

PELICAN RIVER

watershed district

2024 Monitoring Work Plan

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Pelican River Watershed District

2024 Monitoring Workplan






				Water Quality	Ecological Integrity	
EQuIS ID	Lake Name	LWQMA	Monitoring	Water Chemistry/Clarity	Vegetation Survey	Shoreline Survey
03-0387-02-206	Big Floyd Lake	Floyd/Campbell	Major	X		
03-0387-01-207	North Floyd Lake	Floyd/Campbell	Major	X		
03-0386-00-201	Little Floyd Lake	Floyd/Campbell	Major	X		
03-0381-00-204	Big Detroit Lake	Detroit/Rice	Major	X	X	
03-0381-00-207	Little Detroit Lake	Detroit/Rice	Major	X	X	
03-0383-00-201	Long Lake	Long	Major	X		X
03-0382-00-202	Saint Clair Lake	Sallie/Melissa	Major	X		
03-0359-00-201	Lake Sallie	Sallie/Melissa	Major	X		
03-0475-00-202	Lake Melissa	Sallie/Melissa	Major	X		
03-0366-00-201	Abbey	Small Lakes	Minor	X		
03-0374-01-201	Johnson	Small Lakes	Minor	X		
03-0374-02-201	Reeves	Small Lakes	Minor	X		
03-0363-00-202	Curfman	Detroit/Rice	Minor		X	
03-0358-00-201	Fox Lake	Fox/Munson	Minor	X		
03-0377-00-201	Pearl	Pearl/Loon	Minor			X
03-0371-00-201	Munson	Fox/Munson	Minor	X		X

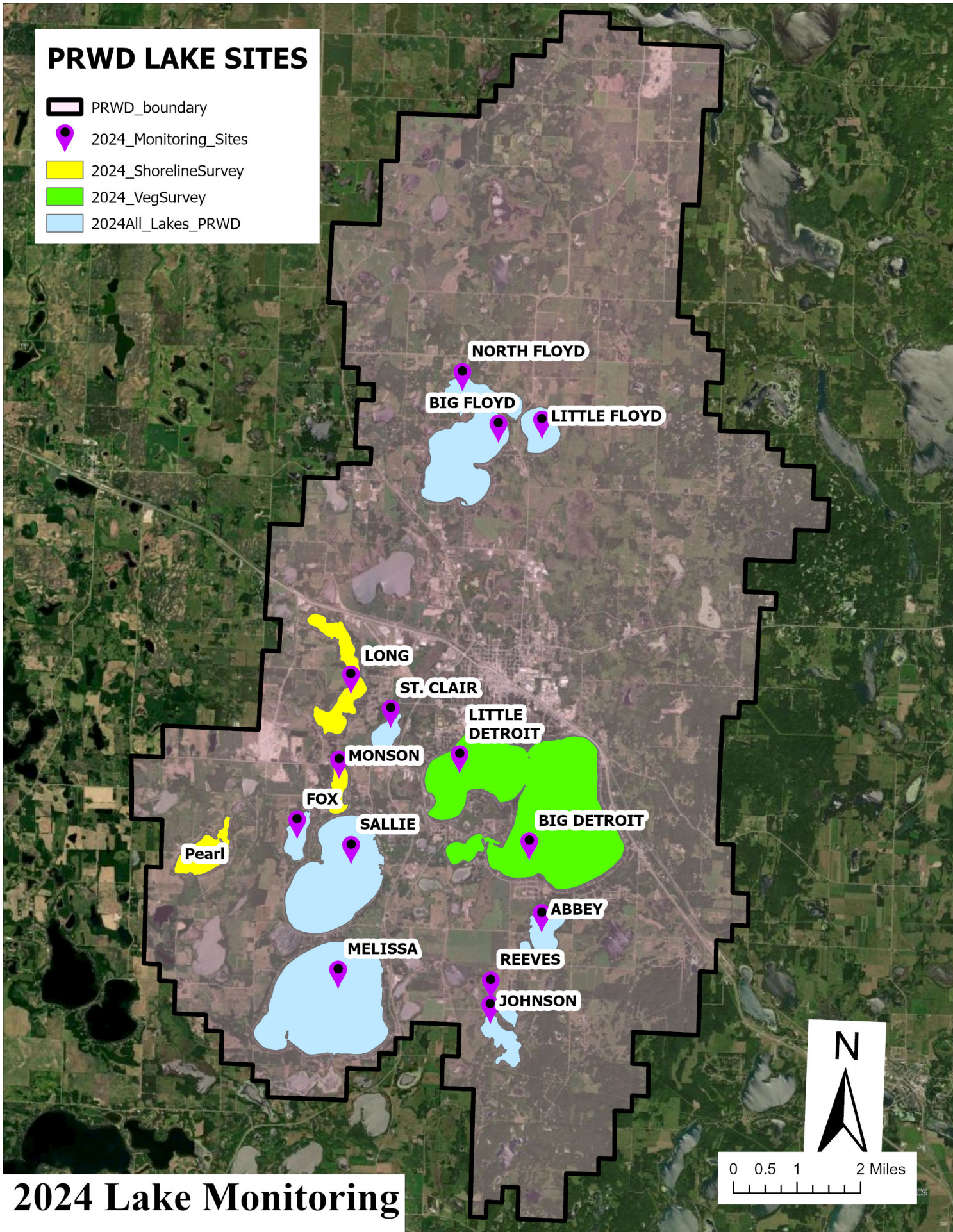
**Dependent on access. Aerial imagery suggest lake may be inaccessible. If staff can not reasonably access, an alternate will be use.*

Notes:

- **Standard Operating Procedures** – All lakes will be sampled per the 10-year Monitoring Plan adopted in 2020.
- **Water Quality** – Water Quality samples will be collected a minimum of 8 times, from June to September on sampled lakes. twice a month for 4 months.
- **Water Quantity** – Lake gages will be maintained on Little Floyd, Detroit, Sallie, Melissa Lakes and St. Clair Lakes.
- **Ecological Integrity** – Vegetation Surveys will occur in late July to early August. Shoreline Surveys will occur as opportunity presents. Zooplankton sampling - after discussion with the MN DNR Area Fisheries Supervisor, due to the backlog of work they need to catch up on we will not be doing sampling this year.
- **Staffing** – 2 Seasonal Interns will be hired from May to August. These interns will be tasked with collecting most of the data that is in this work plan.
- **Equipment** – Updated monitoring equipment (boat, spot lock and aqua-view). All staff will be adequately trained with the field equipment.

PRWD LAKE SITES

-  PRWD_boundary
-  2024_Monitoring_Sites
-  2024_ShorelineSurvey
-  2024_VegSurvey
-  2024All_Lakes_PRWD



2024 Lake Monitoring

2024 Monitoring Workplan

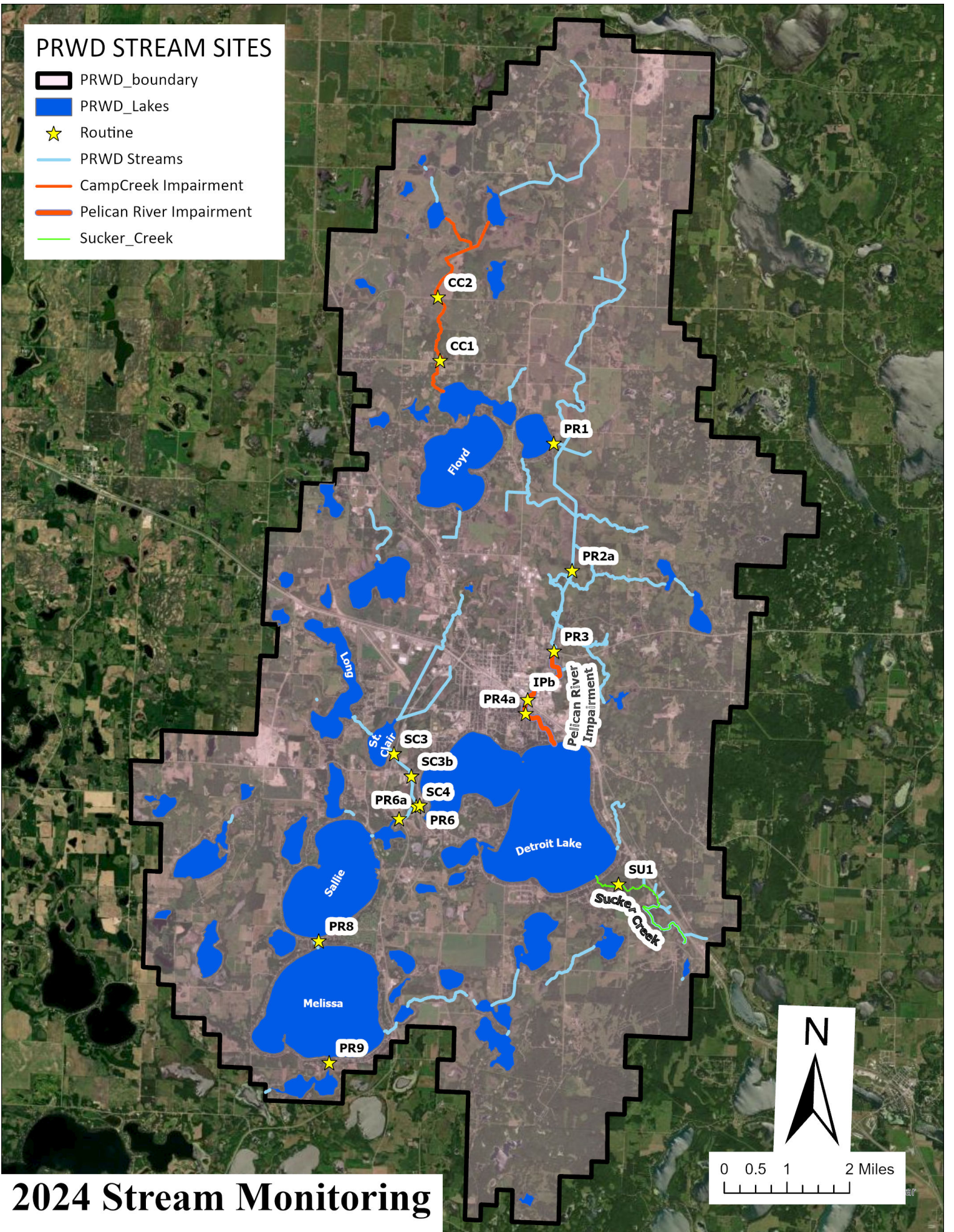
Site	EquIS Location ID	Description	Weekly Visit			Bi-Weekly	Event/Storm		NOTES
			Staff Gauge	Chemical	E. Coli	Flow	Chemical	E. Coli	
CC2**	S002-164	Campbell Creek at 230th St	X	X		X	X		
CC1**	S002-163	Campbell Creek at CR-149	X	X		X	X		
PR1	S002-167	Little Floyd Outlet on Little Floyd Rd	X	X					
PR2a**	S016-453	Pelican River at Rice Lake Outlet (Rice Lake Structure)	X	X		X	X		
PR3	S002-169	Pelican River at State Highway 34	X	X	X	X	X	X	
PR4	S002-170	Pelican River at Corbett Rd						X	
PR4a**	S002-176	Pelican River at Railroad Trestle	X	X	X	X	X	X	
PR6**	S002-172	Pelican River at Detroit Lake Outlet	X	X		X	X		
PR6a	S009-364	Pelican River at US Highway 59	X	X					
PR8	S002-174	Pelican River at Lake Sallie Outlet	X	X					
PR9	S002-175	Pelican River at Lake Melissa Outlet	X	X					
SC3**	S002-158	Ditch 14 at Lake St. Clair Outlet	X	X		X	X		
SC3b	S005-247	Ditch 14 Between Lake St. Clair and Pelican River	X	X					
SC4	S002-160	Ditch 14 at Outlet to Pelican River	X	X		X	X		
SU1**	S002-162	Sucker Creek at Outlet to Detroit Lake	X	X		X	X		
Ipb	S015-007	PELICAN R (IPb INDUSTRIAL PARK DOWNSTREAM) AT RANDOLPH RD AT DETROIT LAKES, MN.	X		X		X	X	
PUB	PD00033	Public Water Access Storm Water Outflow (Roosevelt Ave)						X	
ESW	PS00177	Stormwater pond East of Cheryl Ave.					X	X	
PR3a	S016-006	8th Street North East of IP North Side of road					X	X	
PR5	S002-171	Pelican River at North Shore Drive (South side)						X	
PAV-E	S002-186	Pavilion East-picnic area- Storm water outflow					X	X	
PAV-W	S002-187	Pavilion West-Washington Ave. outflow					X	X	
** HOBO									
TP, OP	2 Bottles								
TP, OP, TSS	3 Bottles	IF THERE IS NO FLOW DO NOT SAMPLE AT THAT SITE							
Ecoli	1 Bottle								

Notes:

- **HOBO's** – HOBO units will be placed by the water Resource Coordinator as soon as streams open up in the spring. If possible, they will remain in place just prior to freeze up in the fall. While HOBO units are deployed, we will take bi-weekly samples at those sites.
- **Water Quality** – All Samples will be taken per the 10-year Monitoring Plan adopted in 2020 at the locations noted in the chart above.
- **Ecological Integrity** – *Campbell Creek* – District staff will continue to cooperate with the MN DNR staff to perform surveys of the channel erosion on Campbell Creek.
- **Water Quantity** – Staff will be taking extensive flow readings to improve rating curves at key locations (Minimum of 12 readings). Staff gages will be maintained at all noted sites. Staff gages will be inspected and cleaned prior to the start of the field season. Gage zero will be surveyed at the beginning and end of the season.
- **Staffing** – 2 Seasonal Interns will be hired from May to August. These interns will be tasked with collecting most of the data that is in this work plan. Water Resource Coordinator will be responsible for any other data collection.
- **Equipment** – A new staff gauge will be installed at the PR3 (the bottom section has rusted away). All staff will be adequately trained with the field equipment.
- **Special Study** – Systematic testing of E. coli in the Pelican River will be performed to locate the source of the E. coli. Staff will use their best judgment to take more samples at key locations when *E.coli loads are high*.

PRWD STREAM SITES

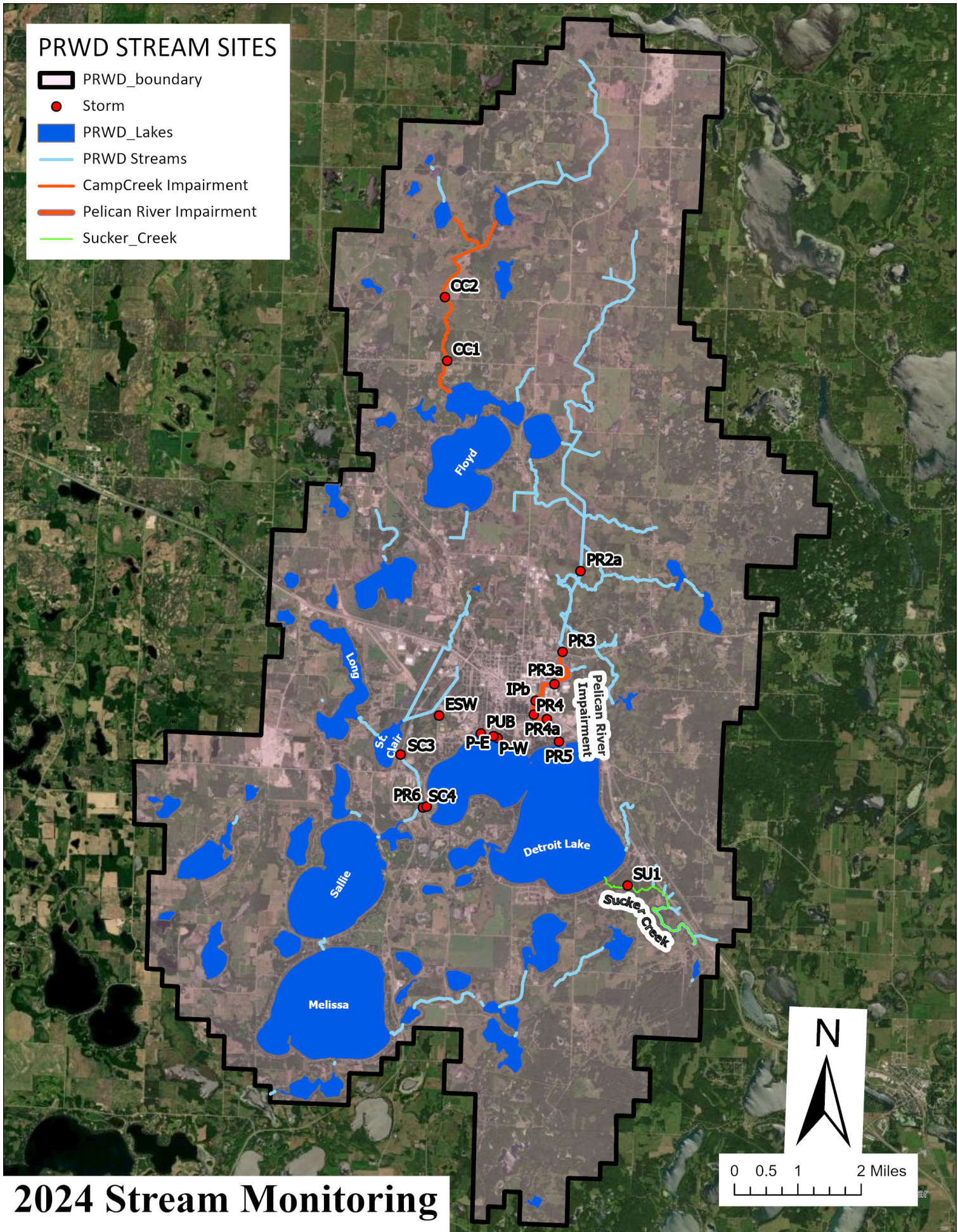
- PRWD_boundary
- PRWD_Lakes
- Routine
- PRWD Streams
- CampCreek Impairment
- Pelican River Impairment
- Sucker_Creek



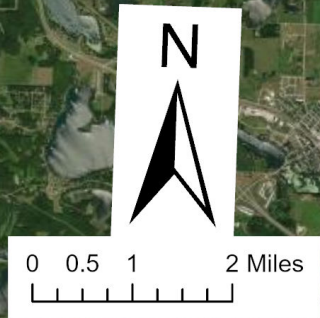
2024 Stream Monitoring

PRWD STREAM SITES

- PRWD_boundary
- Storm
- PRWD_Lakes
- PRWD Streams
- CampCreek Impairment
- Pelican River Impairment
- Sucker_Creek



2024 Stream Monitoring



Routine Sampling Lakes (8 Samples/ 14 Lakes) & Streams (20 weeks/ 14 Streams)				
Metric	# of Sites	# of Samples	RMBEL Cost	Total Budget
Total Phosphorous	24	392	\$ 24.00	\$ 9,408.00
Orthophosphate	24	392	\$ 29.00	\$ 11,368.00
Chlorophyll-a	14	112	\$ 30.00	\$ 3,360.00
Total Suspended Solids	5	100	\$ 23.00	\$ 2,300.00
E-Coli	3	30	\$ 30.00	\$ 900.00
			Total	\$ 27,336.00
Storm Event Steam Sampling - budget for 5 events				
Metric	# of Sites	# of Samples	RMBEL Cost	Total Budget
Total Phosphorous	14	70	\$ 24.00	\$ 1,680.00
Orthophosphate	14	70	\$ 29.00	\$ 2,030.00
Total Suspended Solids	5	25	\$ 23.00	\$ 575.00
E-Coli	10	50	\$ 30.00	\$ 1,500.00
			Total	\$ 5,785.00
			Total Sampling	
			Expected Cost:	\$ 33,121.00
Administrative				
Line Item				
Seasonal Staff*				\$ 23,000.00
Water Resource Coordinator (1/2x)				\$ 50,300.00
Vehicle and Maintenance/Milage (Fuel)				\$ 2,000.00
Equipment Purchase/Repair				\$ 5,000.00
Monitoring Supplies				\$ 3,000.00
Insurance/Training/ telecommunications				\$2,000
Capital Outlay* No purchases planned in 2024				
			Total Budgeted:	\$ 85,300.00
GRAND TOTAL for 2024				\$ 118,421.00
*May 2024 seasonal Staff wage increase				