

2018

Regular Coalition Meetings

April 12

July 12

October 11

At 10:00 AM

Harrisville Library



Working Together to
Restore and Protect
Our Natural
Resources

PRVEL 2017 IN REVIEW

By Carole Plunkey, Chair

The main focus in the watershed this past year was the planning, restoration, and completion of the project to remove the old Buhl Dam on Forest Service property in Alcona County. Partnership agency Huron Pines Conservation Council out of Gaylord secured the funding for this endeavor as well as

the design engineer and the contractor who removed the dam and installed the new footbridge across the river. PRVEL members were involved all through the process and assisted with pre-removal and post-removal stream sampling, community promotion, and hosting of the dam removal celebration event held at the site in September. All attendees were pleased with the results and additional stream sampling will be conducted this year. Trees will be planted if necessary.

Spring and Fall projects put into motion every season included the macro-invertebrate sampling events and the placement (and then retrieval) of the temperature logger meters in designated streams. Both efforts are targeted to gather data on water quality and temperature. A special macro sampling opportunity at the Sprinkler Lake camp this summer, allowed PRVEL volunteers to work with the US For-



New Buhl Bridge Ribbon Cutting Event

est Service to educate elementary students enrolled in the program and have fun at the same time.

The Crowd Hydrology project is in full swing and it is hopeful that each year, more people will join the PRVEL volunteers to take several readings throughout the year and call them in to

be recorded so that the information can be used to determine trends, safety or feasibility of water sampling, impact of weather events, etc.

This was the second year for PRVEL participation in the Giving Tuesday online donation event sponsored by the Community Foundation of NE Michigan. This is an important fundraiser for our programs, and the board appreciated the \$1,535 dollars received. **Thank you once again to all contributors.** Funding for all our programs depends heavily on private donations and these monies help to supplement any grants awarded.

The board works hard to address the goals of PRVEL's extensive management plan and reviews potential projects yearly. Working with our partners in monitoring and protecting the watershed will be continued into the new year, and meetings are already underway to plan for 2018.

STREAM TEMPERATURE MONITORING PROJECT UPDATE

(in cooperation with Michigan DNR, Tim Cwalinski)

When fish community sampling data is lacking for a river or stream, water temperatures can be used to surmise what the fish community might look like. The Fisheries Division of the Department of Natural Resources (DNR) and other agencies, such as the U.S. Geological Survey (USGS), have gathered stream temperature data at many rivers statewide for decades. Examples of why temperatures are measured include monitoring:

- pre- and post-treatment water temperature regimes.
- temperatures for fish related concerns (e.g., cold, cool, and warm water guides).
- temperatures in relation to point source influences (e.g., warm or cold water discharges).
- Long term temperature changes related to climate changes

The provision of temperature meters by PRVEL is a supplement to the temperature collection program of the DNR. The meters take a reading every hour while in place from May until September each year. These readings allow for the calculation of the average daily (mean) July temperature and the maximum daily temperature in the stream, both

Water temperatures (°F) in consecutive years at various locations in the Pine River watershed.

Average Temps	2014	2015	2016	2017
<i>South Br Pine Rv – USFS 4121</i>				
July	–	–	–	62
Aug	–	–	–	60
<i>South Br Pine Rv – Buhl Dam/Road</i>				
July	62	–	65	64
Aug	61	–	64	61
<i>McGillis Ck – Buhl Rd</i>				
July	62	–	64	64
Aug	61	–	64	61
<i>West Br Pine River – Bean Hill Rd</i>				
July	58	–	61	61
Aug	58	–	62	59
<i>West Br Pine River – Cruzen Road</i>				
July	63	–	66	65
Aug	62	–	66	62
<i>East Br Pine River – McConnell Road N</i>				
July	60	–	–	–
Aug	59	–	–	–
<i>East Br Pine River – Tait Road</i>				
July	63	–	65	64
Aug	61	–	66	62
<i>Coppler Ck – F41</i>				
July	57	–	58	59
Aug	56	–	58	56
<i>Pine River – Kings Corner Road</i>				
July	65	–	69	67
Aug	64	–	68	64



vital information to provide an indication of trout densities and survival.

Our temperature loggers, or recording meters, are carefully prepared by Tim Cwalinski, DNR Fisheries Division and are used to collect the data annually. Containing special computer software, each meter is “launched” in the office, with instructions to start recording the temperature hourly

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Winter 2018 Newsletter

Temperature Monitoring continued from page 2

on a certain date. In some years, the DNR also places some their own meters at other locations in the watershed. The meters are placed in the rivers at key locations in the spring, and then retrieved in the fall.

The meters are anchored properly in a river reach where flow is believed to be fully mixed (not over springs), and they are hidden from the public eye so as not to be disturbed. Upon retrieval in the fall, the data is downloaded from the meter and the readings are analyzed.

The DNR uses the average July temperature to make year to year comparisons. July is the month when our streams typically are the warmest. Past DNR research has shown that brook trout populations are reduced in streams with average July temperatures of 66 degrees F or greater. Brown and rainbow trout populations are reduced when the

July average temperature is typically 68 degrees F or greater. Of course, years that the month of June or August is hot, it is not good for the trout population either.

Annual recording of temperatures at key locations provides the foundation over the long term to provide an indication of change. PRVEL will continue to work with the DNR as it manages (computer launch and download summaries) the PRVEL furnished meters while PRVEL members will continue to install and remove them from the water each year.

Tim Cwalinski has stated the following about the data shown in the table:

"The Pine is a good watershed with plenty of cold and cool water sites. This is long term trend data, and we just started. Warming trend data (or lack of warming trend) will be seen over decades, maybe many decades or even a century."

WATERSHED WILDLIFE WATCH

Massasauga Rattlesnake

The Eastern Massasauga rattlesnake is Michigan's only venomous snake and one of only two species that occur in the Great Lakes region. Two to three feet in length, it is rather timid and likes to hide under vegetation or woody debris, disguised by its brown/grey coloration. When disturbed, it prefers to hide rather than be aggressive. Primarily found in wetlands,



it appears to return to its hibernation site each year, unable to survive winters if going outside that site. As a result of its decline in numbers in the state (primarily due to habitat loss or indiscriminate killing), it has been designated as a species of special concern and is protected by the DNR unless a permit is issued. Michigan appears to be the last stronghold for this species and efforts are being made to increase public awareness of the importance of co-existing with this often misunderstood snake.

Mark Your Calendars!

Michigan Lake and Stream Associations 57th Annual Conference
"Preserving Your Freshwater Gem: The Essentials of Lake Stewardship"

Friday & Saturday April 20th & 21st, 2018
Crystal Mountain Resort, Thompsonville, MI

For more information visit the ML&SA 57th Annual Conference web page at
<https://www.mymlsa.org/mlsa-57th-annual-conference/>

E. COLI SAMPLING UPDATE

by Dan Steck, Water Quality Monitor

Samples were taken monthly from April through September at twelve locations on the Pine River system in 2017. In addition to the sampling of five base locations on the Pine, seven sites were sampled on East, West and South Branches this year.

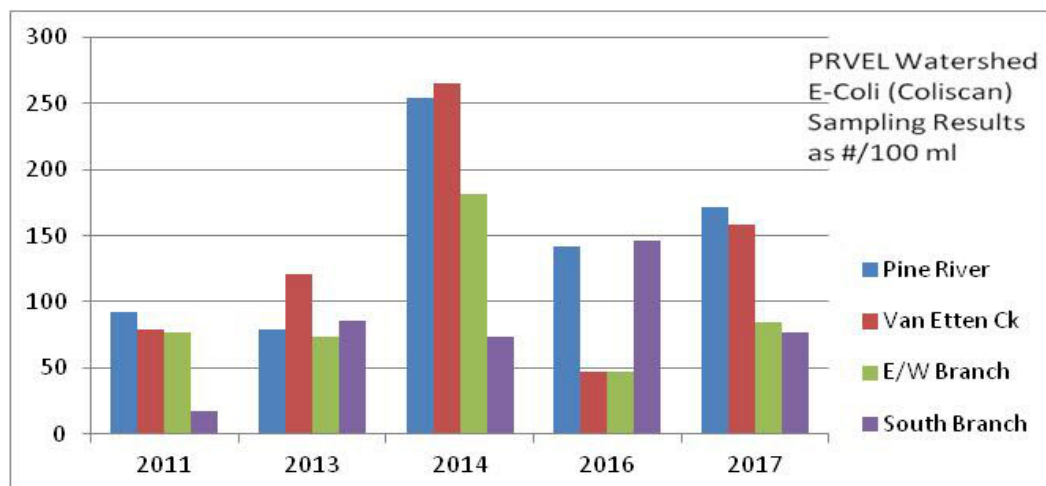
Table 1 - Pine River Watershed E. Coli Monitoring

Location	Site No	2017				12-year Combined Results			
		No	No./100 ml		Min	No.	No./100 ml		Min
			Mean	Max			Mean	Max	
Pine River and Tributaries		No	#/100 ml				#/100 ml		
Pine River @ County Line	01	7	172	280	100	56	94	3500	1
Pine River @ F-41	02	5	69	240	20	51	69	2400	1
Pine River @ Cruzen Road	04	7	77	160	40	53	65	2600	1
Van Etten Crk @ Barlow Road S.	11	7	159	360	50	52	133	3600	1
E/W Pine River @ F-30	31	7	.84	240	20	53	102	3800	1
E. Branch of Pine @ Proconier	34	6	65	160	20	31	114	1000	1
E. Br of Pine @ McConnell Rd	37	6	56	140	20	20	48	240	1
E. Br Pine @ M-72 & F-41	38E	6	35	180	1	31	55	1750	1
W. Br Pine @ Cruzen Rd	41	7	97	280	20	29	81	1450	1
S. Br Pine below Buhl Dam	05	5	60	160	20	13	63	300	20
S. Br Pine above Buhl Dam	06	3	78	100	60	8	49	200	20
S. Br Pine @ Rearing Pond Road	07	6	25	80	1	14	48	340	1

All results are expressed as CFU (colony forming units)/100 ml

Observations

1. The geometric means for two of the twelve of the sites sampled in 2017 were higher than 130 CFU/100 ml state standard for swimming waters and one site exceeded the 300 CFU/100 ml single sample concentration for the same standard. Only one site, Van Etten Creek at the junction of Barlow Rd. and the Pine River Trail exceeded both of these standards this year.
2. **The bacteriological quality of the streams in the watershed continues to be acceptable with no indicators of pollution.**



PHOSPHORUS/TOTAL SUSPENDED SOLIDS MONITORING

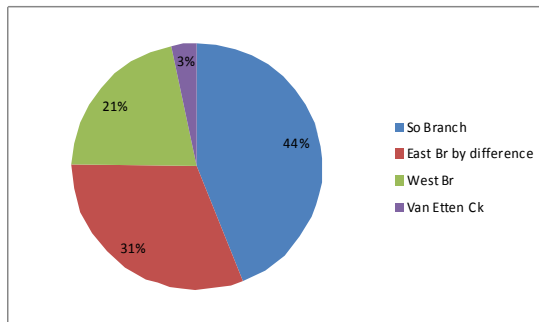
by Dan Stock, Water Quality Monitor

A shift in the focus of the annual sampling was initiated in 2017 as a variation to the sampling started in 2009.

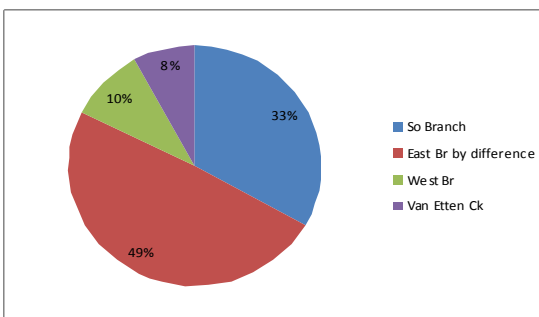
Sampling was started on the South and West branches and the Pine River (E/W) at F-30. Sampling of Van Etten Creek at the corner of Barlow Road and Pine River Trail, although planned, was not done because of chronic high water levels created by a downstream blockage. The results of the Van Etten Creek sampling from previous years were used. The Pine River at the county line and the Van Etten River (Lower Van Etten Creek) where it leaves the lake continued to be monitored to determine the relative impact of upstream and lake shore nutrients and solids.

Samples were collected during both high flow and low flow conditions from April through October from the five locations and analyzed for total

Flow, gps



Phosphorus, lbs/day



phosphorous (P) and total suspended solids (TSS). Water level (stage) measurements were taken at the time of sampling to obtain an estimate of the flow and quantities.

Although the TSS results reported by the University of Michigan Laboratory continued to be higher than those reported by the Central Michigan University Laboratory, this should not be a problem in future years as the intent of this sampling is to estimate the relative contribution of each tributary to the total loading at the county line. Gauge measurements taken and recorded at the Crow Hydrology

web sites were also converted to estimated flow rates for purposes of estimating P and TSS loads. Regression analyses were used to estimate the P and TSS loadings for those dates that gauge and flow readings were taken over the sampling period.

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FIRST YEAR TRIBUTARY SAMPLING RESULTS

	Flow, Q		Phosphorus, P		Solids, TSS	
	cfs	%	#/Day	%	tons/day	%
So Branch	82	44%	9.4	33%	15.7	47%
East Br by difference	58	31%	14.0	49%	8.3	25%
West Br	39	21%	2.8	10%	8.7	26%
Van Etten Ck	6	3%	2.3	8%	0.8	2%
Pine River @ Co Line	168		13.0		22.4	
Tributary estimate for balance (not including Duvall)						
	185	110%	28.4	219%	33.5	149%
Van Etten River below Dam	190		19.6		9.0	
E/W @ F-30	97		6.7		17.0	

P and Tss Report continued from page 5

Observations

The flow, P and TSS in the Pine River at the county line seems to be under reported based on this sampling. Additional flow stage measurements will be taken in 2018 to better refine the flow/stage curves and hopefully improve the estimates.

Based on these first year estimates, it appears that the percentage contribution of TSS from each tributary is close to the percent estimated flow. However, the contributions of phosphorus from Van Etten Creek

and the East Branch, both of which pass through agricultural areas are higher than would be indicated by their flows.

The P load leaving Van Etten Lake as measured this year exceeded that entering the lake. This seems to happen every few years.

It would be premature to make any long term conclusions based on these first year results.

INVASIVE SPECIES MONITORING OF 80 ACRE ERA SUMMARY

As previously reported, the invasive species (IS) monitoring program of the 80 acre DNR owned property just north of Van Etten Lake, has been a priority for PRVEL. The unchecked spread of unwanted IS directly impacts the ecosystem along the river and Van Etten Lake.

Over the past four years, some remarkable results have been observed. The first three, multiple crews hauled out over twenty-five bags of IS that were

pulled or dug out. Last year was a bye year for the program.

We will be back at it this spring, and we encourage anyone interested working with Doug Jager on this project to please contact him. Those of you that have never floated up the Pine would be amazed at the beauty of this area of the river. If you like to canoe or kayak this would be a great volunteer opportunity. It's a lot of fun and also a learning experience.

WANTED VOLUNTEERS: FOR MACRO-INVERTEBRATE (aquatic insects) TRAINING

Sampling our streams for aquatic insect populations is an important part of assessing water quality in the Pine River and its tributaries. .

If you would like to be a volunteer for the sampling program, either collecting specimens in the streams or sorting "bugs" up on the river bank, you can still sign up for this spring's sampling online or by email. The dates are yet to be decided and they will be e-mailed to all on the PRVEL membership list. Please join the team as a volunteer, either helping in or out of the water by signing up on our Facebook page at www.facebook.com/pineriverwatershed



or by contacting Arnie Leriche via email at aleriche526@gmail.com

PRVEL is also looking for more people to step up and volunteer to take the training made available through MiCorps (Michigan Clean Water Corps). There are no fees. Having an interest in nature and preserving the environment makes you a perfect candidate for this training program and you can help PRVEL to achieve our goals. Training includes the procedures for collecting specimens, insect identification, stream habitat analysis, and field protocols and is offered each year, usually in June or July at different locations. Contact Arnie to learn more .

April Elections



As a non-profit 501(c)(3) organization run by by-laws, PRVEL conducts an election each April to nominate individuals to fill five positions on the board of directors. To allow for “new blood” on the board while keeping some stability, three positions are voted on in even years, while two positions are then voted on the odd years. An existing board

member may be re-elected for any number of years.

Please consider joining the board to help in the decision making process for potential projects, participate in planning and implementation of special events, and to add your input on a variety of issues which directly impact the effectiveness of the board to make things happen within the watershed.

You may nominate yourself at the upcoming April 12th meeting and/or submit your name ahead of time to any board member to be considered at the time of the election..

Becoming a board member is a great way to not only be a significant part of monitoring and protecting the watershed, but also to add your special knowledge/expertise to improve our programs and conservation projects.

DNR Launches New Program Eyes in the Field

As reported on the Dept of Natural Resources website in August of last year, a new program designed to work as an “app” for cell-phones, computers, or tablets is now available to assist the department in gathering data on fish and wildlife observations. The program includes forms for reporting things like diseased wildlife, tagged fish, or specific animals like cougars or feral swine.

This new venture is similar to the River Keepers program, which is more localized to include the watershed area and any reports can be emailed to anyone on the PRVEL board for follow-up. Getting out into the watershed for recreation is a wonderful way to have fun and help out as well by keeping your eyes open for potential problems like unusual fish kills, beaver dams, invasive plant species, etc.

Contact Carole Plunkey to sign on at

caroleplunkey@charter.net

OUR 2017 TREASURY REPORT

January 1, 2017 Balance	\$5,804.94
Income	
Donations	1,350.00
VELA	500.00
Grants	0.00
Other	
Interest	4.76
Subtotal -	\$1,854.76
Program Expenses	
Meetings	
Newspaper Ads	160.50
Macro Sampling	0.00
Temperature Logging	250.00
Coliform Sampling	258.49
Invasives Program	250.00
P/TSS Sampling	605.22
River Clearance	0.00
AuSable Project	0.00
River Keepers	0.00
Subtotal -	\$1,314.00
Administration Expenses	
Chamber of Commerce Dues	150.00
Giving Tuesday	92.34
Post Office Box rental	74.00
Supplies, Newsletter, postage	83.00
MI Nonprofit Incorporation	20.00
Flyer and brochures	36.07
Subtotal -	\$455.41
December 31, 2017 Balance	\$5,890.29

Most of our funding comes from donations from those having an interest in helping us meet our objectives. Please keep us in mind when making your plan for charitable contributions this year.



PRVEL Coalition Board

Chair - Carole Plunkey	caroleplunkey@charter.net
Treasurer - Dan Stock	dstock4239@charter.net
Susan Malski	smallard3@yahoo.com
Scott Lingo	scott@targetrealestate.com
Arnie Leriche	aleriche526@gmail.com

Non-Voting Advisors

US Forest Service	Huron Pines RC&D
USDA-NRCS	DNR/Fisheries
US Fish & Wildlife	DEQ/Water Quality

Is this newsletter informative and useful to you? What would you like to see covered that is not being noted? Please let us know your response by email - caroleplunkey@charter.net

HOW CAN I VOLUNTEER FOR PRVEL?

Our conservation group is comprised totally of volunteers, all working together to make things happen for the benefit of the watershed. Please step forward and make 2018 the year you help us make a difference in your neck of the woods.

Ways you can volunteer:

- Macro invertebrate sampling program – Spring and Fall
- Monitoring fishery – place temp loggers
- River Keepers/monitor watershed out in the field
- Write articles for the newsletter
- Serve on the watershed board of directors
- Project workers – out in the field (seasonal)
- Fund raising – bring ideas to the attention of

Contact via email
as shown above

- Arnie Leriche
- Scott Lingo
- Carole Plunkey
- Dan Stock
- Carole Plunkey
- Carole Plunkey
- any board member

Yes! I wish to support the water resource improvement efforts in the Pine River Van Etten Lake Watershed with my tax deductible contribution.

Please make your check payable to PRVEL Watershed Coalition and send to:

**PRVEL Watershed Coalition
PO Box 680
Oscoda, MI 48750**

Name _____

Street _____

City _____

State/Zip _____

Phone _____

E-mail _____