERSHED / LAKESIDE FEATURES 21ms ID 2248911

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) :								LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)				
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)	LDI: <u>2.23</u>				
☒	☒	☐	☒	☒	☐	☐	☐	Land Use Source & Year: SBIO, 2016				
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☒ Moderate ☐ Heavy								Artificially Impounded ☐ Yes ☒ No				
Local Watershed NPS Pollution : ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy												
STORMWATER INPUTS		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation		Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place		Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place				
<u>19</u>		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6		5 4 3 2 1				
LAKESIDE ALTERATIONS		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected)		Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected)		Many structures, roads or other human disturbance visible (50%-70% lakeside affected)		Highly developed or disturbed (>70% of lakeside affected)				
<u>17</u>		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6		5 4 3 2 1				
BUFFER ZONE		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer		89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer		< 29% of shoreline with >18m buffer				
<u>19</u>		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6		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: Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat. (%) Cond. (UMHO/CM) Salinity (PPT) Top: <u>0.3</u> <u>24.9</u> <u>5.03</u> <u>8.17</u> <u>98.2</u> <u>13.8</u> <u>0.00</u> Mid-Depth: <u>2.0</u> <u>24.9</u> <u>4.93</u> <u>8.13</u> <u>97.6</u> <u>13.8</u> <u>0.00</u> Bottom: <u>3.8</u> <u>23.1</u> <u>4.67</u> <u>5.30</u> <u>61.8</u> <u>14.9</u> <u>0.01</u>						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____					
Meter ID: <u>154179</u> <u>12:38</u>						Clarity: ☐ Clear ☒ Slightly Turbid ☐ Opaque ☐ Turbid Color: ☒ Clear ☐ Tannic ☐ Green					
Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☒ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____						SECCHI (M) <u>1.9</u> Total Station Depth (M) <u>4.3</u> VOB ☐					
Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____						Biological Communities: LVI Conducted? ☒ Yes ☐ No Phytoplankton Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot #: _____ Exp Date: <u>In Lab</u> 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 ☒ ☐ ☐ ☐						Additional Notes: <u>Her silviculture clear cuttg.</u> <u>Water level High</u>					
Weather Conditions: <u>Sunny, Windy, 80's.</u> ☒ YSI post verify successful.											
SAMPLING TEAM: Frank Butera, Stopher Slade						SIGNATURE: <u>[Signature]</u>			DATE: <u>5/19/2021</u>		

DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet

STORET STATION NUMBER: 32030097	DATE (M/D/Y) 5/19/2021	LAKE NAME PORTER LAKE		FIELD ID / NAME PORTERREF												
WBID: 682	COUNTY: WASHINGTON	SAMPLING LOCATION/DESCRIPTION: PORTER LAKE REFERENCE		LAKE SIZE: FB 43-800												
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		Poor												
Secchi ☐	Secchi >3 m Or VOB	3	2.6	2.2	1.8	1.4	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Vegetation Quality ☐	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants		Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats		Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed)										
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Stormwater Inputs ☐	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation	Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place		Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place										
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Bottom Substrate Quality ☐	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present		Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom		Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom										
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Lakeside Adverse Human Alternations ☐	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)	Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected		Many structures, roads or other human disturbance visible (50%-70%) lakeside affected		Highly developed or disturbed (>70% of lakeside affected)										
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Upland Buffer Zone ☐	Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer	89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer		< 29% of shoreline with >18m buffer										
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Adverse Watershed Land Use ☐	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 ☐	COMMENTS: Severe Clear Cutting in Watershed Recently.															
ANALYSIS DATE: 5/19/2021	ANALYST: F. BUTERA					SIGNATURE: [Signature]										

SBIO Sample ID: 82228 Macro-ID: 16824

QC: _____

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Porter Lake.					County: Washington					Date: 5/19/2021				
Analyst: F. Butera, Stopher Slade					Signature: <i>[Signature]</i>					STORET: 32030097				
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 <u>82228</u>	3	6	9	12	Collected? (v)	Macro ID _____	3	6	9	12	Collected? (v)			
SPECIES						SPECIES								
Acer rubrum			1			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 lissophyllum								
Bidens laevis						*Hypericum myrtifolium								
Bidens mitis						Ilex cassine								
Blechnum serrulatum						Ipomoea aquatica								
Boehmeria cylindrica						Ipomoea sagittata								
Brasenia schreberi	1	1	1	1		Itea virginica								
Cabomba caroliniana						Juncus effusus								
Casuarina equisetifolia						*Juncus marginatus								
Centella asiatica						*Juncus megacephalus <i>polycephalus</i>								
Cephalanthus occidentalis	1	1	1	1		Juncus repens								
Ceratophyllum demersum						*Juncus scirpoides								
Chara sp.						Lachnanthes caroliniana								
Cladium jamaicense						Leersia hexandra	1	1	1	1				
Cliftonia monophylla						Landoltia punctata (Spiro. punctata)								
Colocasia esculenta						Lemna sp.								
*Commelina						Leucothoe racemosa (Eubotrys racemosa)								
Crinum americanum						Limnium spongia								
*Cyperus alternifolius (C. involucratus)						Limnophila sessiliflora								
Cyperus articulatus						Liquidambar styraciflua								
Cyperus haspan						*Ludwigia arcuata								
*Cyperus lecontei						*Ludwigia leptocarpa								
*Cyperus polystachyos						*Ludwigia linearis <i>suffruticosa</i>								
*Cyperus odoratus						*Ludwigia octovalvis								
*Cyperus surinamensis						*Ludwigia peruviana								
Cyrtilla racemiflora	1	1	1	1		*Ludwigia repens								
Decodon verticillatus						*Ludwigia <i>sp. flowers / pods</i>								
Diodia virginiana						Luziola fluitans (Hydrochloa carolinensis)								
*Echinochloa crus-galli						Lyonia lucida								
*Echinochloa muricatum						Magnolia virginiana								
Echinochloa walteri						Mayaca fluviatilis								
Eclipta prostrata (E. alba)						Melaleuca quinquenervia								
Egeria densa						Micranthemum glomeratum								
Eichhornia crassipes						Micranthemum umbrosum								
*Eleocharis baldwinii						Mikania scandens								
*Eleocharis <i>elongata</i>						Mimosa pigra								
Eleocharis cellulosa						Myrica cerifera								
Eleocharis equisetoides						Lycopus								
Eleocharis interstincta						<i>Nympha. long. cor. life</i>	1	1	1	1				
*Eriocaulon compressum						<i>Liquidambar</i>								
*Eriocaulon decangulare						<i>Red-Lyall shrub (Myrica?)</i>								
Eupatorium capillifolium						<i>Asph. repens (L?)</i>								
*Fuirena						<i>Bidens alba</i>								
Fuirena scirpoidea						<i>Juncus repens / Rh. etc</i>								
Gordonia lasianthus						<i>** Not V. burnii</i>								
<i>Eriocaulon</i>														

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

SPECIES	3	6	9	12	Collected? (v)	SPECIES	3	6	9	12	Collected? (v)
Myriophyllum aquaticum						Salix caroliniana					
*Myriophyllum heterophyllum						Salvinia minima					
*Myriophyllum laxum						Sambucus canadensis					
*Myriophyllum pinnatum						Sapium sebiferum					
Myriophyllum spicatum						Saururus cernuus					
*Najas filifolia						Schinus terebinthifolius					
*Najas guadalupensis						*Schoenoplectus californicus					
*Najas minor						*Schoenoplectus pungens					
Nelumbo lutea						*Schoenoplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.						Scirpus cyperinus					
Nymphaea odorata	1	1	1	1		*Sesbania					
Nymphoides aquatica						Solidago sp.			1		
Nyssa sylvatica var. biflora				1		Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.	1	1	1	1	
Panicum hemitomom		1		1		Thalia geniculata					
Panicum repens						Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.					
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia floridana	1	1	1	1	
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea					
Pistia stratioides						*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana					
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						Wedelia trilobata (Sphag. trilobata)					
*Polygonum						Wolffiella spp.					
Pontederia cordata	1	1	1	1		Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.			1		
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuck. pectinatus)						Winged Sumac					
Proserpinaca pectinata						X Rhus camp...					
*Rhexia						Lycopus	1				
*Rhynchospora corniculata						Lachnocaulon minus					
*Rhynchospora inundata						Dichanthelium cf. ensifolium (?)					
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis				1	✓						
Sagittaria lancifolia											
Sagittaria latifolia											
*Rhynchospora					✓						

Photo Log

Win ID / Storet: 32030097

Station Name: Porter Lake Reference

Date:

Samplers. F. Butera, S. Slade

1	N
2	E
3	S
4	W
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	

Notes.