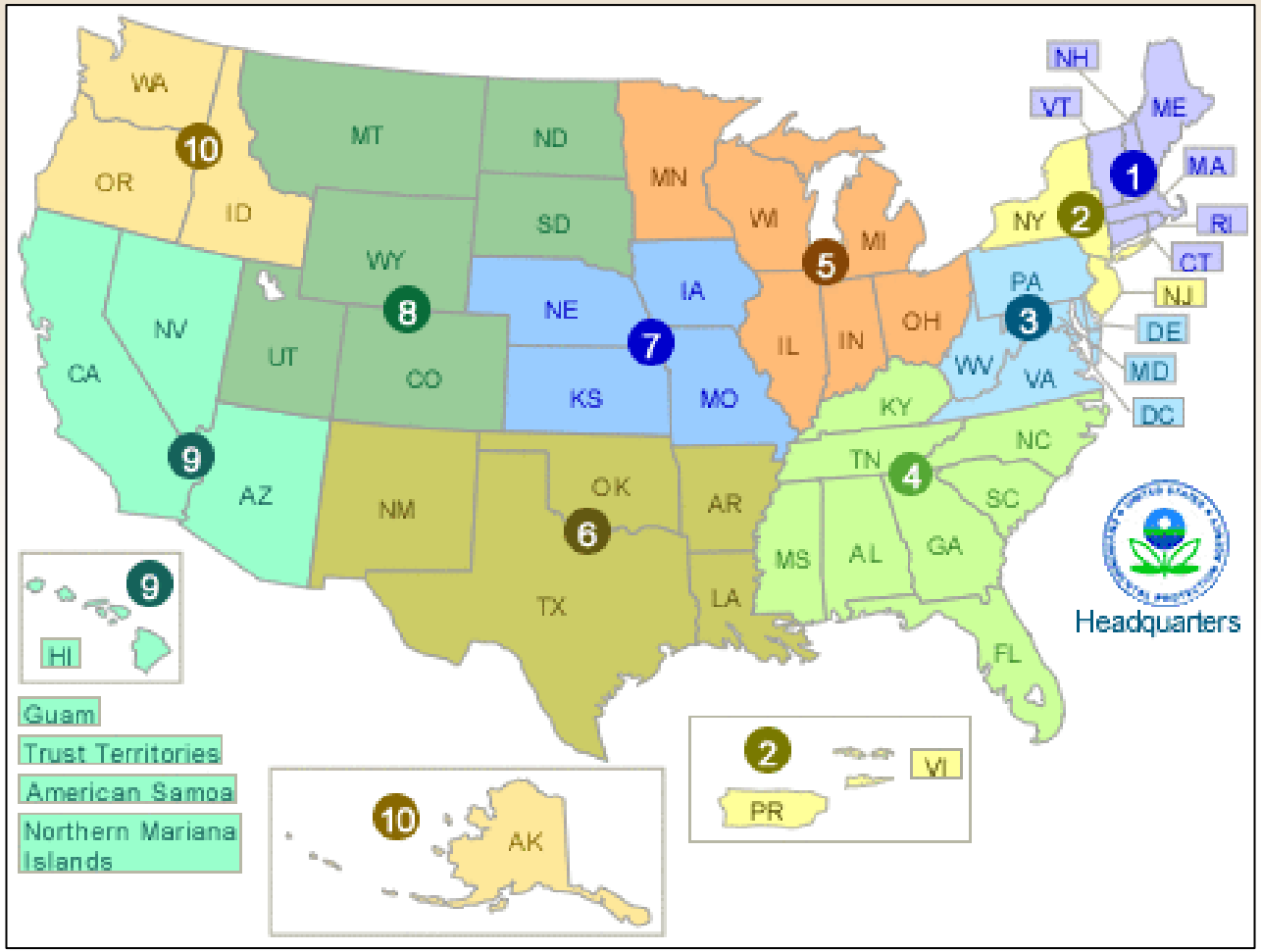
Implementing On-the-Ground Nonpoint Source Projects

Webinar #5
May 25, 2023
2 – 4pm Eastern

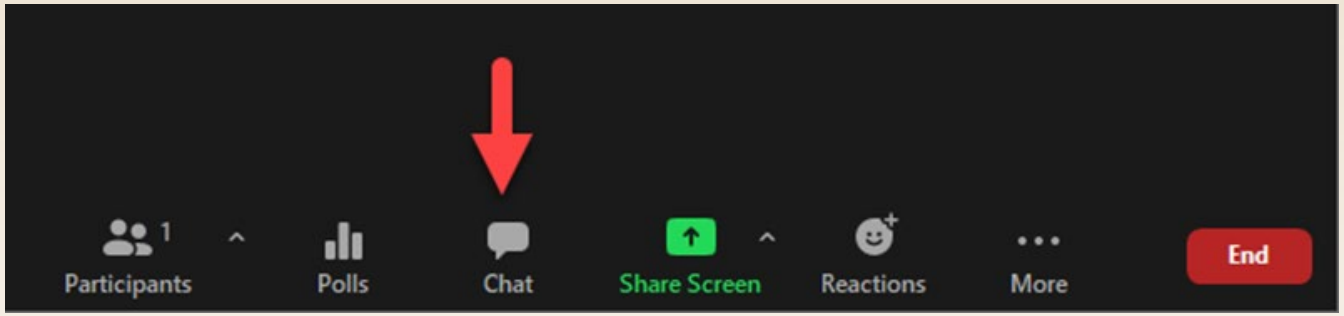
Poll #1: What EPA Region are you in?



Poll #2:
How long have you been working in Tribal water quality programs?

- Less than one year
- 1-4 years
- 5-10 years
- Over 10 years
- Since Hector was a pup/ since the last ice age/ a very long time

Training Webinar Logistics



- **To ask a question:** Please type your question in the Chat box. We will take questions after presentations.
- **Technical difficulties:** If you are having technical difficulties, please send a message through the Chat to Gabby Vinyard, ERG (host) or email gabby.vinyard@erg.com
- **Evaluation:** Please complete the survey evaluation at the end of the training.

Upcoming Tribal NPS Training Webinars

6. **Addressing Agricultural NPS Pollution: Key Partners & Strategies**. Thurs, June 22.

*All webinars will be 2-4pm Eastern

Zoom registration links also available at https://www.epa.gov/nps/tribal-nps-resources-and-training

Webinar Agenda

- Greetings and Introductions
- Overview of the 319 Competitive Grant Program
- Tribal Presentations
- Participant Discussion
- Summary and Next Training Session

Poll #3: Have you applied for a competitive 319 grant?

- Yes
- No
- Don’t know
- What’s a competitive 319 grant?

Poll #4: Have you received competitive 319 funding?

- Yes
- No
- Have not applied for it.

BMPs & Management Measures Structural & Nonstructural

Janette Marsh

US EPA Region 5 NPS Program

Tribal 319 Coordinator

Know Your Water Quality Goals

WQ protection where high-quality waters exist

WQ improvement to meet goals or standards

Intention of Clean Water Act 319 – provide fixes

Program Documents

- *Assessment Report*
- ID impacted waters
- ID categories of NPS
- ***ID process for selecting BMPs***
- ID existing programs to address NPS

- *Management Plan*
- Schedule - milestones
- ***ID BMPs to be used***
- ID programs needed to implement BMPs
- Sources of assistance – technical and financial
- Review of relevant programs/projects for consistency
- Utilizing local and private experts
- Develop on a watershed basis

Do you see an opportunity for BMPs?

How would you go about choosing the BMPs?

Who would do the implementation?

What climate assumptions would you make?

Definitions

- **What are *Management Measures*?**

- **Economically achievable** actions to **control the addition of pollutants** to our waters, which provide the greatest degree of pollutant reduction through the application of the best available NPS controls

Definitions

What are *Best Management Practices*? (BMPs)

- Either **physical or cultural controls** working individually or as a group, **appropriate to the source, location, and area climate for the pollutant to be controlled**. These are a basis for estimating the effectiveness, costs, and economic impacts of achieving the management measures

How to Select BMPs and MMs

Select Management Measures by category of pollution (agriculture, forestry)

Select BMPs by the source of pollution, site conditions and climate factors (rain gardens, native plants, fencing)

See the electronic field office technical guide

Field Office Technical Guide (FOTG) | Natural Resources Conservation Service (usda.gov)

Types of BMPs

- **Structural**
  - *Moving earth*
  - *Planting things*
  - *Construction*
    - *erosion controls*
    - *culvert*
    - *replacement*
- **Non-structural**
  - *Surveys*
  - *Institutional changes*
  - *Ordinance*
  - *development*
  - *Residue management*

Non-Structural

Chapter 48

Water Resources Ordinance

Kanekalunyuhs Olihwake

the matters of the different kinds of waters

48.3-7. "Non-point Source" means a land management activity which contributes to runoff,seepage or percolation which adversely affects or threatens the quality of waters of the Reservation and which is not a point source as defined in Section 3-10.

48.6-5. Oneida Environmental Fund established. The Oneida Environmental Fund is hereby established. Any and all monies collected pursuant to this Ordinance shall be deposited in the Oneida Environmental Fund. This fund shall be used by the Tribe to defray the expense of administering this Ordinance, and to fund pilot projects and provide pollution control and prevention grants to persons at the discretion of the Department, and subject to the availability of funds.

Adopted - BC-5-08-96-B

Structural BMPs

What do you want to achieve

- **Control pollutants at the source**

  Stormwater infiltration

- **Provide treatment for special wastes**

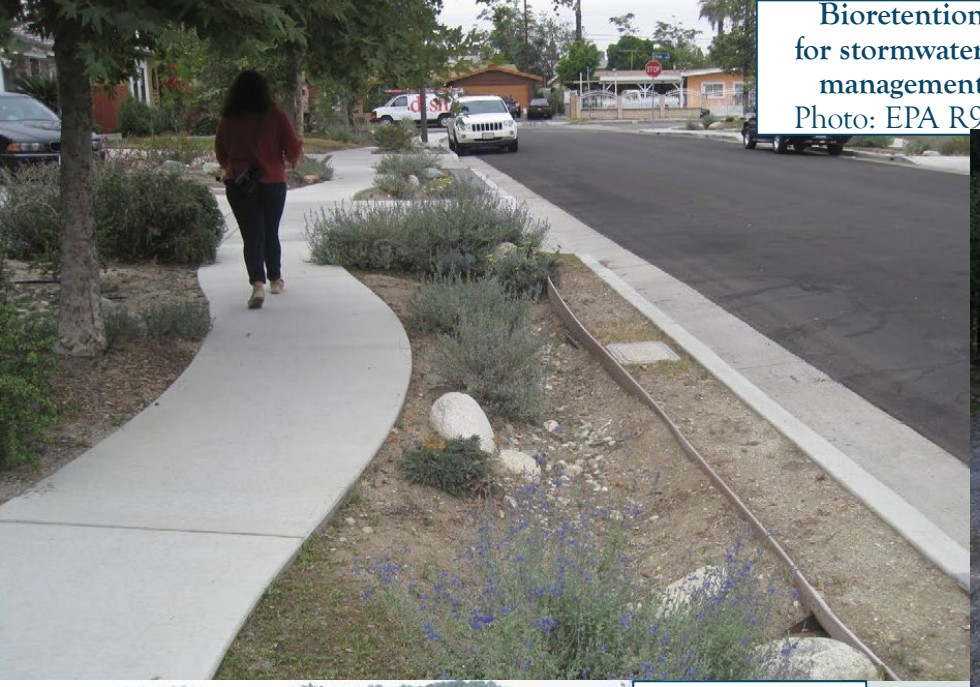
  Manure management/containment

- **Prevent stream and river bank erosion**

  Preserve/replace vegetation

- **Redesign developed areas**

  Keep runoff on site



Bioretention for stormwater management
Photo: EPA R9

Water Bars to slow runoff from forestry roads
Photo: Penobscot Nation

Erosion Control
Photo: EPA R9

Exclusion Fencing
Photo: EPA R9

Culvert sized for climate change
Photo: EPA R1

Dune Grass Planting
Photo: EPA R1

Saxon Harbor

discharge to Lake Superior near Wisconsin – Michigan border

really big culvert about 10-12’

Before and After

Burnsville Raingardens

Designed by: Barr Engineering

Gravel Pit

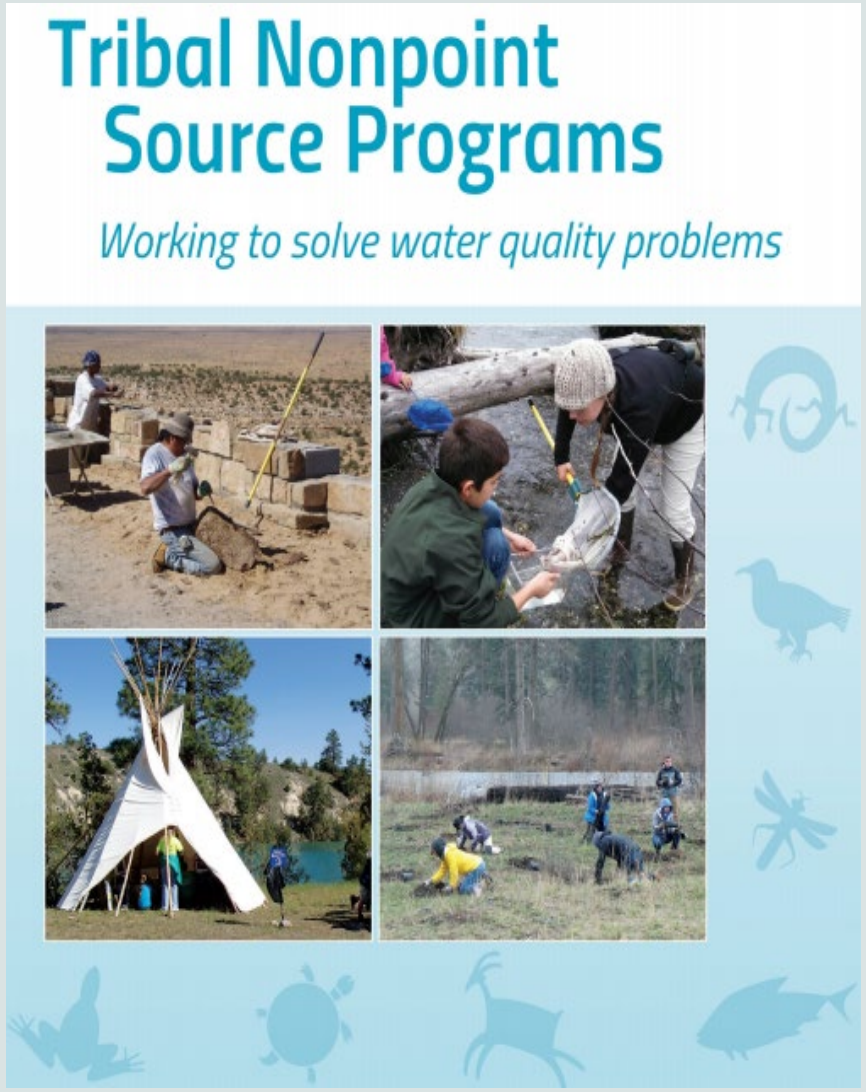
What it takes to get a BMP implemented

- **Technical information**

  what is the problem you are trying to solve

- **Partnerships – look at what is being used in your area**

- **Clear understanding of the outcome desired**



- 211 tribes currently eligible to receive Section 319 grants – and more coming!

CWA 319 Tribal Competitive Grant Program

MARGOT BUCKELEW

EPA HQ

BUCKELEW.MARGOT@EPA.GOV

What is this program?

The national NPS Program puts out an annual request for applications to help support Tribal implementation work.

Application must include on-the-ground implementation of BMP.

Up to 25% of Funds can also be used for activities such as (but not limited to):

- Watershed plan development
- Outreach / education
- Staff training

Who can apply?

All Tribes eligible to receive FY2024 319 grants.

- See https://www.Epa.Gov/NPS/current-Tribal-ss319-grant-information for list.

Tribes may apply for both base & competitive 319 funds in the same year.

Application Requirements:

-Project narrative and workplan (15-page limit)

-Standard EPA grant forms (SF-424, Key Contacts, indirect cost rate)

-Supporting materials

On average, over the last five years of competitive 319 grant cycles…

$2.7M available each year

$125K project cap (increased in FY23)

39 applications/year

30 applications selected for award/year

Successful applicants most frequently addressed NPS from agriculture, hydro/habitat modification, and forestry. (note: EPA does not give scoring preference to certain types)

What kind of work is EPA looking to fund?

Projects that…

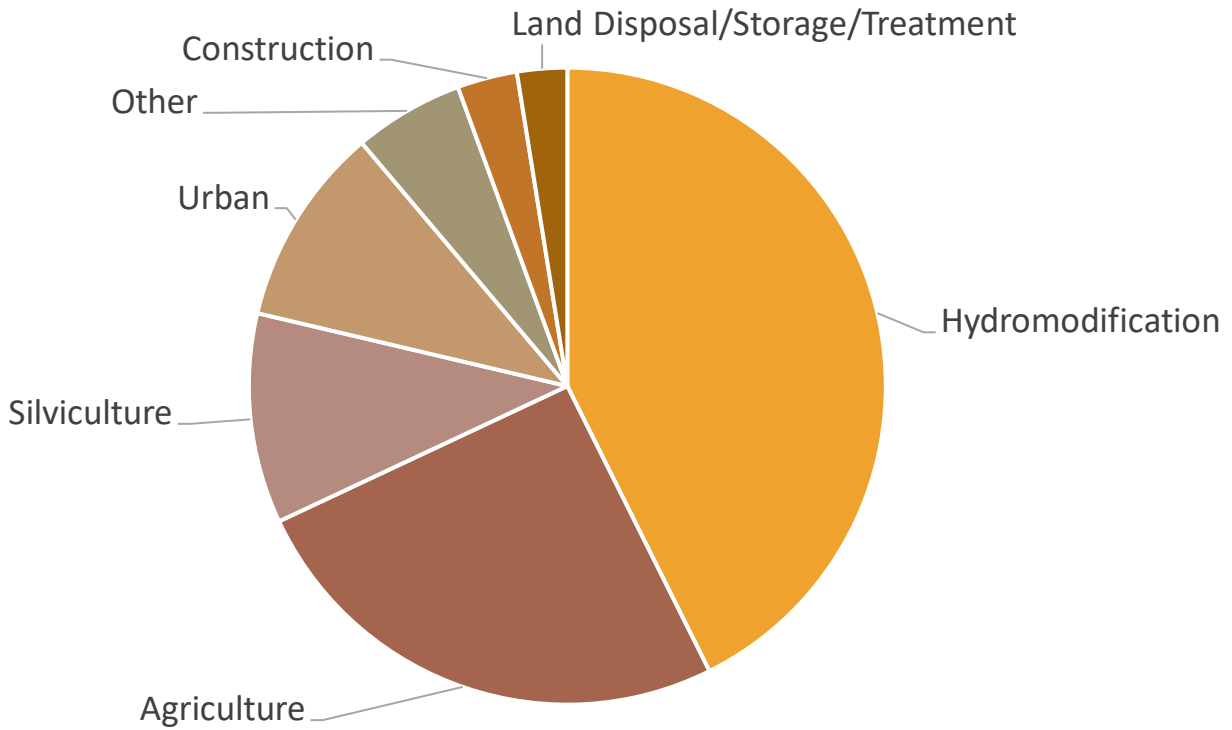
Will directly improve/protect water quality by implementing on-the-ground BMPs.

Are strategically targeted in the watershed to address a NPS pollution problem/threat.

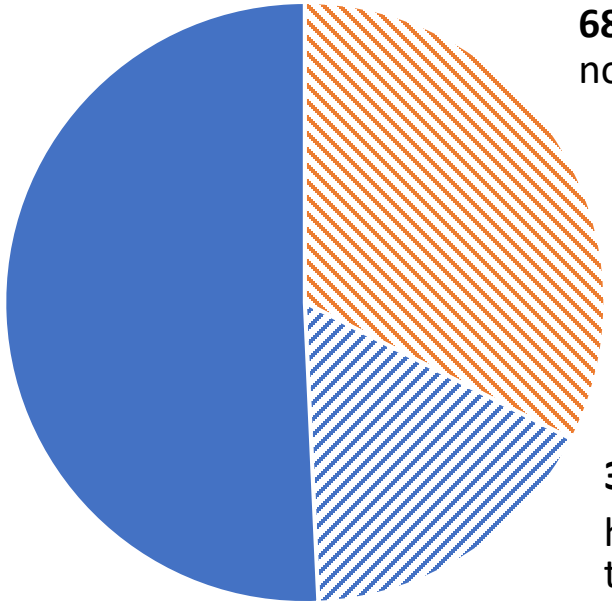
Demonstrate a “readiness to proceed.”

- Reasonable and achievable budget and project schedule.
- Project team with clearly defined roles/responsibilities.

NPS pollution sources addressed by competitive 319 projects awarded in recent years



Tribal 319 competitive grants, 2005-2021



106 Tribes have received ≥1 competitive grant

68 Tribes have not yet applied

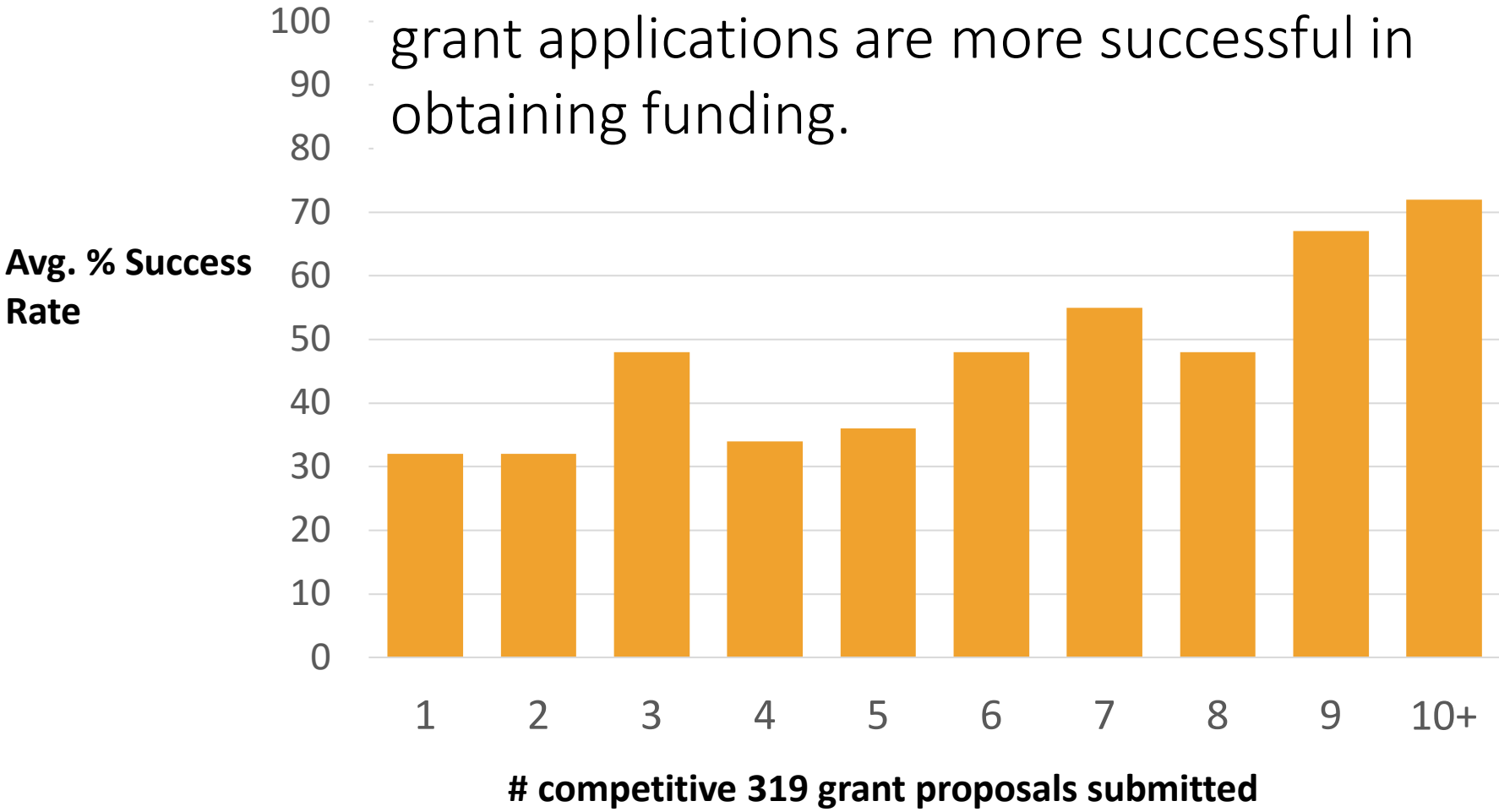
35 Tribes have applied ≥1 time, but are not yet successful

Increasing Equity in the Tribal 319 Program:

- Targeting Tribes/Nations that have not received a competitive grant in the last 5 years
- Up to 5 projects are set aside

- Goal of increasing applicant pool and success rate.

Tribes that submit more competitive 319 grant applications are more successful in obtaining funding.



FY24 RFA

RFA will be released in the fall.

Outreach:

- Webinar(s)
- Email
- TCOTS
- FAQ of changes on our website

Questions?

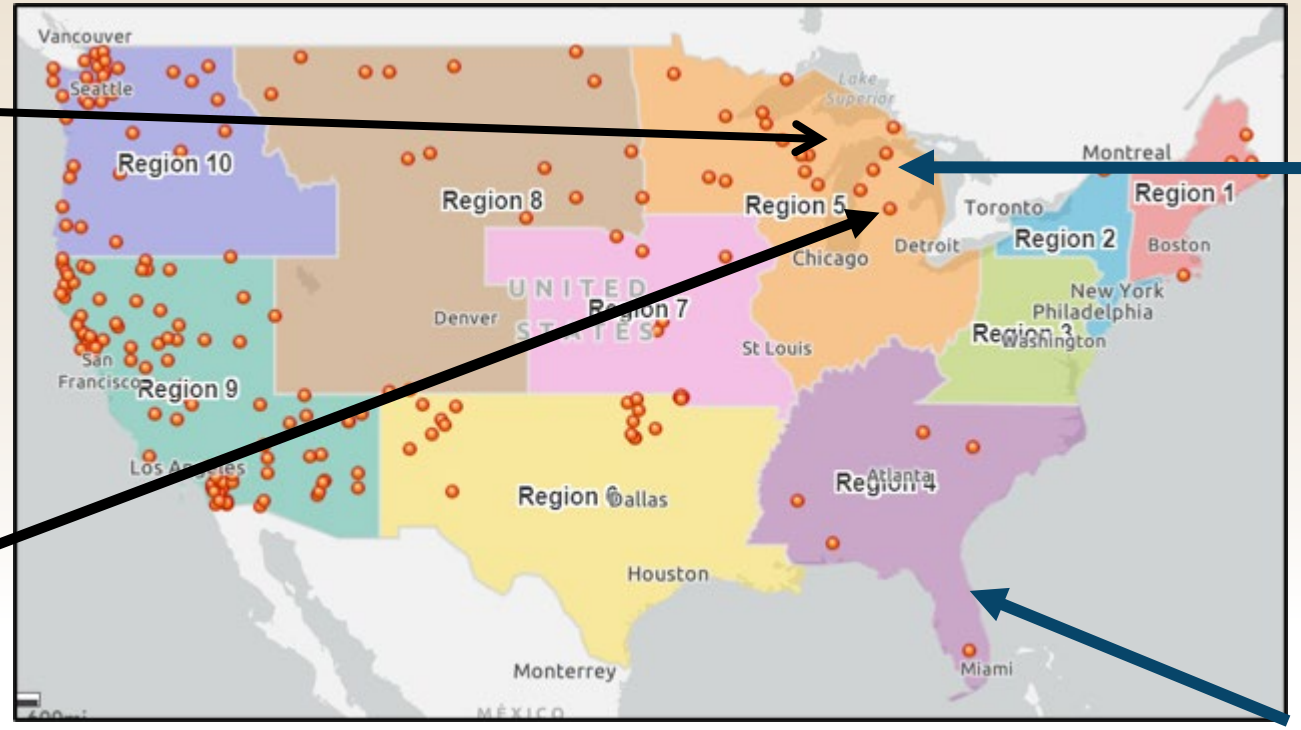
Margot Buckelew

Buckelew.margot@epa.gov

Tribal Presentations

Ryan Siggelkow, Forest County Potawatomi

Alex Wieten, Gun Lake Tribe



Samuel J. Day Little Traverse Bay Bands-Odawa

Amy Castaneda Miccosukee Tribe of Florida

Miccosukee Tribe of Indians of Florida

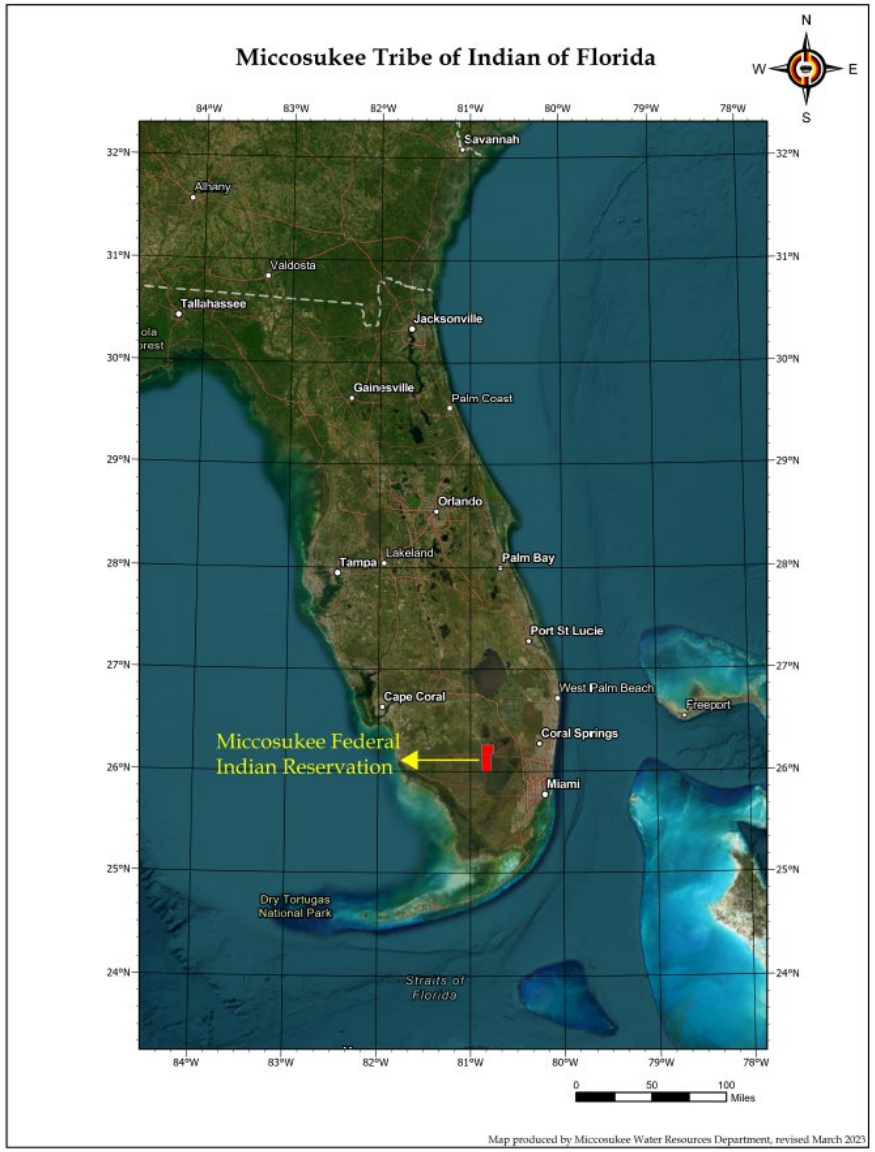
Nonpoint Source Project at Miccosukee Ranch

EPA Webinar Series: Implementing On-the-Ground NPS Projects

May 25, 2023

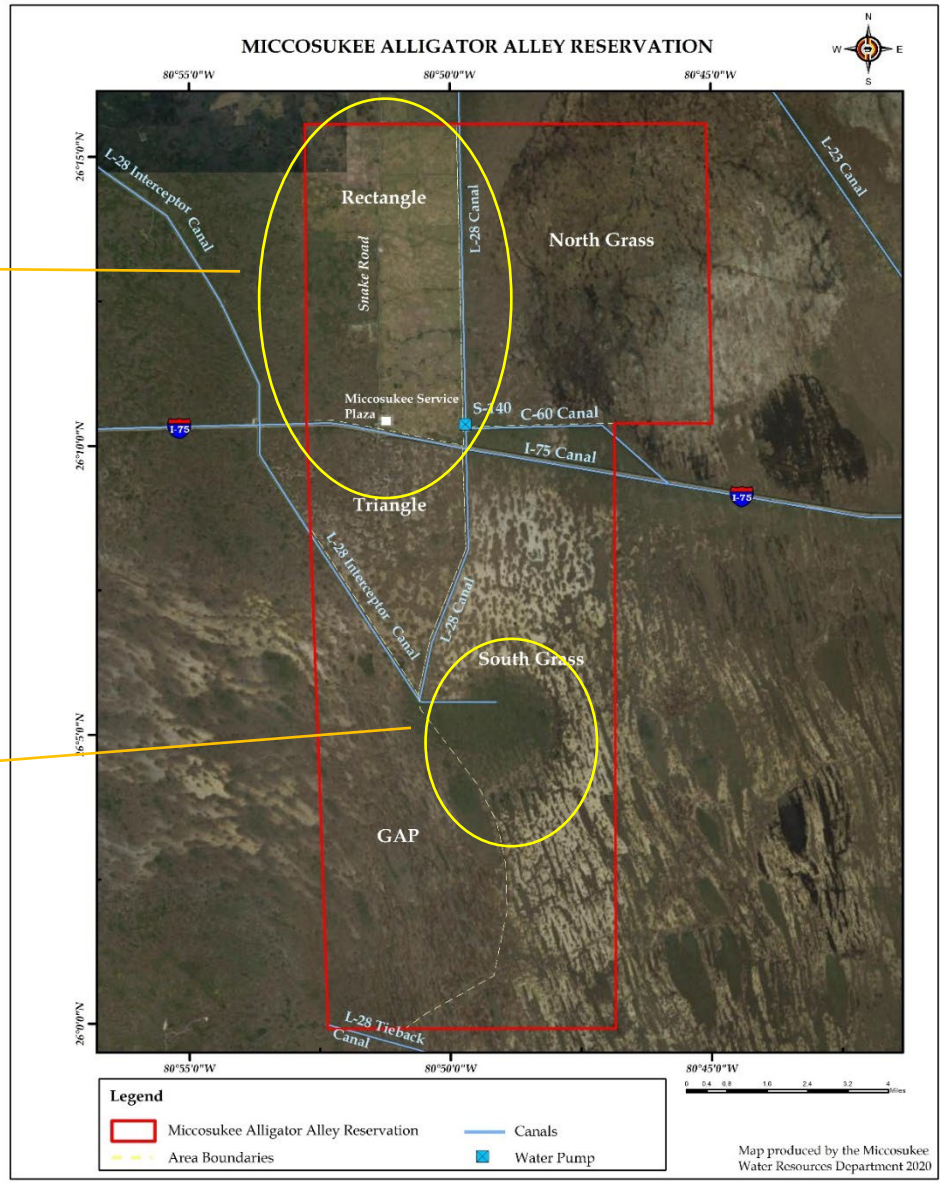
Amy Castaneda
AmyC@MiccosukeeTribe.com

Where are we?

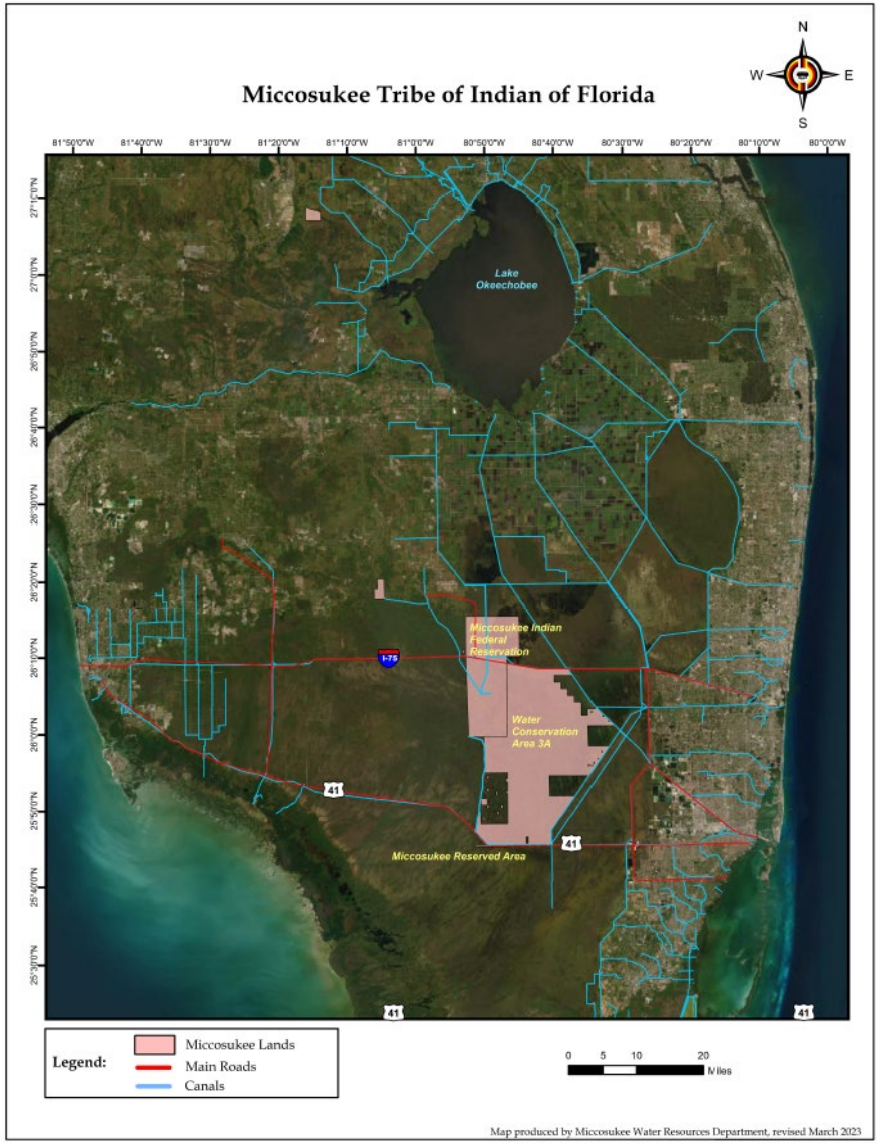


NPS activities in Rectangle, over 12,000 acres

"The Plume" of invasive vegetation over 4,000 acres



Why focus on this area?



- Tribe has WQS of 10 ppb for Total Phosphorus
- Water flows south from Ag fields through:
  - The Tribal lands
  - State lands
  - Everglades National Park
- The WQ in this area averages 80-100 ppb

Issues:

Cattle in the water

Excrement near the water

Erosion and nutrient rich sediment transfer

So…What did we do?

- Alternate water source

Solar pump before trough installation

Trough installation with two troughs per solar pump for multiple fields

So…What did we do?

- Invasive species removal

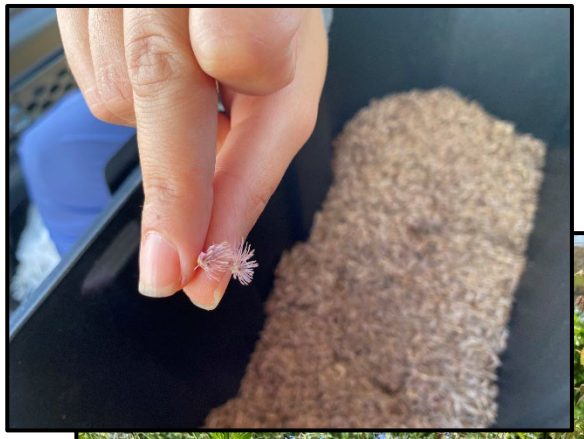
Brazilian pepper:
Schinus terebinthifolia

So…What did we do?

- Cattle exclusion fence

So…What did we do?

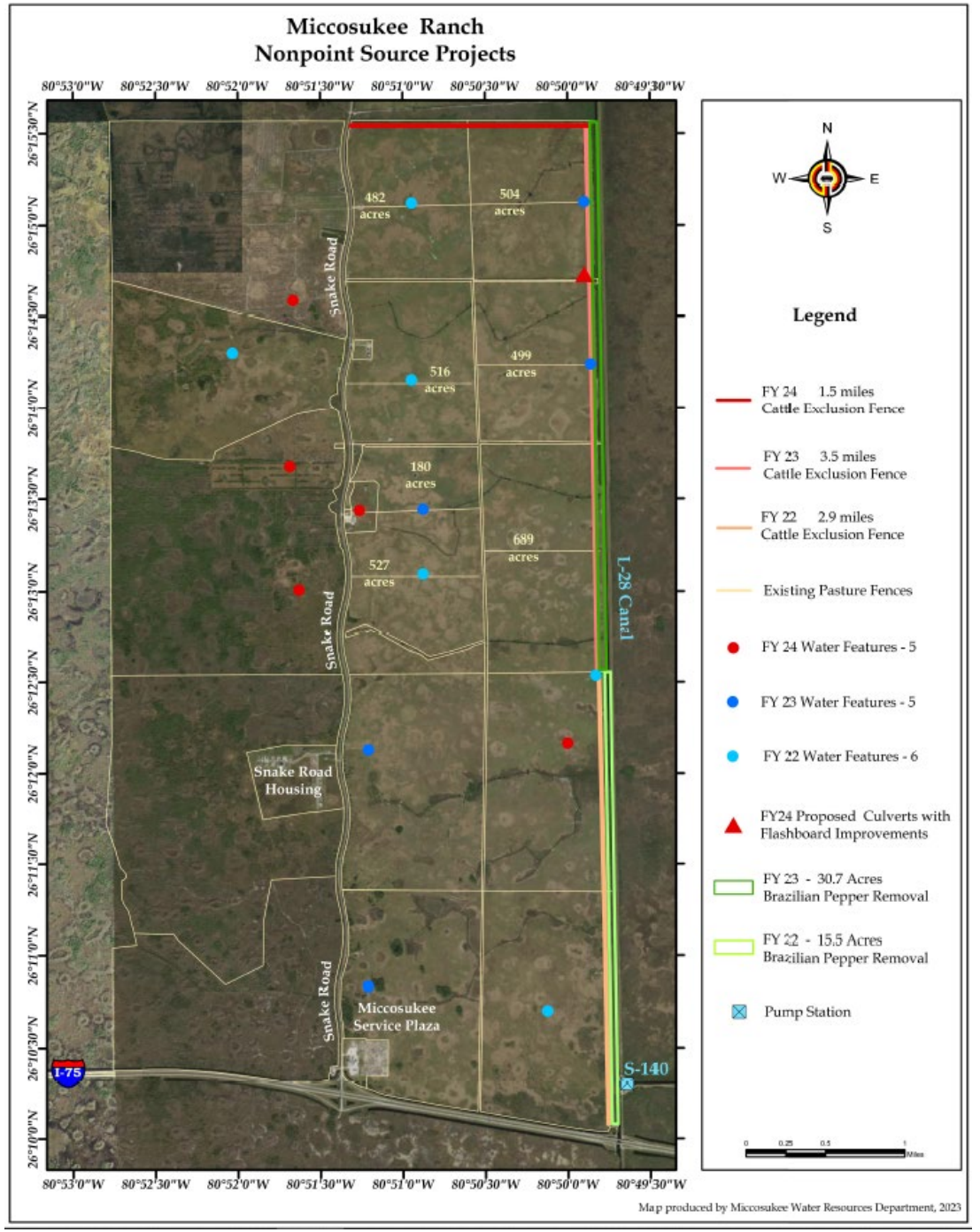
- Native seed dispersal




Solar water pump
Cattle exclusion fence and gate
Brazilian pepper removed & native seeds dispersed
Brazilian pepper removed & native seeds dispersed
Troughs

The things you find

Where are you going?



Gun Lake Tribe Nonpoint Source Program

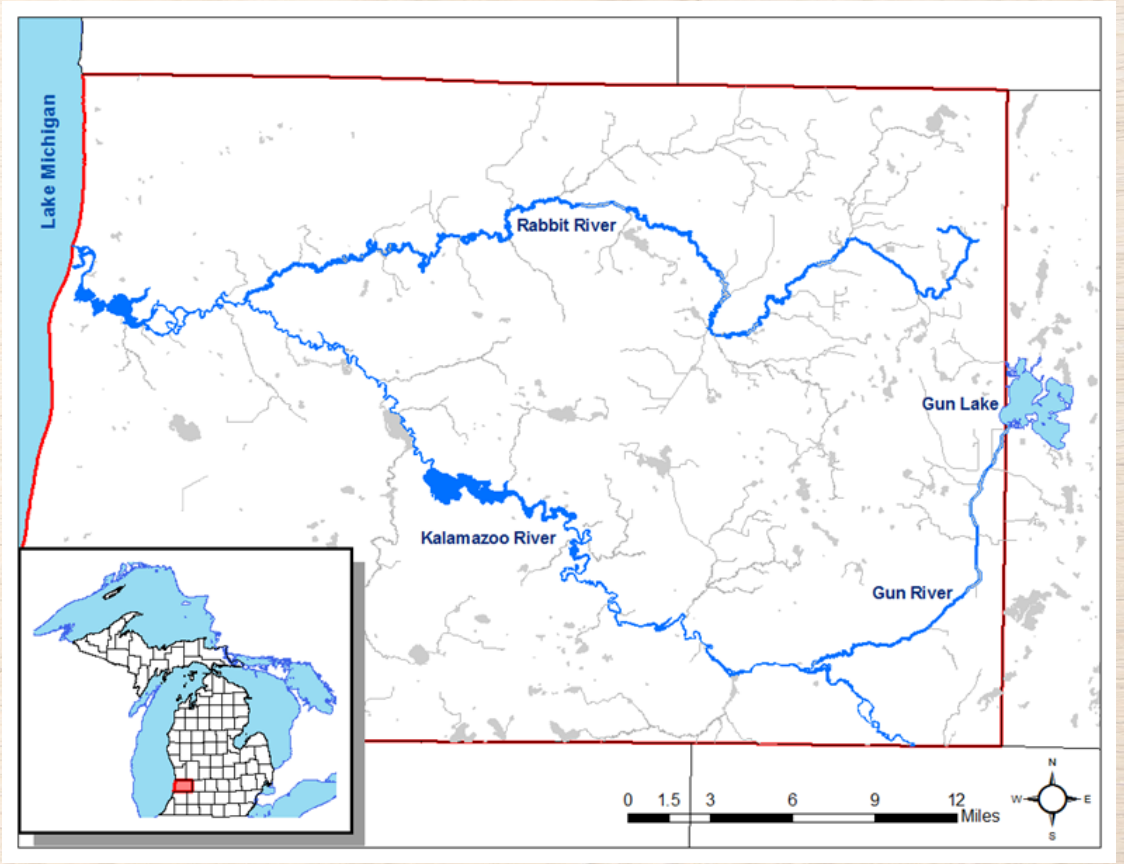
Alex Wieten

Water Resources Specialist

GUN LAKE TRIBE
ENVIRONMENTAL DEPARTMENT

Gun Lake Tribe

- Recognized August 1999
- Located in SW Michigan
- All land holdings within Allegan County
- All lands within the Kalamazoo River Watershed



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GLT Lands

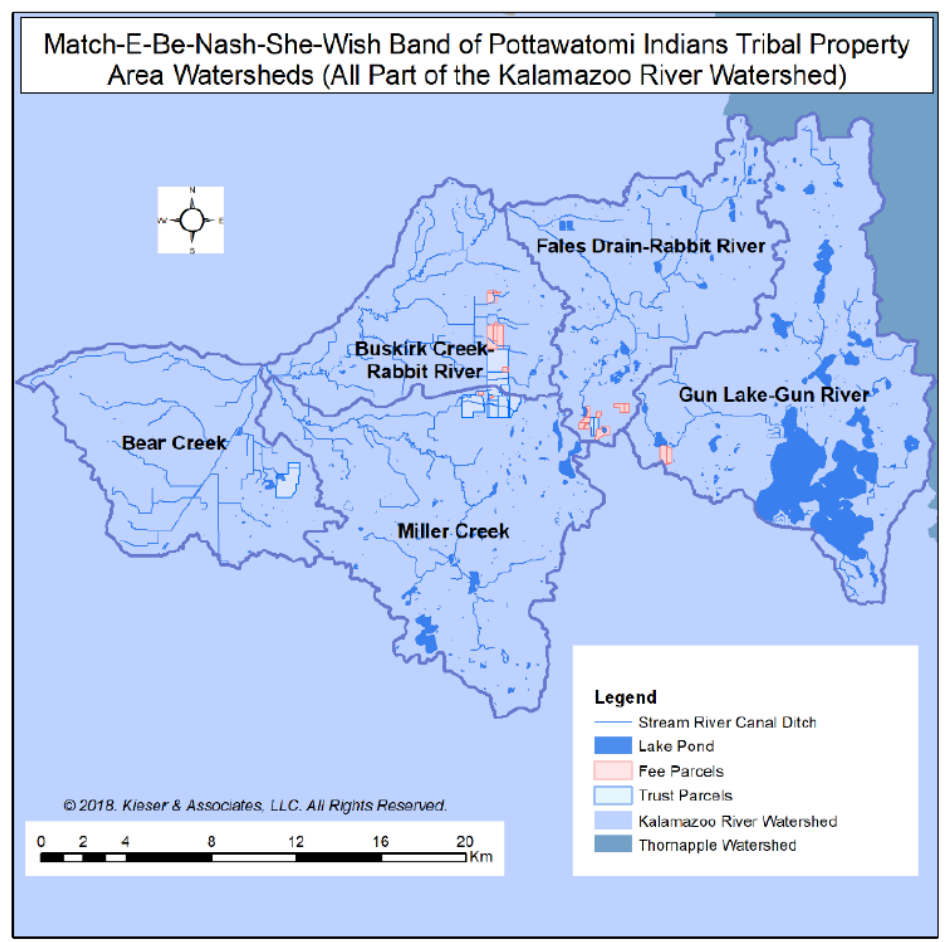


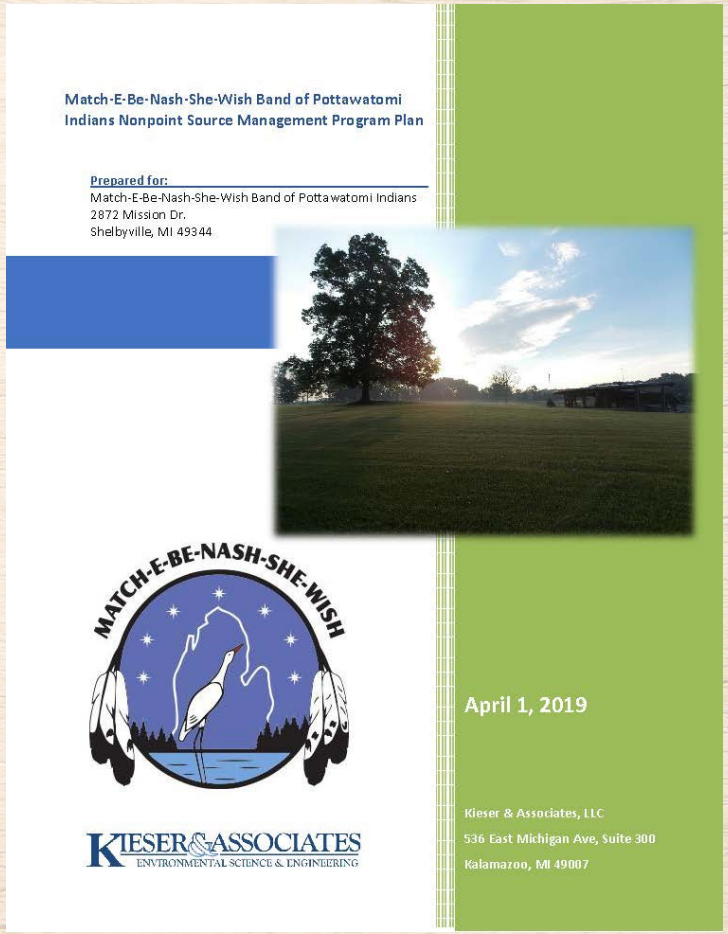
Table 1: Summary atlas of MBPI water resources

Resource Description	Trust Lands	Fee Lands	All Gun Lake Tribe Lands
Land Surface Area (ac)	604.4	558.5	1162.9
Rivers/Streams (km)	1.6	2.8	4.3
Lakes/Reservoirs/Ponds (#)	3.0	5.0	8.0
Lakes/Reservoirs/Ponds (ac)	20.3	56.4	76.7
Wetlands (ac)	62.5	43.4	105.9

GUN LAKE TRIBE
ENVIRONMENTAL DEPARTMENT

GLT 319 Program

- Began work- spring 2018
- Kieser and Associates
- Program approval- June 2020
- First projects- fall 2020



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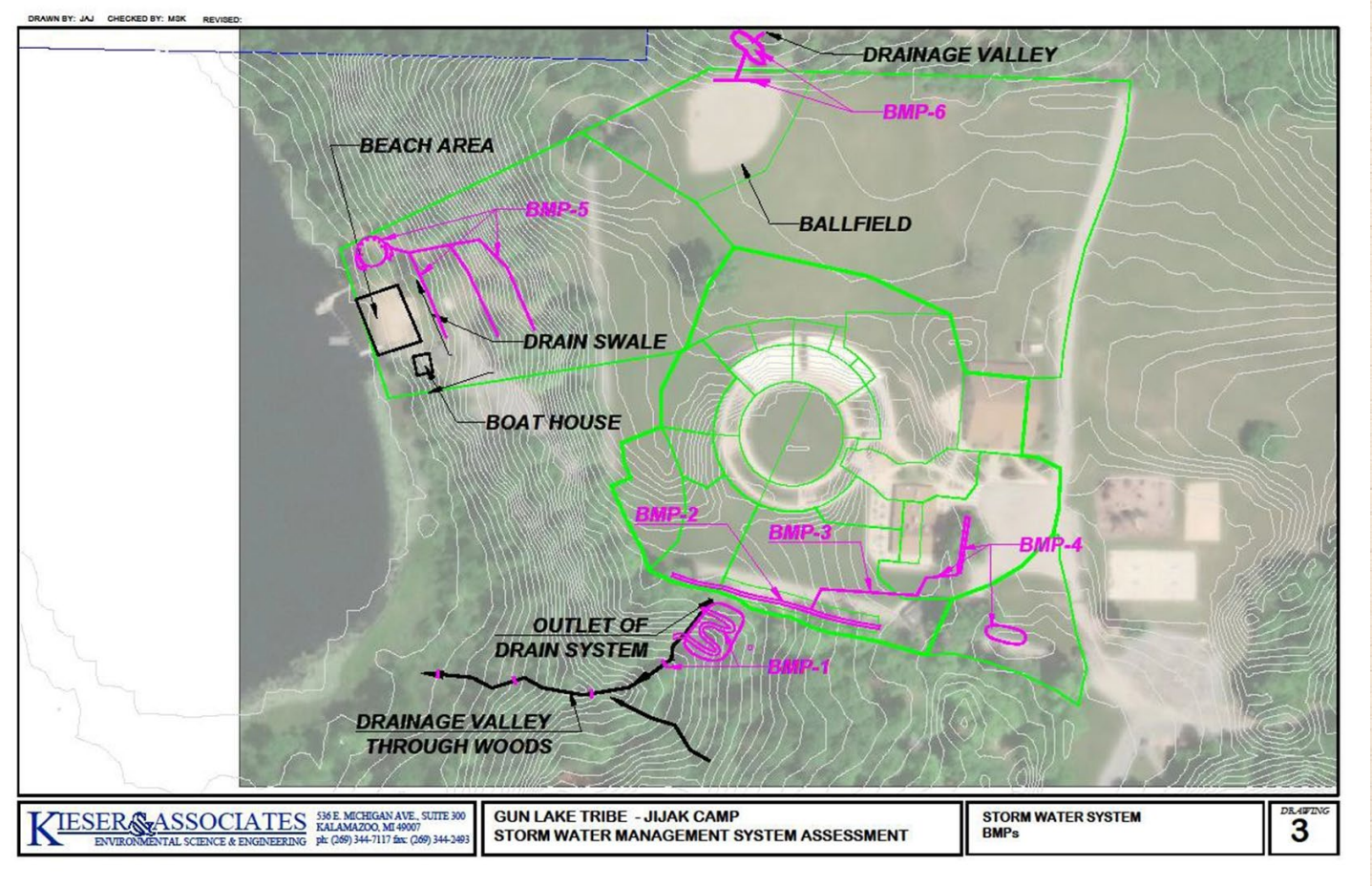
ENVIRONMENTAL DEPARTMENT

Jijak Property Stormwater Retrofits



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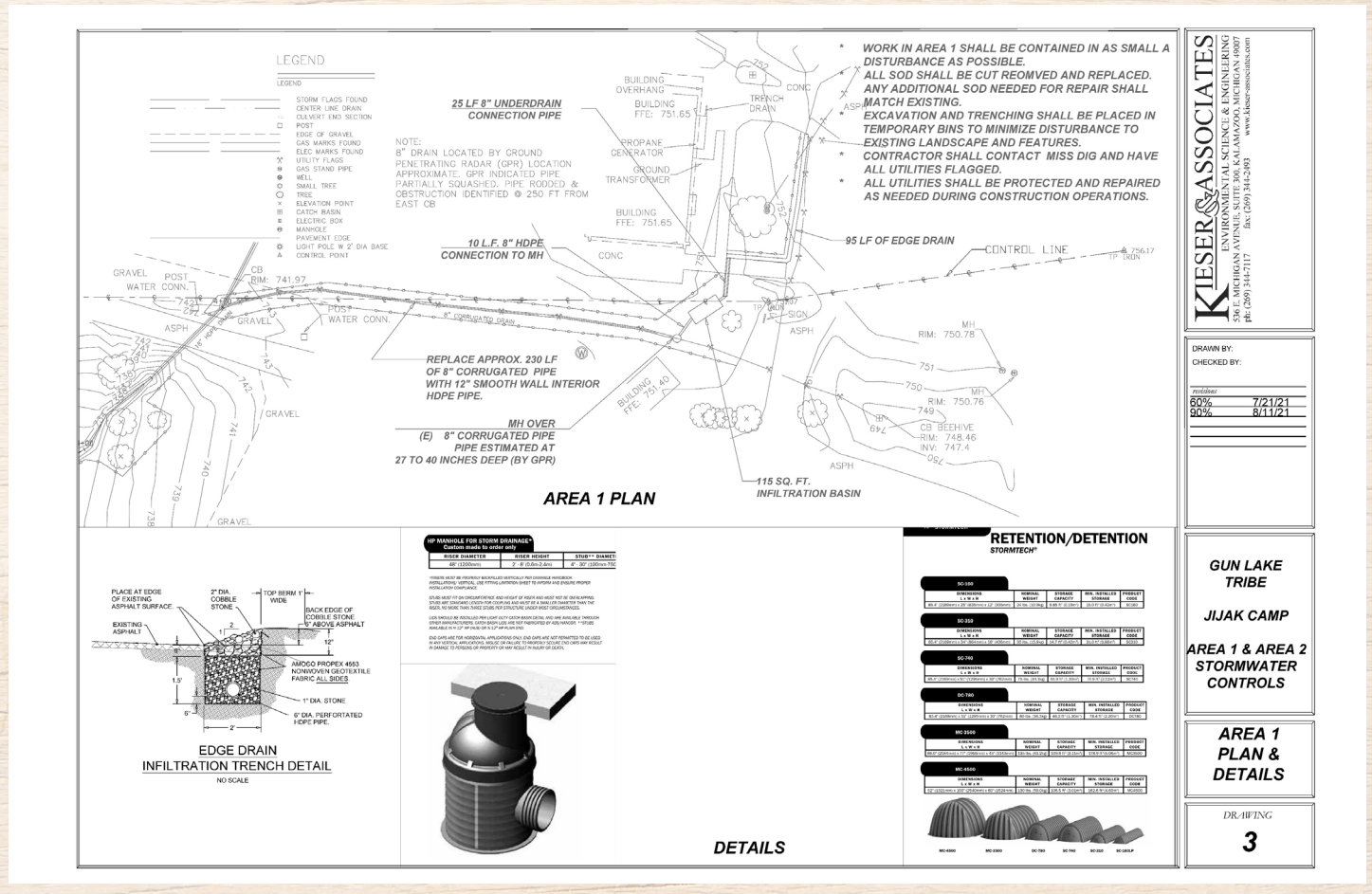
ENVIRONMENTAL DEPARTMENT

Phase 1



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GUN LAKE TRIBE
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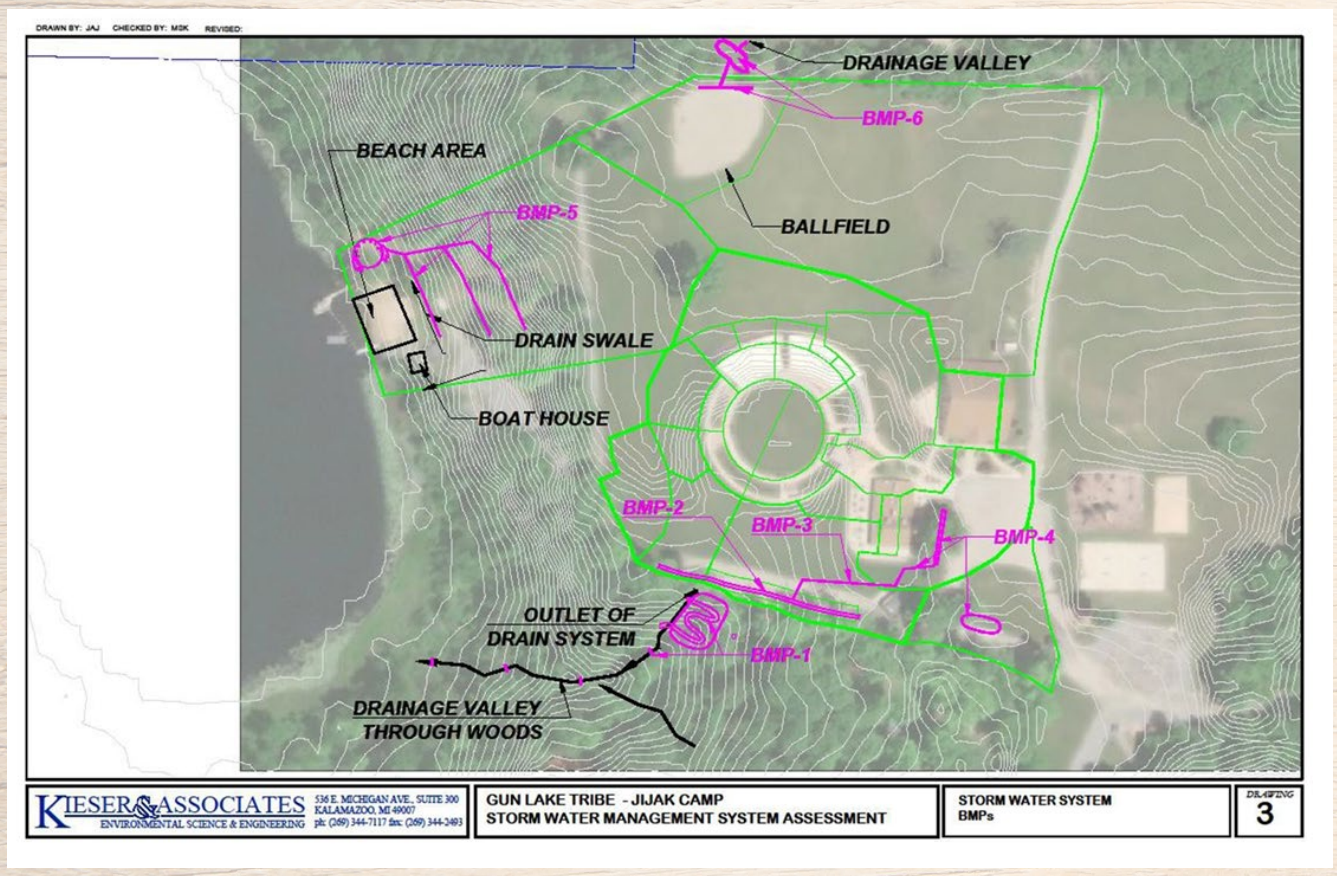
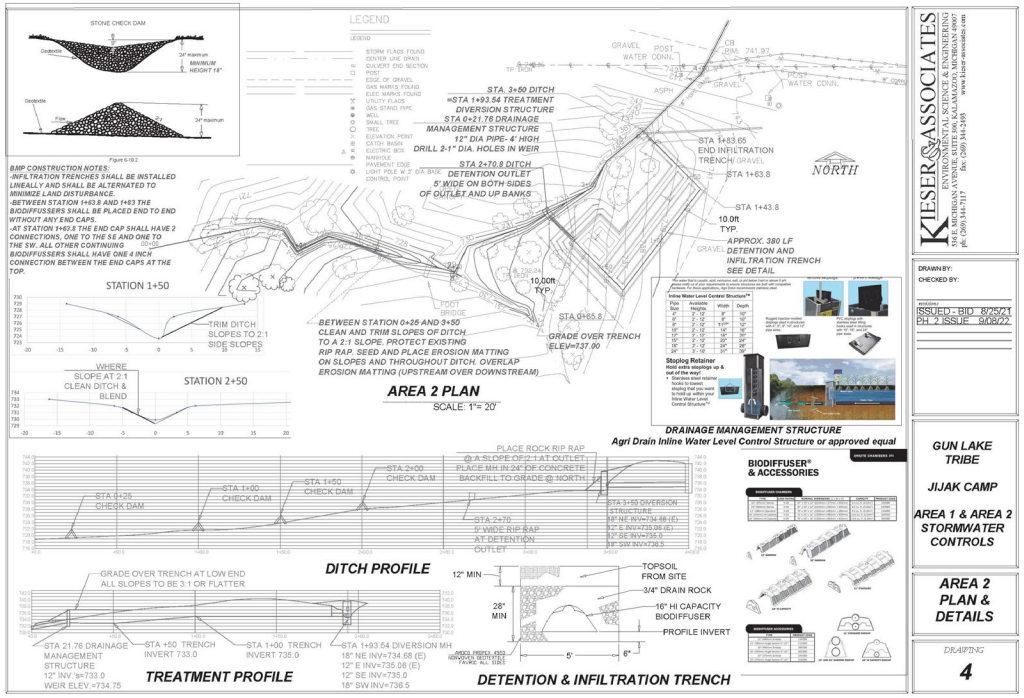
Phase 2





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Jijak Property Stormwater Retrofits

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Agricultural Lease Modifications

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ENVIRONMENTAL DEPARTMENT

Agricultural Lease Modifications

- Nutrient management plans required
- 100-foot buffer on all wetlands and waterways
  - 34 acres planted, 15 acres planned this fall
- No restricted use pesticides (RUPs)

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Agricultural Field Restoration

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Agricultural Field Restoration

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Prairie Restoration

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Stormwater Site Development Standards

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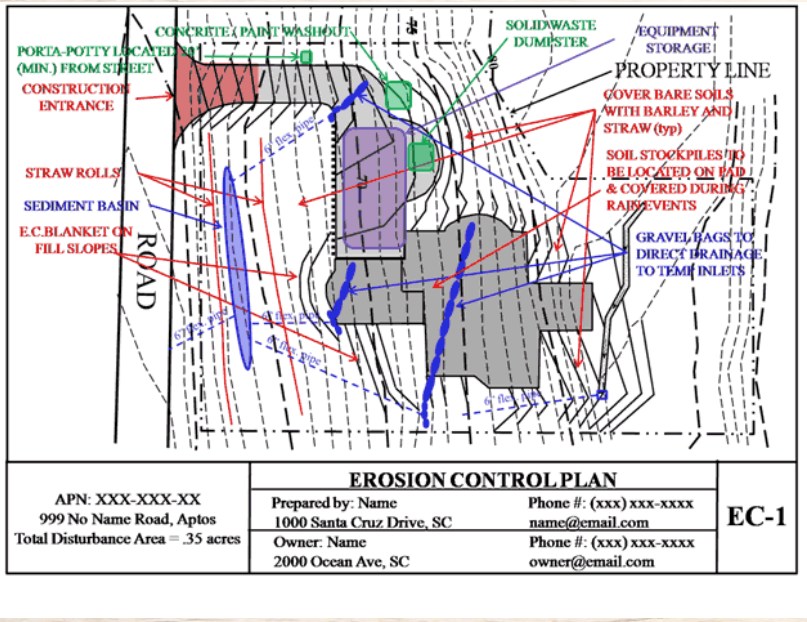
Soil Erosion and Sediment Control



1. Design and construct terrain features to minimize the erosion potential of the exposed site based on the soil type, time of year, proximity to waterways, duration of exposure, length and steepness of the slope and the anticipated volume and intensity of runoff.
2. Minimize the surface area of unstabilized soils left unprotected and vulnerable to runoff and wind at any one time.
3. Minimize the amount of time that unstabilized soil areas are exposed to erosive forces.
4. Provide control measures that will effectively control erosion of, and sediment from, exposed areas, and stabilize disturbed areas, except for actively cultivated agricultural fields, either temporarily or permanently as soon as possible.
5. Avoid concentrating runoff. When concentrated runoff cannot be avoided, runoff velocities shall be reduced to non-erosive velocities.
6. Eroded sediments will be trapped on-site with temporary and permanent barriers, basins or other sediment retention devices while allowing for the controlled discharge of runoff at non-erosive velocities.
7. Implement a continuous inspection and maintenance program.

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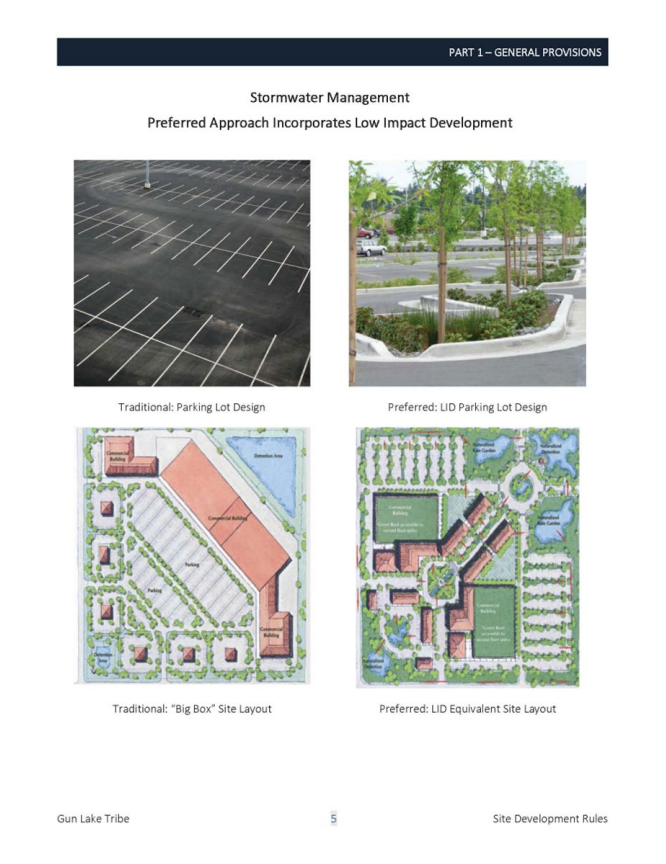
ENVIRONMENTAL DEPARTMENT

Stormwater Site Development Standards



These programs were developed to set standards for the management of stormwater to be applied throughout Tribal territory and meet the following objectives:

1. Ensure stormwater drainage systems are adequate to address stormwater management needs within a proposed development and protect the drainage, property and water rights outside of the proposed development.
2. Protect the Tribe's natural resources for future generations.
3. Reduce flood damage due to development.
4. Minimize the degradation of existing watercourses.
5. Prevent an increase in nonpoint source pollution.
6. Maintain site hydrology to avoid detrimental changes in the balance between stormwater runoff, groundwater recharge and evapotranspiration.
7. Protect nearby development.

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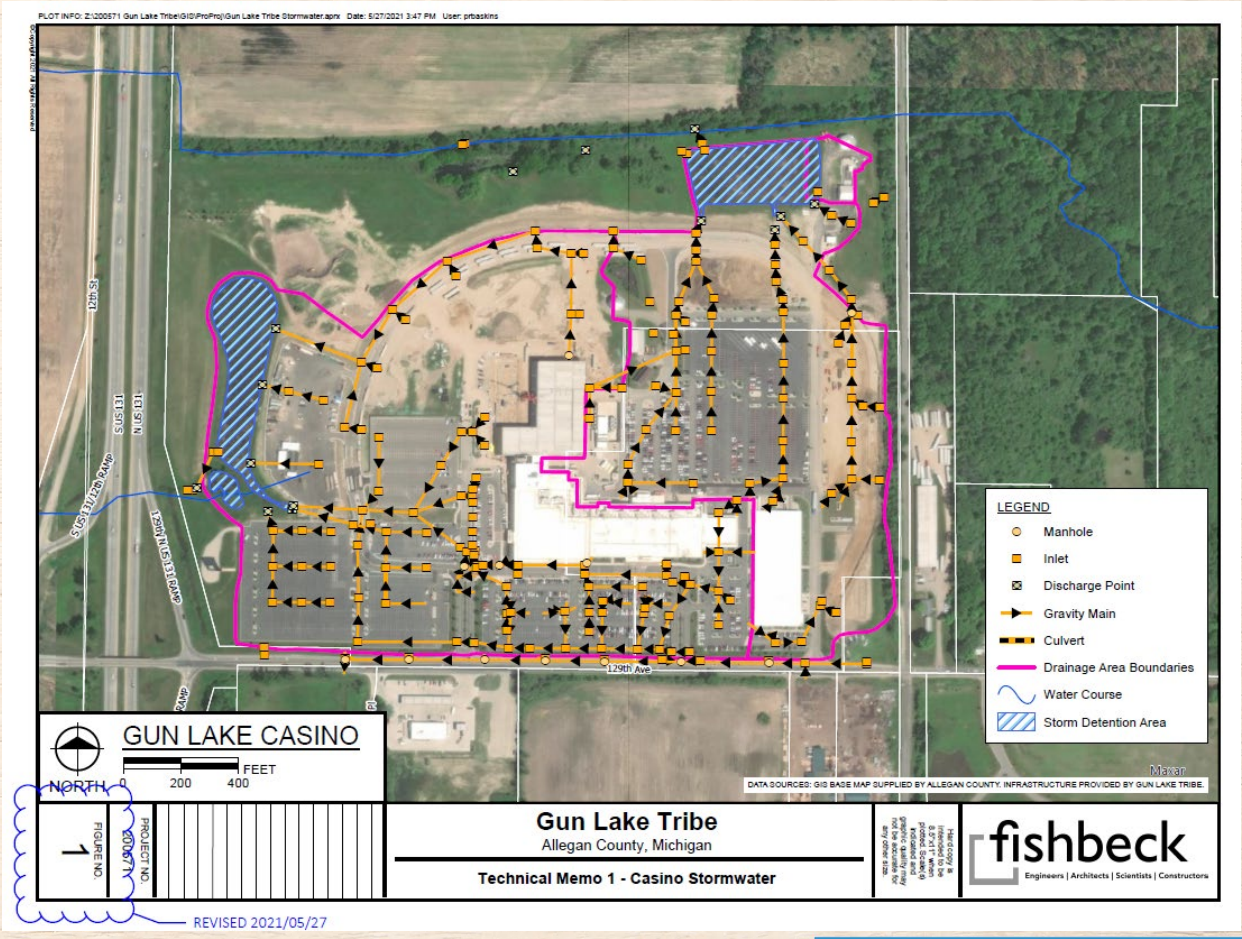
ENVIRONMENTAL DEPARTMENT

Stormwater Maintenance and Upgrades

Gun Lake Tribe
Government Campus Stormwater
Operations, Inspections, and Long-Term Maintenance Plan

Prepared For:
Gun Lake Tribe
Shelbyville, Michigan

October 17, 2022
Project No. 221548



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ENVIRONMENTAL DEPARTMENT

Alex.Wieten@glt-nsn.gov

GUN LAKE TRIBE
ENVIRONMENTAL DEPARTMENT

NEWMAN CREEK RESTORATION

CWA 319 – FY' 23 COMPETITIVE PROJECT

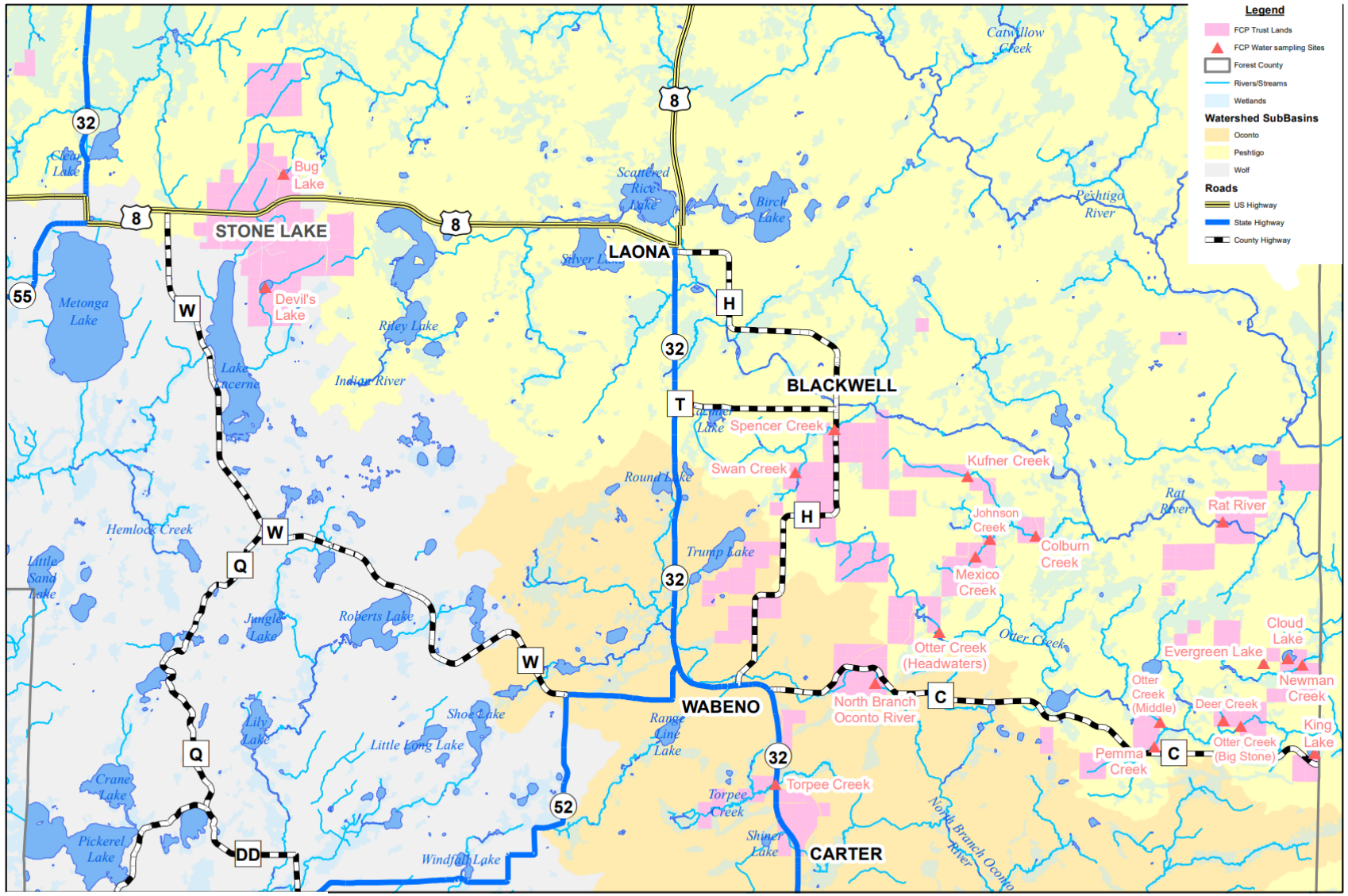
Ryan Siggelkow – Biologist of Aquatic Sciences

FOREST COUNTY POTAWATOMI
NATURAL RESOURCES

EPA Region 5

- 35 tribes in total
- 11 tribes in Wisconsin

THE WATERS OF THE FOREST COUNTY POTAWATOMI COMMUNITY

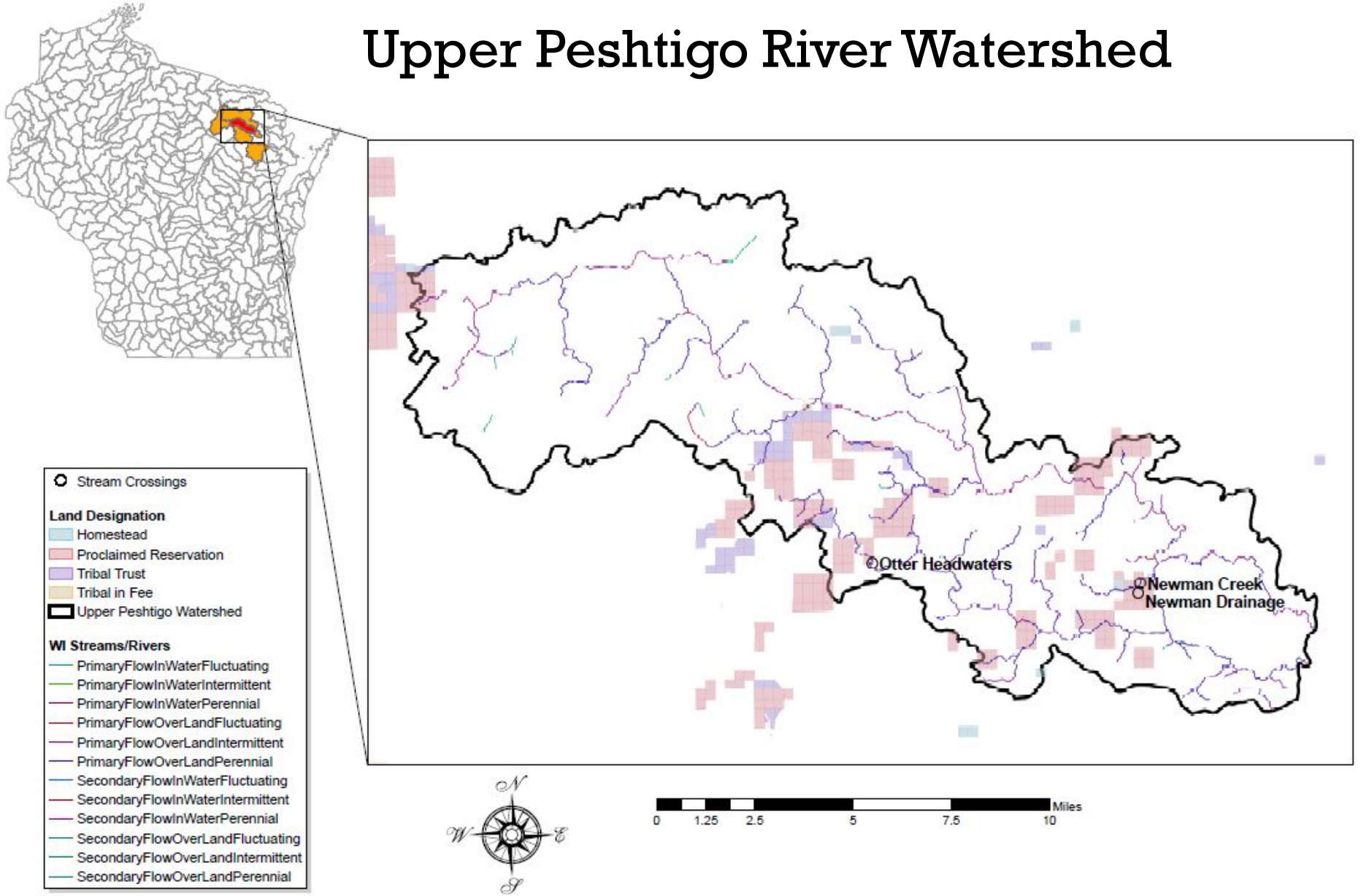


FOREST COUNTY POTAWATOMI
LAND INFORMATION

FCPC Water Atlas

Reservation pop. (residents)	720
Reservation surface area (acres)	11,996
Stream miles	19
Number of lakes	5
Acres of lakes	110
Acres of wetlands	3,646

Upper Peshtigo River Watershed



FOREST COUNTY POTAWATOMI
NATURAL RESOURCES

FOREST COUNTY POTAWATOMI COMMUNITY
STREAM CROSSING INVENTORY

Great Lakes RESTORATION

September 10, 2020

Prepared by:
Forest County Potawatomi Community
Natural Resources Department
PO Box 340
Crandon, WI 54520
Phone: 715-478-7361
Fax: 715-478-7225

Passability Ranking	Degree of Barrier	Characteristics
1	Complete	• Completely washed out • > 1.0 ft perched[1]
2	Significant	• 0.5 – 1.0 ft perched • < 75% bankfull width Not countersunk[2] and one or both: • Water/Culvert slope > 1% (WDFW 2000) • Headloss[3] of >1.0 ft
3	Minor	• Water depth <0.2 ft (USFS et al. 2011) • Upstream ponding • Scour pools • >2.0 sizing width ratio (too wide)
4	Passable	• Native fish passage
0	Dry	• No water

Table 2. Crossing passability ranking and degree of passage barrier.

Criteria used in prioritizing the list of stream crossings in need of remediation:

Step 1: Degree of barrier

Complete ❯ Significant ❯ Moderate ❯ Passable ❯ Dry

Step 2: Thermal regime (when alike barrier conditions exist)

Cold water ❯ Warm water

Step 3: Stream crossing locations

On FCPC land ❯ Off or shared with FCPC land

*Where: ">" means greater priority than.

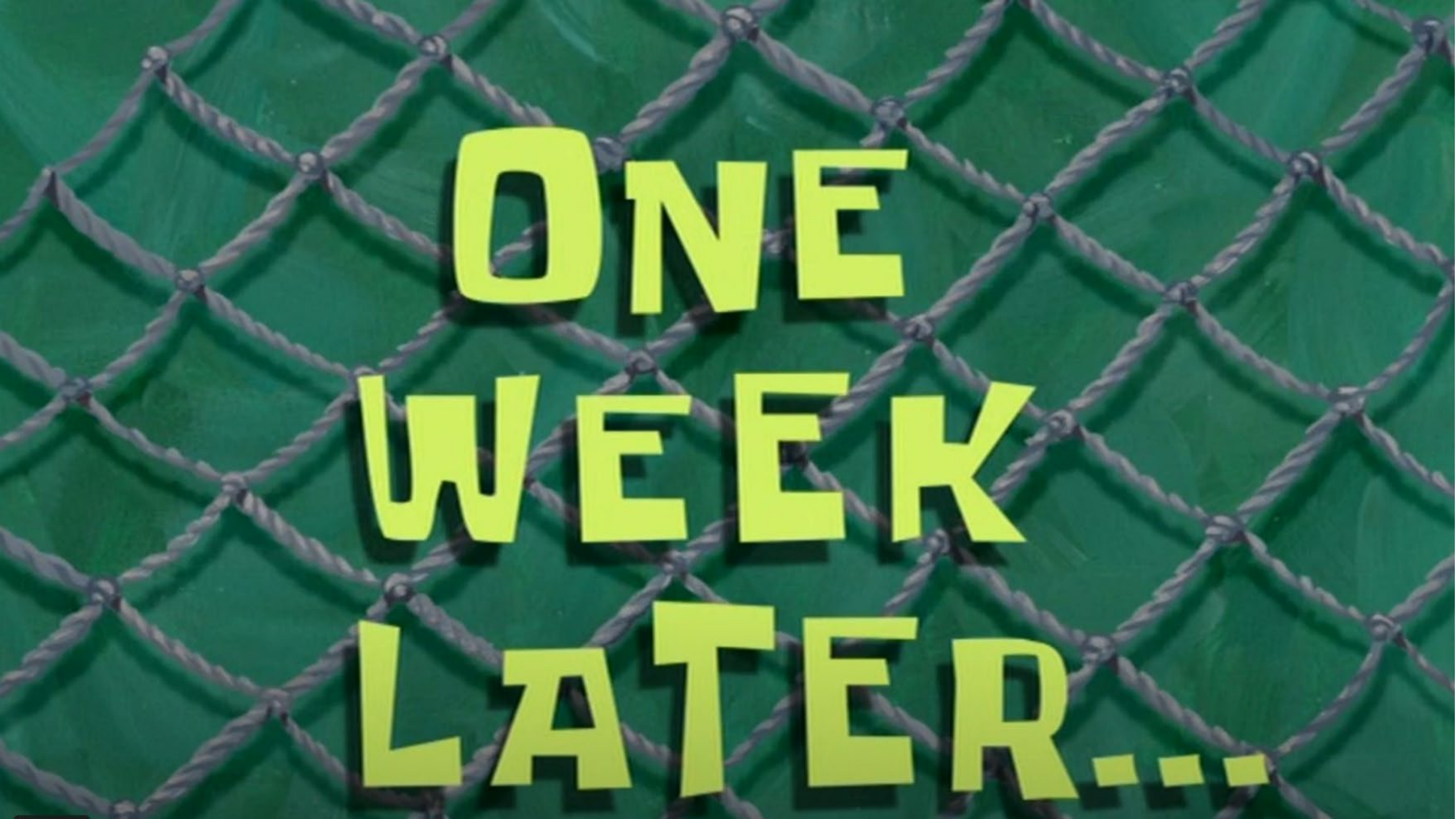
Priority List: (1 – Highest, 22 – Lowest)

1. Devil's Lake Inlet
2. Otter Creek (Headwaters)
3. Kufner Creek
4. Pemma Creek
5. Newman Creek
6. Wee-Care
7. Spencer Creek
8. Oneva 32
9. Old 32 (South)
10. Old 32 (North)
11. Shiner Lake Rd.
12. Devils Lake Ln.
13. Charlie Samz Rd
14. Hemlock Lake Rd
15. Deer Creek
16. Otter Creek (Otter Creek Rd)
17. Otter Creek (Indian Market)
18. Otter Creek (Northwoods Rd)
19. Swan Creek
20. Torpee Creek
21. Colburn Creek (New culvert installed May of 2019)
22. Devils Lake Outlet (Dried up)

NEWMAN CREEK

MAINTENANCE

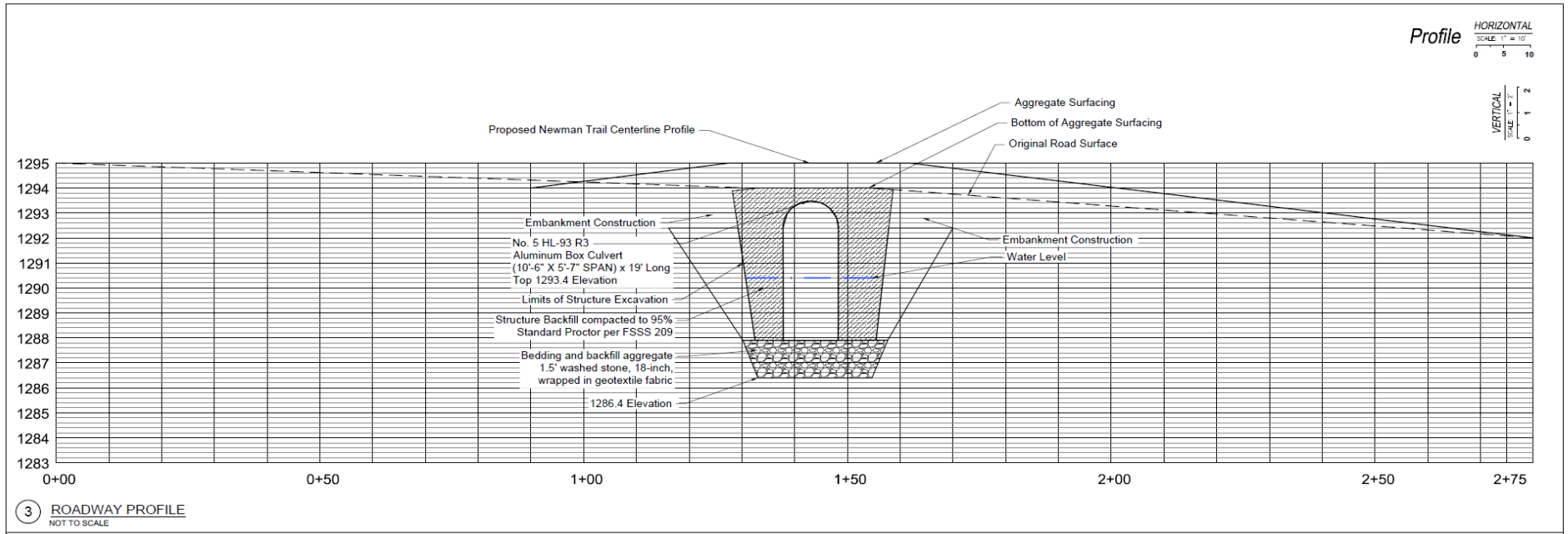
April 8, 2019


ONE
WEEK
LATER...

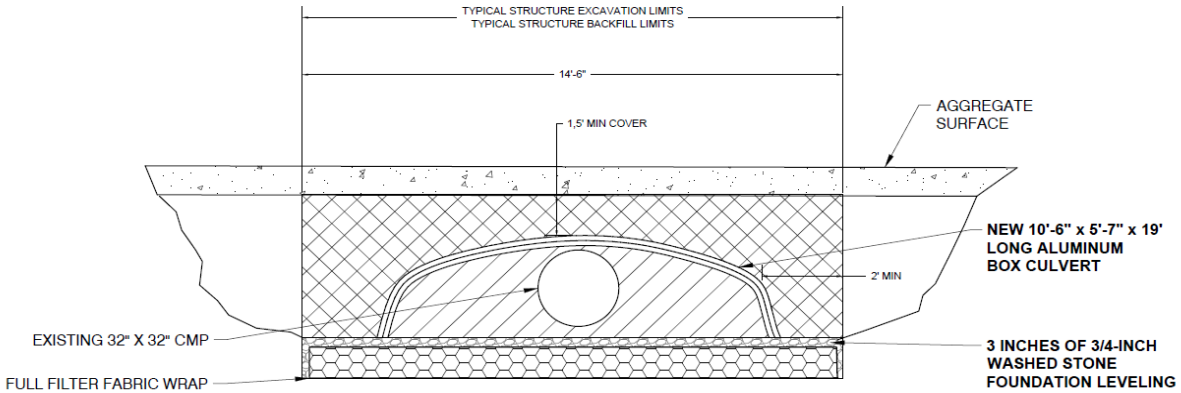
April 15, 2019

BASE CWA 319

- Hired Stantec (formally Cardno) for engineered design
- Aluminum box culvert
- 10’6” wide to meet bankfull width



3 ROADWAY PROFILE
NOT TO SCALE



TYPICAL EARTHWORK CROSS SECTION

Notes:
1. BENCH INTO EXISTING SLOPES.
2. STRUCTURE FOUNDATION BEDDING FILL SHALL BE 18" MINIMUM OF 1.5" WASHED STONE.
3. STRUCTURE FOUNDATION BEDDING FILL SHALL BE COMPLETELY ENVELOPED IN GEOTEXTILE. GEOTEXTILE SHALL BE MRAFI 140N OR EQUIVALENT.
4. UP TO 3" OF 3/4" WASHED STONE FOUNDATION LEVELING COURSE MAY BE USED IF NECESSARY

4 STRUCTURE DETAIL
NOT TO SCALE

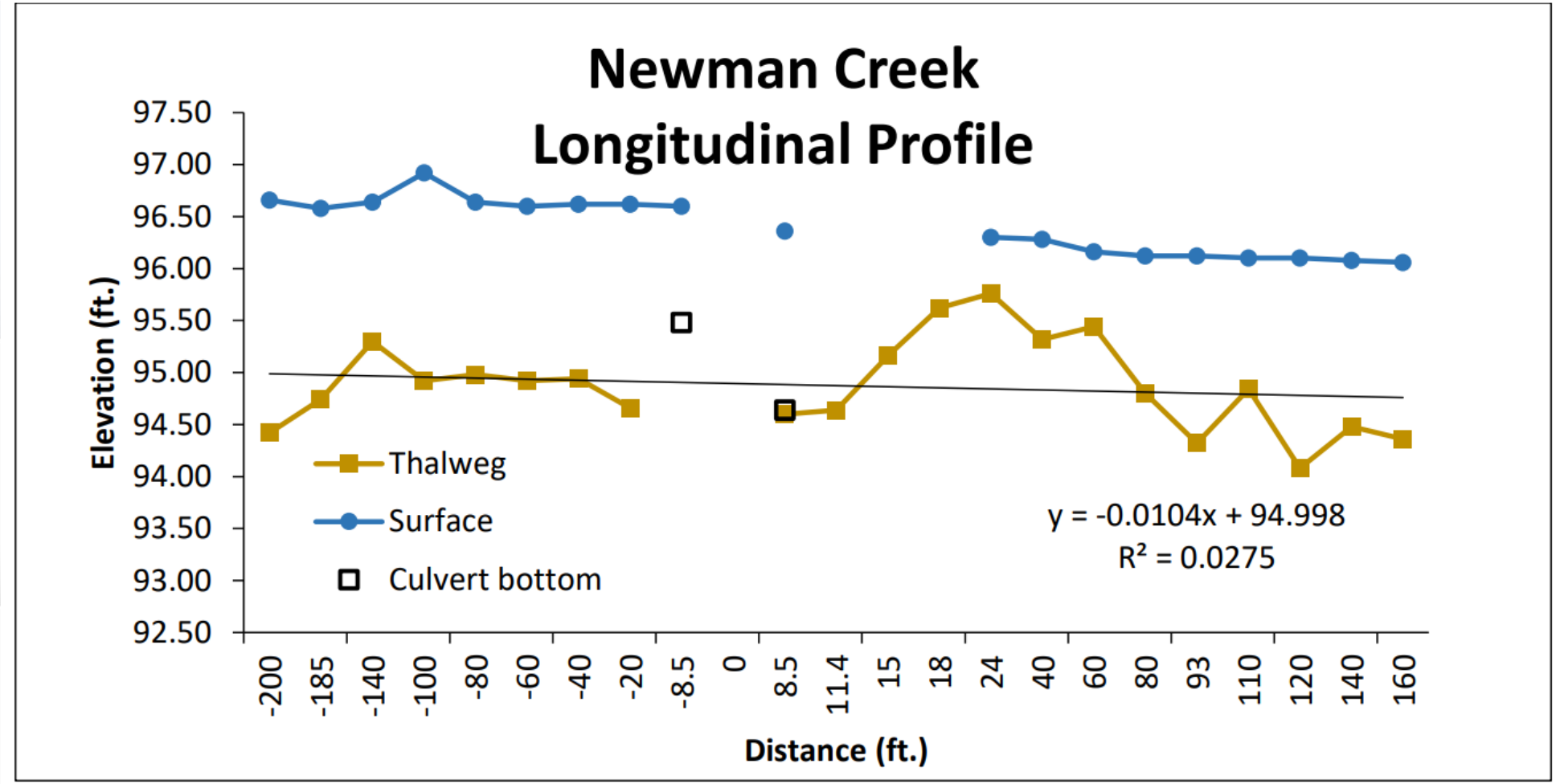
FINAL DESIGN

Cardno
MADISON
8133 CITTONWOOD DRIVE, SUITE A
FITCHBURG, WISCONSIN 53719
TEL: (608) 661-3365 www.cardno.com

DETAILS
STREAM CROSSING DESIGN AT NEWMAN CREEK
FCPC NATURAL RESOURCES DEPARTMENT
Forest County, Wisconsin

NO.	DATE	DESCRIPTION	BY

DATE JUNE 2022
DRAWN COD
DESIGNED ACS
CHECKED
PROJECT # J219231300
SHEET TITLE DETAILS
SHEET NUMBER 8
LAND USE # —

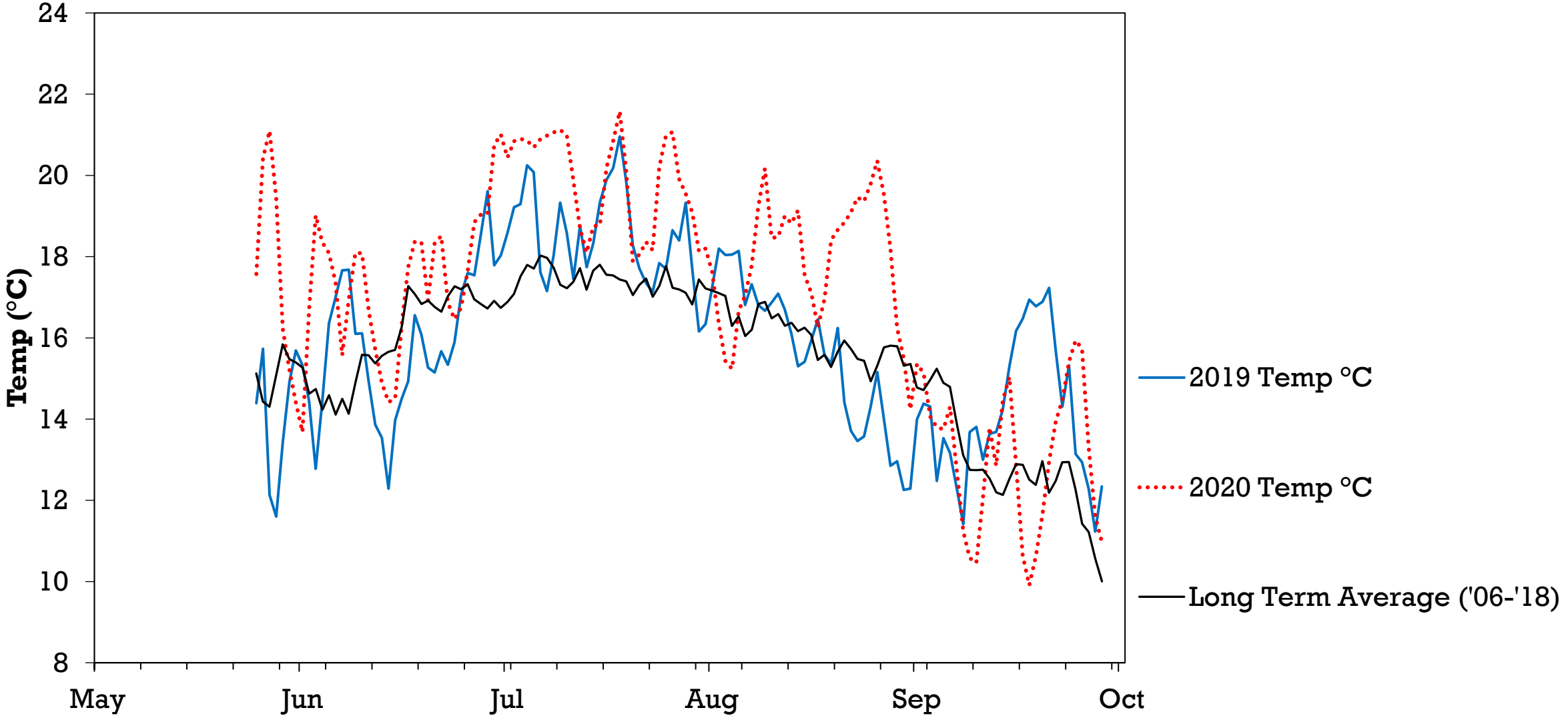

Newman Creek
Longitudinal Profile
Elevation (ft.)
97.50
97.00
96.50
96.00
95.50
95.00
94.50
94.00
93.50
93.00
92.50
Thalweg
Surface
Culvert bottom
y = -0.0104x + 94.998
R² = 0.0275
-200
-185
-140
-100
-80
-60
-40
-20
-8.5
0
8.5
11.4
15
18
24
40
60
80
93
110
120
140
160
Distance (ft.)

- **DISSOLVED OXYGEN LEVELS HAVE FALLEN BELOW BASELINE AVERAGES SINCE 2015.**

TABLE 52. Newman Creek statistics for physical parameters of surface water samples during baseline('07 - '10) through present ('21-'22) periods.

Period	Statistic	Discharge (ft^3/s)	Dissolved Oxygen (mg/L)	pH	Specific Conductance (µs/cm)	Turbidity (NTU)
2021-2022	Maximum	6.70	13.30	7.92	226	3.90
	Minimum	0.17	5.88	6.94	94	0.00
	Median	0.62	8.10	7.70	175	1.20
	Average	1.51	8.18	7.57	167	1.36
	Samples (n)	10	9	10	10	9
2019-2020	Maximum	7.61	9.32	7.59	174	8.00
	Minimum	0.58	5.15	7.15	27	0.00
	Median	3.23	6.79	7.27	116	0.00
	Average	3.25	6.69	7.32	122	1.60
	Samples (n)	5	7	7	7	5
2017-2018	Maximum	6.06	11.40	8.03	204	3.50
	Minimum	0.60	5.83	7.38	94	0.00
	Median	1.47	9.07	7.62	184	0.00
	Average	1.90	9.00	7.63	163	0.73
	Samples (n)	10	9	10	9	9
2015-2016	Maximum	8.71	10.55	7.79	242	5.50
	Minimum	0.75	5.44	7.21	121	0.00
	Median	1.21	9.34	7.57	170	0.00
	Average	2.98	8.91	7.57	181	0.59
	Samples (n)	10	9	10	10	10
2013-2014	Maximum	5.78	12.84	7.89	267	3.20
	Minimum	0.81	9.68	6.83	97	0.00
	Median	1.05	10.57	7.39	200	0.65
	Average	2.11	11.03	7.33	185	1.12
	Samples (n)	5	6	6	6	6
2011-2012	Maximum	2.76	12.09	8.42	323	5.70
	Minimum	0.42	8.16	7.25	138	0.00
	Median	1.90	10.32	7.83	212	0.75
	Average	1.79	10.14	7.83	215	1.77
	Samples (n)	6	7	8	8	6
Baseline	Maximum	4.65	13.79	9.12	341	19.00
	Minimum	0.17	7.44	7.03	58	0.00
	Median	0.61	10.56	7.76	230	2.60
	Average	0.81	10.63	7.82	223	3.07
	Samples (n)	34	47	48	48	47

NEWMAN CREEK
DAILY TEMPERATURE AVERAGES



Forest County Potawatomi Community - Warmwater IBI Calculator						
Site Name:	Newman Creek	Distance Shocked (m):		100		Pulse Rate:
Sample Date:	8/17/2021	Shocking Time (minutes):		20.416667		12.5
Personnel:	RS, KD	Sampling Gear Type:		1 Backpack		Duty Cycle:
Weather:	Clear	Peak Volts:	240	Peak Amps:	1.9	60

MATRIX	VALUE	SCORE
total # of fish	123	n/a
total # of native spp.	10	10
total # of darter spp.	1	2
total # of sucker spp.	0	2
total # of sunfish spp. < 8km from lake	0	0
total # of sunfish spp. >8km from lake	0	0
total # of intolerant spp.	3	10
total # of tolerant fish	50	5
total # of omnivores	0	0
total # of insectivores	61	5
total # of top carnivores	0	0
total # of simple lithophils	10	0
	Subtotal	34

Stream width (m):			1.97
Ln stream width (m):			0.68
>8 km from a lake (y or n)?			n
Discharge:	0.00		cfs
Clarity:	Cloudy		
MATRIX			VALUE
% of tolerant spp.			41
% of omnivorous spp.			0
% of insevtivores			50
% of carnivores			0
% of simple lithophilous			8
Correction Factors			
# of nontolerant fish/300m			219
% DELT			0

Correction Factors	----------	34
total # of DELT fish	0	34
Total after correction factors	----------	34

Station Coordinates		
Station Start:	45.°N	88.°W
Station End:	45.°N	88.°W

IBI Score:	34

Biotic Integrity Rating:	FAIR

Notes:	** STREAM WIDTH BELOW IBI MODEL CALIBRATION (<2.5m or 8.2 ft.)

Total # of Captured Fish	Common Name	FCPC Species Code	# YOY	CPUE Fish/min	CPUE Fish/m	CPUE Fish/mile
28	Pearl Dace	PED	0	1.371	0.280	450.62
34	Creek Chub	CRC	0	1.665	0.340	547.18
17	Finescale Dace	FSD	0	0.833	0.170	273.59
20	Northern Redbelly Dace	NRD	0	0.980	0.200	321.87
8	Blacknose Dace	WBD	0	0.392	0.080	128.75
8	Central Mudminnow	CMM	0	0.392	0.080	128.75

TABLE 56. Stream electrofishing survey Index of Biotic Integrity scores and salmonid (trout) catch per unit effort for Newman Creek since 2003.

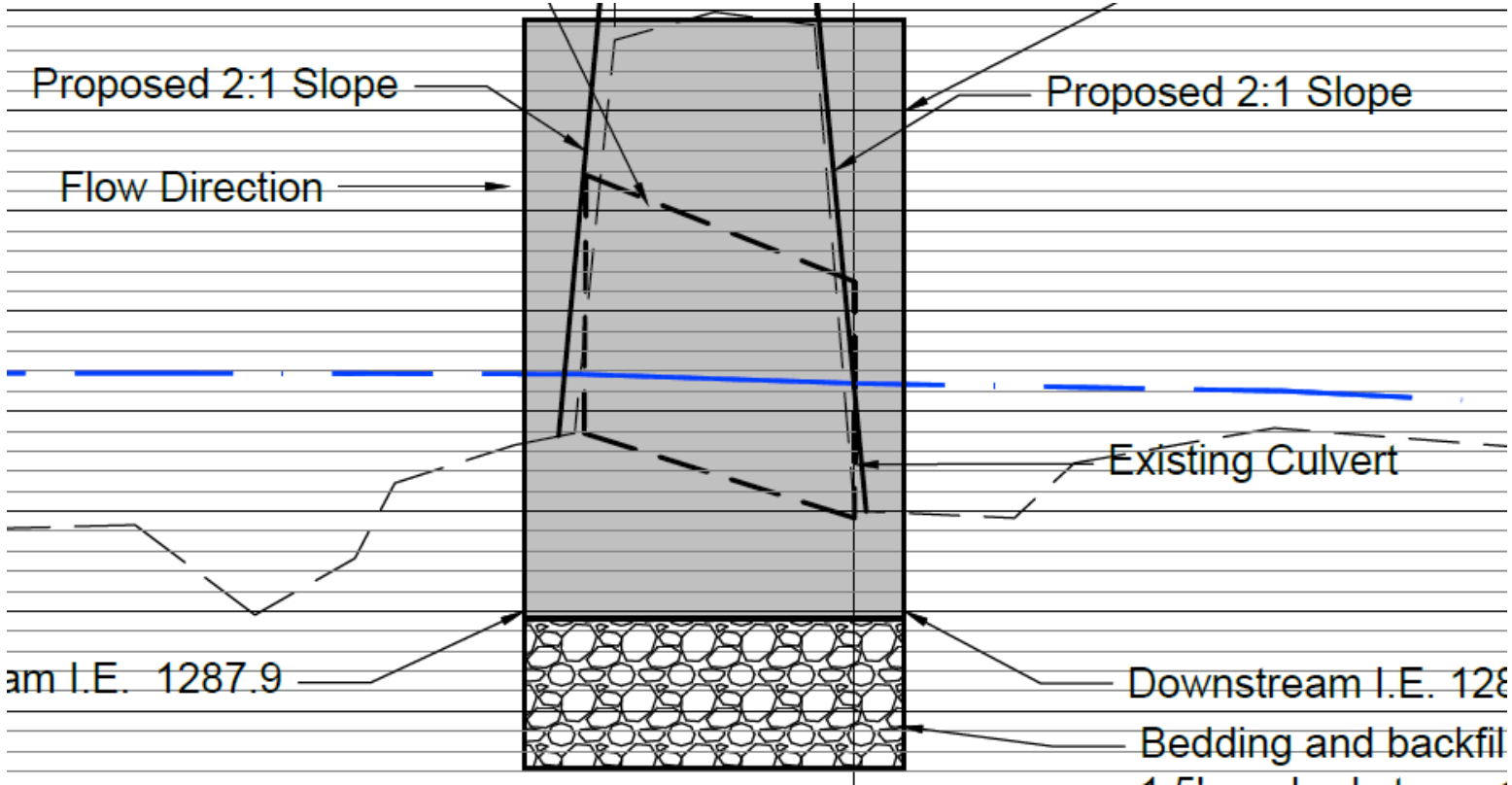
Year	IBI Score	Station Length (meters)	Trout Captured	Trout CPUE (fish/meter)	Trout CPUE (fish/mile)
2003	40	106.7	0	0.00	0
2004	40	106.7	0	0.00	0
2005	40	106.7	0	0.00	0
2006	40	106.7	0	0.00	0
2007	40	106.7	0	0.00	0
2008	40	106.7	0	0.00	0
2009	40	106.7	0	0.00	0
2010	50	106.7	1	0.01	15
2011	50	106.7	0	0.00	0
2012	30	100	0	0.00	0
2013	60	100	1	0.01	16
2014	30	100	0	0.00	0
2015	30	100	1	0.01	16
2016	30	100	0	0.00	0
2017	24	100	0	0.00	0
2018	29	100	0	0.00	0
2019	30	100	0	0.00	0
2020	10	100	0	0.00	0
Maximum Value	60		1	0.01	16
Minimum Value	10		0	0.00	0
Average Value	36		0	0.00	3

PROJECT AWARDED… NOW WHAT?

- Hired a local contractor with a lot of experience.

HIRED STANTEC FOR OVERSIGHT

- **To ensure proper elevations are set.**
- **To ensure designs are followed closely.**



PERMITTING

- Wisconsin Department of Natural Resources
  - No permit needed

- United States Army Corps of Engineers
  - Nationwide 3 for maintenance
  - Nationwide 33 for temporary construction, access and dewatering
  - No pre-construction notification needed

TOTAL COMPETITIVE CWA 319 BUDGET: $100,000

- **Estimated costs**
  - **$115,000 to replace both stream crossings (main and trail drainage)**

- **Actual costs (so far)**
  - **$74,500**
  - **Native seed mix not accounted for yet**

QUICK RECAP

1. Collected years of high-quality data.
   Utilized CWA 106 Funding

2. Completed stream crossing inventory with a list of prioritized impaired crossings.
   Utilized GLRI funding

3. Completed Stream Crossing Replacement Design.
   Utilized base CWA 319 funding

4. Complete stream crossing replacement and restoration. (To commence this summer August 15, 2023).
   Utilizing competitive CWA 319 funding

CONTACT INFORMATION

Ryan Siggelkow
Biologist – Aquatic Sciences
Forest County Potawatomi Community
Natural Resources Department
Ryan.Siggelkow@fcp-nsn.gov

FOREST COUNTY
POTAWATOMI
NATURAL
RESOURCES

VICTORY FOR WATER AT VICTORIES SQUARE: IMPLEMENTING AN URBAN NPS PROJECT

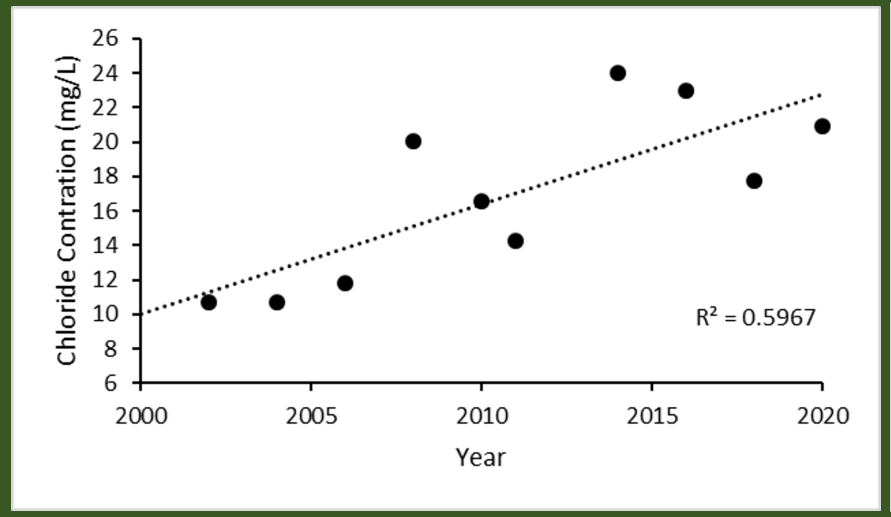
Sam Day
Little Traverse Bay Bands of Odawa Indians
Water Quality Biologist
sday@ltbbodawa-nsn.gov

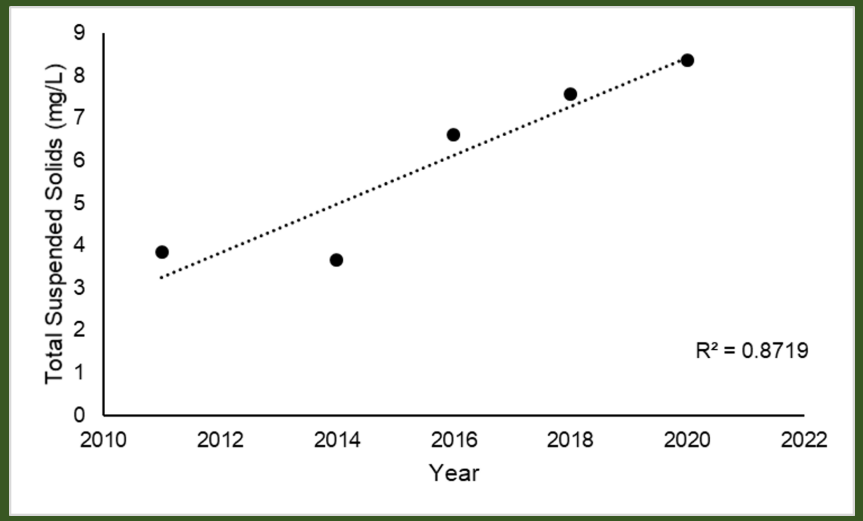
LITTLE TRAVERSE BAY BANDS OF ODAWA INDIANS
ODAWA NATURAL RESOURCES DEPARTMENT

Bear River

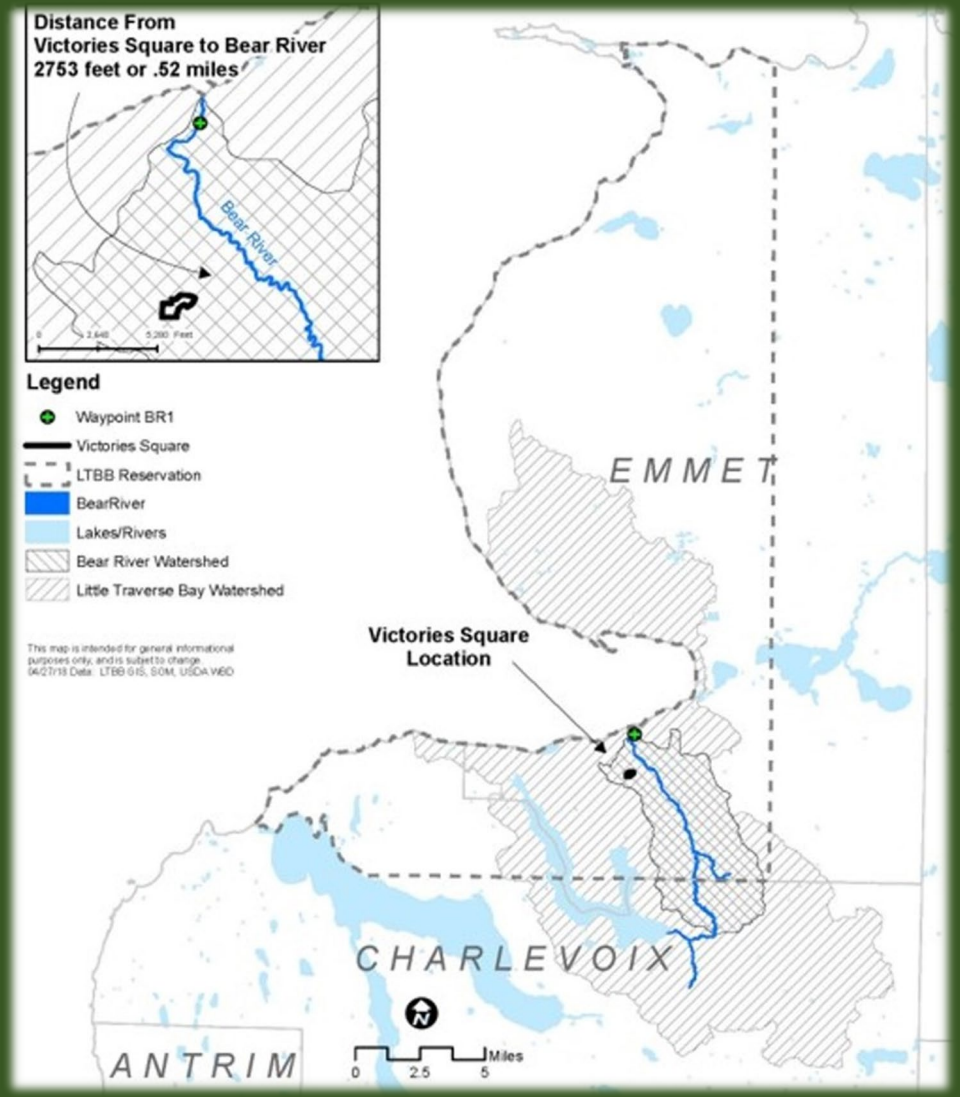
Issues in the Bear Watershed

- Increasing chloride concentrations
- Increasing total suspended solids
- Contaminated fish
- Increasing impervious surfaces
- Sedimentation of LTBB wetland





Green Infrastructure at Victories Square

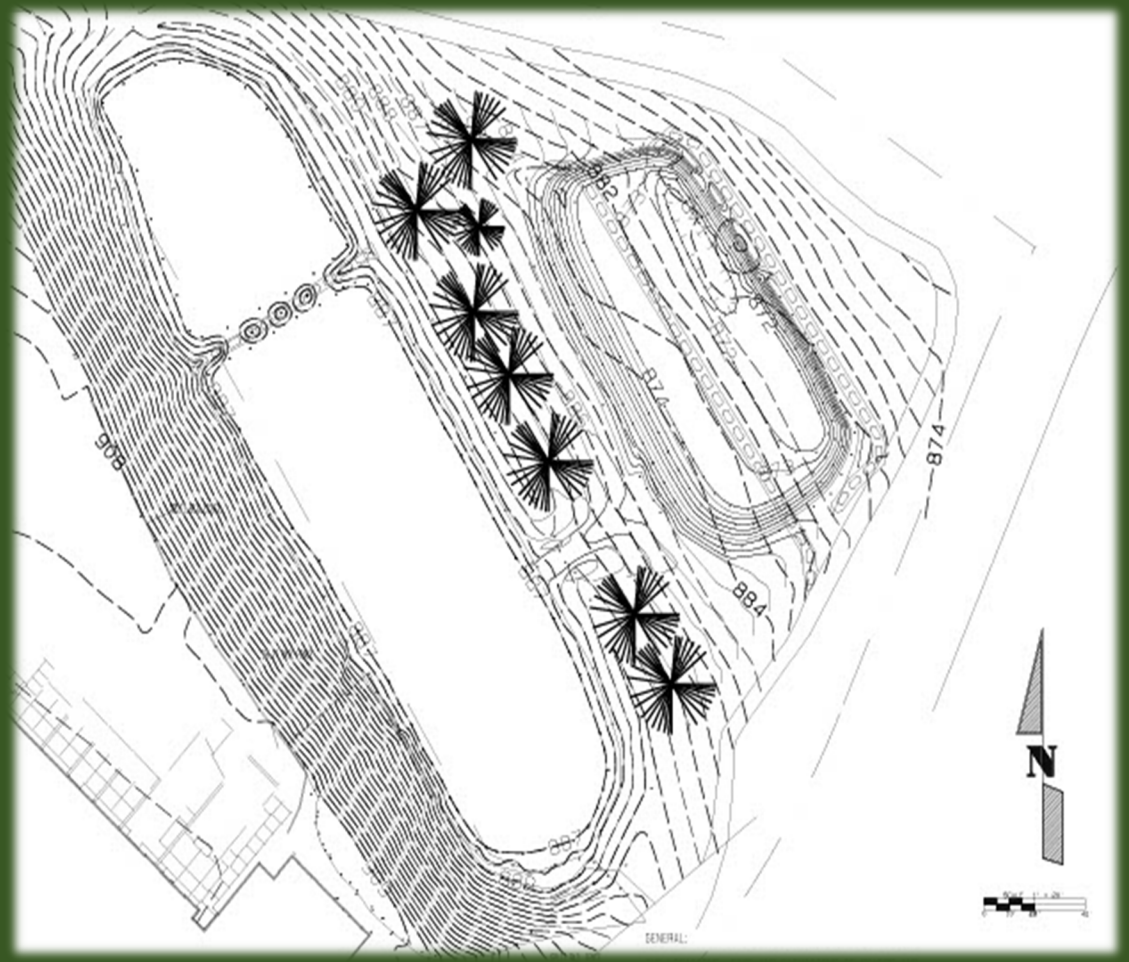


319 Competitive Overview

- Applied for 3 phases of funding beginning in 2018
- BMP's include:
  - Stormwater bioretention areas
  - Permeable pavers
  - Stormwater basin improvements
  - Boardwalk
  - Catch Basin filters
  - Educational signs

Phase I Implementation

A series of Unfortunate events



Getting Back on Track

- Adjust scope of Phases II and III
- Work with EPA
- Re-bid project for 2023 implementation

Phases II and III Implementation

Takeaways

- Don’t get discouraged
- Be flexible
- Work with your partners

Questions?

Contact Info:

Sam Day
Little Traverse Bay Bands of Odawa Indians
Water Quality Biologist
Email: sday@ltbbodawa-nsn.gov
Phone: (231) 242-1572

Break-out Instructions and Discussion Questions

- You will automatically be moved to your randomized breakout room. The breakout session will last approximately 30 minutes and will *not* be recorded.

  - What projects have you done or are considering?
  - What has been your experience applying for funding?

For more information about EPA's Tribal NPS Program

Tribal NPS Program Web Page:

https://www.epa.gov/nps/tribal-nonpoint-source-program

EPA Region	Coordinator
HQ	Steve Epting Margot Buckelew
1	Bessie Wright
2	Aimee Boucher
3	Jason Challandes
4	Sharon Brown
5	Janette Marsh
6	Sam Reynolds
7	Ann D'Alfonso
8	Erika Larsen
9	Howard Kahan Larry Maurin
10	Krista Mendelman

Thank You!

6. **Addressing Agricultural NPS Pollution: Key Partners & Strategies**. Thurs, June 22.

*2-4pm Eastern

Zoom registration links also available at https://www.epa.gov/nps/tribal-nps-resources-and-training