



Generalized Water Information System Database Utilities

Recon Tracking

Existing Station

New SW Station

New GW Station

PK RANDOM SAMPLE LOCATION = Z3-SL-15009

County	PUTNAM	Quarter Quad	
WMD	ST. JOHNS RIVER WMD	HUC	OKLAWAHA
Random Latitude	29° 36m 24.3101s	Random Longitude	82° 01m 06.60226s
	29.60675		82.0185

Is Z3-SL-15009 sampleable? ☐ Yes ☐ No ☒ N/A

Exclusion Category:

Exclusion Criteria:(definitions):

Was Z3-SL-15009 sampled? Yes Month 5 Day 24 Year 2021

Comments:

Save

Reset

☒ Aerial Photo ☐ Quad Map ☐ No Image

Show Map

**DEP TIER 1
STATUS NETWORK SITE CHARACTERIZATION**

Stream/Water Body Name: **North Twin Lake**

Site ID Z3-SL-15009	Latitude	Longitude	Type of Recon Site Visit	Date of Recon 5/16/2021
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Return Recon #1 _____

Return Recon #2 _____

Return Recon #3 _____

Resource Type Small Lake	Secondary Resource Type No 2nd Type
Desk Recon: 12/15/2021 By: Nate Gargas	Letter Sent:
Recon Team: Nate Gargas	

Site Location Address & Contact Information	Property Owner's Address
	Alen Reeves
	139 Twin Lakes Rd
	hawthorne, FL 32640
	352-283-0474
Data Requested: YES	County: Putnam

Tidal Info: _____

Access and Permission
YES-VERBAL PERMISSION

Reason for Exclusion

Recon Result
For Site:
Z3-SL-15009

INCLUDE

ADDITIONAL NOTES	
CALL BEFORE SAMPLING 24-48hrs Alen Reeves 352-283-0474 Additional Items: Jon Boat w/Trolling Motor Access point address is 139 Twin Lakes Rd Hawthorne, FL 32640 if you would like to use Nav App Go here see word	
DIRECTIONS:	
From the district turn left onto FL-100 W go ~1.4 miles, turn left onto CR 309C go ~2.4 miles, turn right onto Motes Rd go ~ 1.4 miles, Turn right onto FL-20 W go ~18.3 miles turn left onto CR 20A go ~0.5 miles, Turn left onto Twin Lakes Rd go ~0.5 miles, house is on left you can drive right down to lake see pics	
FILES GENERATED: (i.e. digital photos, GPS, etc.)	PHOTOS

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: 23-SL-15009	County: Pulaski Co.	Date: 10/19/21									
Analyst: North Twin Lake	Signature: <i>[Signature]</i>	STORET:									
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									
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
<i>Acer rubrum</i>						<i>Habenaria repens</i>					
Alternanthera philoxeroides						Hydrilla verticillata					
<i>Andropogon</i> sp.						<i>Hydrocotyle</i> sp.					
<i>Azolla filiculoides</i> (A. caroliniana)						Hygrophila polysperma					
<i>Baccharis</i> sp.						* <i>Hypericum fasciculatum</i>					
<i>Bacopa caroliniana</i>						* <i>Hypericum hypericoides</i>					
<i>Bacopa monnieri</i>						* <i>Hypericum myrtifolium</i>					
<i>Bidens laevis</i>						<i>Ilex cassine</i>					
<i>Bidens mitis</i>						Ipomoea aquatica					
<i>Blechnum serrulatum</i>						<i>Ipomoea sagittata</i>					
<i>Boehmeria cylindrica</i>						<i>Itea virginica</i>					
<i>Brasenia schreberi</i>						<i>Juncus effusus</i>					
<i>Cabomba caroliniana</i>						* <i>Juncus marginatus</i>					
Casuarina equisetifolia						* <i>Juncus megacephalus</i>					
<i>Centella asiatica</i>						<i>Juncus repens</i>					
<i>Cephalanthus occidentalis</i>						* <i>Juncus scirpoides</i>					
<i>Ceratophyllum demersum</i>						<i>Lachnanthes caroliniana</i>					
<i>Chara</i> sp.						<i>Leersia hexandra</i>					
<i>Cladium jamaicense</i>						Landoltia punctata (Spirodela punctata)					
<i>Cliftonia monophylla</i>						<i>Lemna</i> sp.					
Colocasia esculenta						<i>Leucothoe racemosa (Eubotrys racemosa)</i>					
* <i>Commelina</i>						<i>Limnium spongia</i>					
<i>Crinum americanum</i>						Limnophila sessiliflora					
* <i>Cyperus alternifolius</i> (C. involucratus)						<i>Liquidambar styraciflua</i>					
<i>Cyperus articulatus</i>						* <i>Ludwigia arcuata</i>					
<i>Cyperus haspan</i>						* <i>Ludwigia leptocarpa</i>					
* <i>Cyperus lecontei</i>						* <i>Ludwigia linearis</i>					
* <i>Cyperus polystachyos</i>						* <i>Ludwigia octovalvis</i>					
* <i>Cyperus odoratus</i>						* Ludwigia peruviana					
* <i>Cyperus surinamensis</i>						<i>Ludwigia repens</i>					
<i>Cyrilla racemiflora</i>						* <i>Ludwigia</i>					
<i>Decodon verticillatus</i>						<i>Luziola fluitans (Hydrochloa carolinensis)</i>					
<i>Diodia virginiana</i>						<i>Lyonia lucida</i>					
* <i>Echinochloa crus-galli</i>						<i>Magnolia virginiana</i>					
* <i>Echinochloa muricatum</i>						<i>Mayaca fluviatilis</i>					
<i>Echinochloa walteri</i>						Melaleuca quinquenervia					
<i>Eclipta prostrata</i> (E. alba)						<i>Micranthemum glomeratum</i>					
Egeria densa						<i>Micranthemum umbrosum</i>					
Eichhornia crassipes						<i>Mikania scandens</i>					
* <i>Eleocharis baldwinii</i>						Mimosa pigra					
* <i>Eleocharis</i>						<i>Myrica cerifera</i>					
<i>Eleocharis cellulosa</i>						<i>Ludwigia suff.</i>					
<i>Eleocharis equisetoides</i>						<i>Habenaria</i>					
<i>Eleocharis interstincta</i>											
* <i>Eriocaulon compressum</i>											
* <i>Eriocaulon decangulare</i>											
<i>Eupatorium capillifolium</i>											
* <i>Fuirena squarrosa</i>											
<i>Fuirena scirpoides</i>											
<i>Gordonia lasianthus</i>											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>SL 23-2-1009</u>					Date:						
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
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						*Sesbania					
Nymphoides aquatica						Solidago sp.					✓
Nyssa sylvatica var. biflora						Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.					✓
Panicum hemitomon						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					✓
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 (Sphagneticola trilobata)					✓
*Polygonum hirsutum						Wolffiella spp.					
Pontederia cordata						Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.					✓
*Potamogeton illinoensis						Zizania aquatica					✓
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)											
Proserpinaca pectinata						Utr. olivacea					✓
*Rhexia spp.						Rhynchospora micro-					✓
*Rhynchospora corniculata						lanceolata spp.					✓
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

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

STORET STATION NUMBER:	DATE (M/D/Y) 10/19/21	LAKE NAME North Twin Lake 23-SL-15009		FIELD ID / NAME:
ECO-REGION:	COUNTY:	SAMPLING LOCATION/DESCRIPTION:		LAKE SIZE:
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
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) ☒
	Optimal	Suboptimal		Marginal
Secchi	Secchi >3 m Or VOB	Secchi(m)		Poor
	20 19 18 17 16	3 2.6 2.2 1.8 1.4		1.0 0.9 0.8 0.7 0.6
	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
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6
	5 4 3 2 1	5 4 3 2 1		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
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6
	5 4 3 2 1	5 4 3 2 1		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
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6
	5 4 3 2 1	5 4 3 2 1		5 4 3 2 1
Lakeside Adverse Human Alterations	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
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6
	5 4 3 2 1	5 4 3 2 1		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
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6
	5 4 3 2 1	5 4 3 2 1		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	5 4 3 2 1		5 4 3 2 1
TOTAL SCORE	78	COMMENTS:		
ANALYSIS DATE:	10/19/21	ANALYST:	SIGNATURE:	

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 29.60675
 COUNTY: Pennam STORET #: _____ LONGITUDE: 82.0189
 DATE: 10/19/12 TIME: 845 SAMPLING AGENCY: _____
 SITE NAME: Northtown Lake WBID: _____
 FIELD ID/NAME: 23-SL-15009 LAKE SIZE: _____ RQ: _____

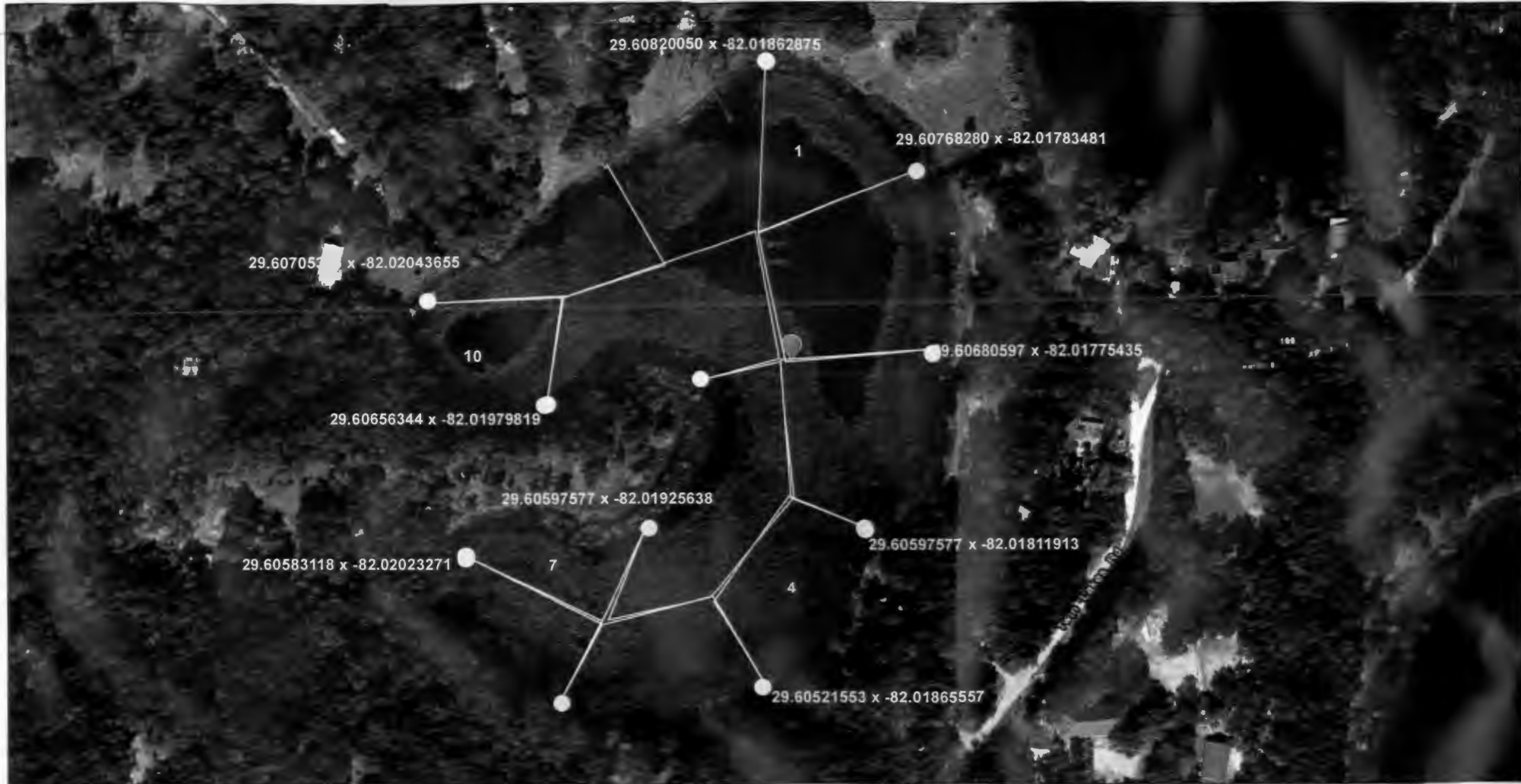
WATERSHED / LAKESIDE FEATURES

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:						
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>8</u>		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 <u>8</u> 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>10</u>		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected) 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		
BUFFER ZONE <u>10</u>		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		

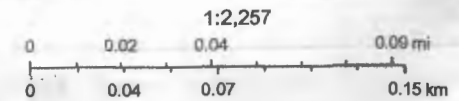
WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: Nutrient Sample Taken? ☐ Yes ☒ No Preserved? ☐ Yes ☐ 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>0.3</u> <u>24.0</u> <u>5.32</u> <u>0.9</u> <u>10.8</u> <u>24.0</u> <u>0.01</u> Mid-Depth: <u>2.0</u> <u>23.7</u> <u>5.29</u> <u>0.63</u> <u>7.6</u> <u>23.8</u> <u>0.01</u> Bottom: <u>3.2</u> <u>23.6</u> <u>5.32</u> <u>0.54</u> <u>6.3</u> <u>24.9</u> <u>0.01</u>							Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____						
Meter ID: _____							Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly 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>0.9</u> Total Station Depth (M) <u>3.7</u> VOB ☐						
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 :							Additional Notes: No rrs data Rgavel - leaves yahoo.com						
SAMPLING TEAM: <u>Sam / B Davis</u>							SIGNATURE: <u>[Signature]</u>						
DATE: <u>10/19/12</u>													

23-SL-15009
north twin lake



October 7, 2021



Maxar, Microsoft, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Esri, HERE, iPC