

Trout Stream Classification Checklist (revised 8/2013)

(This checklist should be completed and accompany any trout stream classification changes. Check the items as appropriate and attach comments if desired.)

Stream name: Pecore Creek

(if stream is known by another name please list both names with the more common name first)

County: Oconto WBIC: 481000

Define the portion of the stream to be classified. Please provide both a written description and the coordinate locations of the upstream and downstream beginning and end points.

From the outlet at Grignon Lake bordering Menominee and Oconto Counties at T29N. R17E. Section 7, SW of SW, downstream to the confluence of the South Branch Oconto River at T29N. R17E. Section 3, NE of SW.

This written description should reference permanent, unambiguous landmarks that would allow a person unfamiliar with the area to locate the points (e.g., dams, road crossings, stream confluences, county lines, section lines, township lines)

Please provide coordinate locations in one of three formats:

Longitude/Latitude (Degrees, Minutes, Seconds): 89° 41' 28.7" W , 44° 55' 14.0" N

Longitude/Latitude (Decimal Degrees): -89.691332, 44.920576

WTM91 (easting and northing in meters): 544361, 494173

Upstream point coordinates: -88.4852, 45.0024

Downstream point coordinates: -88.4206, 45.0216

Classification proposed: Class III

X Fish survey (including relative abundance, length distribution, and age structure) and habitat survey completed on water to be classified
Survey on file at what location: FH Database and Peshtigo DNR office. See attachments.

Fish team supervisor and district fisheries supervisor have approved the classification.

Date 9/30

Water resources management specialist/water quality biologist has approved the classification, especially for class III waters.

Date 9/25

Public notice published in local newspaper or other media

Date 10/7/15

Notice sent to all clerks of the county, town, city, or village in which the stream is located

Date 10/1/15

Notice sent to legislators in the affected districts

Date 10/1/15

Notice sent to chairpersons of legislative committees with jurisdiction for natural resources issues

Date 10/1/15

No hearing requested 30 days after public notice

Hearing requested, held, and classification recommended

Date _____

Signed: Author of Checklist Tammie J. Paoli Date Sept. 3, 2015

Fish Team Supervisor Anna D. B. [Signature] Date 9-30-15

Water Quality Biologist [Signature] Date 9/29/2015

Pecore Creek

Pecore Creek is a 17.9 mile hard water stream having slight alkalinity. Pecore Creek is a tributary to the South Branch Oconto River, and is currently considered Class II trout water in Oconto County and Class I in the upper reaches in Menominee County. This stream is not known to support natural trout reproduction, and brook or brown trout are considered a stocked supplemented species. Watershed land use is predominantly agriculture in Oconto County and primarily forest in Menominee County. A baseline habitat survey conducted in 2004 at Willow Road recorded sand as the primary substrate, and only minimal gravel was documented (less than 9% overall). Due to lack of data for fisheries, habitat, and temperature readings in the Menominee County reach (approximately 10 miles), this document only proposes classification changes for the reach in Oconto County at this time.

Onset HOBO[®] Water Temp Pro v2 temperature logging devices (accuracy $\pm 0.36^{\circ}$ F at 32-122^o F) were deployed in late spring of 2009, 2012, and 2013 at two locations: Willow Road and Elm Road (see map). Water temperature was recorded every half hour. Loggers were retrieved in early fall and data was downloaded. Maximum daily average thresholds for trout was considered to be 74 deg F for a 7 day interval, and 72.5 deg F for a 14 day interval (Wehrly et al. 2007)¹.

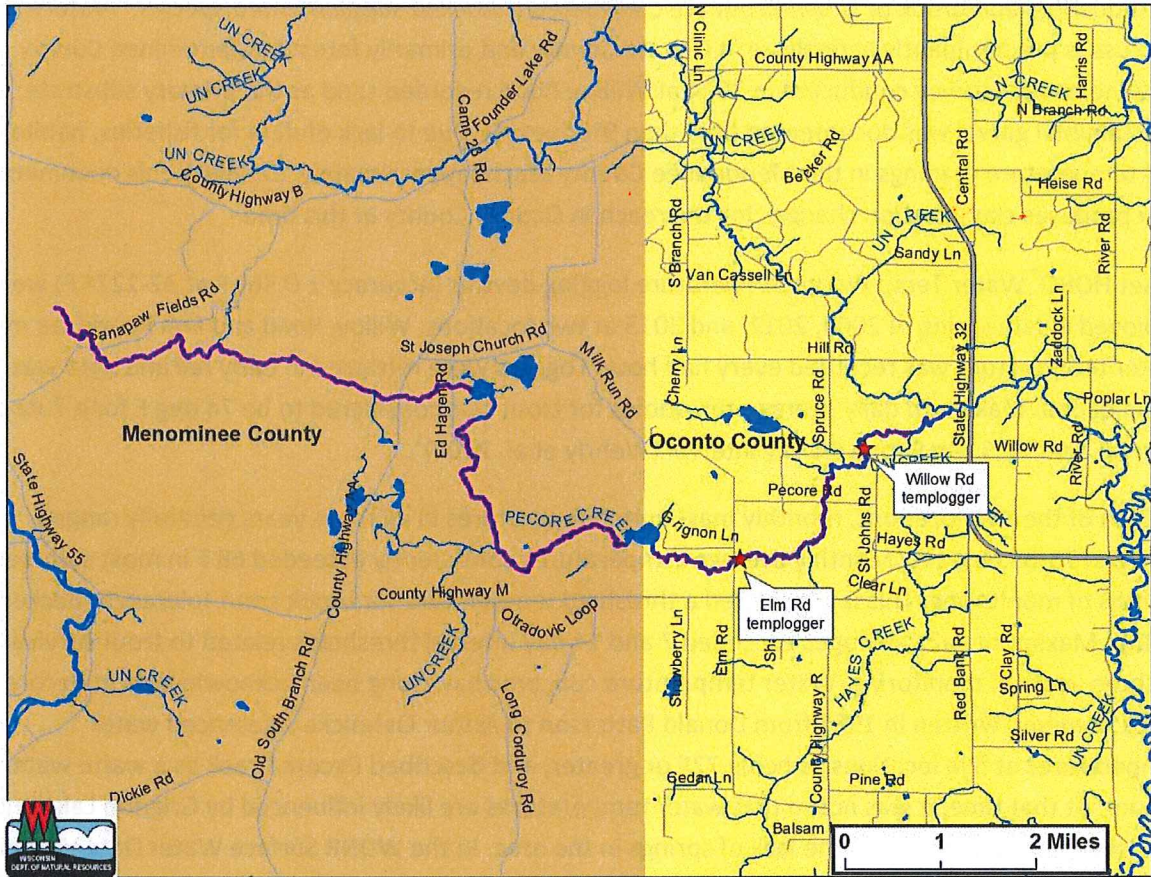
At each of the two locations, monthly maximum temperatures in all three years generally ranged between 75-85 degrees. Monthly average temperatures consistently exceeded 68 F in most summer months of monitoring. This is considered a threshold temperature for brook trout tolerance (Becker 1983)². Maximum daily averages exceeded 7 and 14 day interval thresholds related to trout survival in all three years of monitoring. Water temperature concerns have long been acknowledged in Pecore Creek. A memo written in 1951 from Donald Patterson to Arthur Oehmcke referenced water temperatures at five locations as being 72F or greater, and described Pecore Creek as a warm water stream. At that time, it was noted that water temperatures are likely influenced by Grignon Lake and Wiscobee Lake drainage and the lack of springs in the area. In the WDNR Surface Water Data Viewer, the entire portion of Pecore Creek in Oconto County is considered "cool-warm mainstem".

Brown trout were stocked in Pecore Creek by WDNR annually between 1972 and 1991. Recent brown trout stockings occurred in 2003, 2013, and 2014. Since then, trout stocking quotas have been removed for Pecore Creek.

A total of seven fisheries stream shocking surveys were conducted at various sites in 2004, 2010, and 2012. These surveys did not produce any trout. In those surveys, the dominant gamefish species captured was smallmouth bass and largemouth bass. Bluegill and rock bass were common. An intensive survey in 1976 at seven stations along Pecore Creek found only one fingerling brown trout. Largemouth bass were the dominant gamefish in those surveys and adult brown trout captured in the 1976 surveys were assumed to be from stocking events.

¹ Wehrly, K.E., L. Wang, and M. Mitro. 2007. Field-based estimates of thermal tolerance limits for trout: incorporating exposure time and temperature fluctuation. *Transactions of the American Fisheries Society* 136:365-374.

² Becker, G.C. 1983. *Fishes of Wisconsin*. University of Wisconsin Press, Madison, WI. 1052 pp.



Date: 03/04/2015
T. Paoli

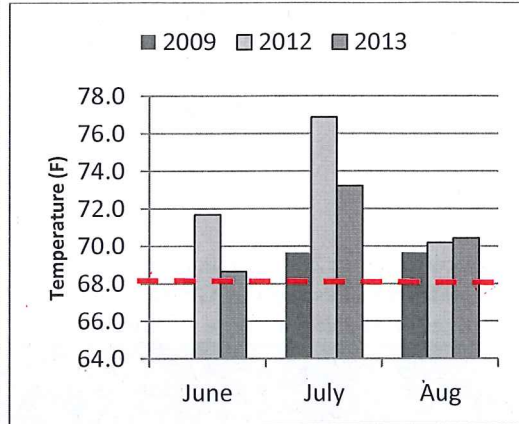
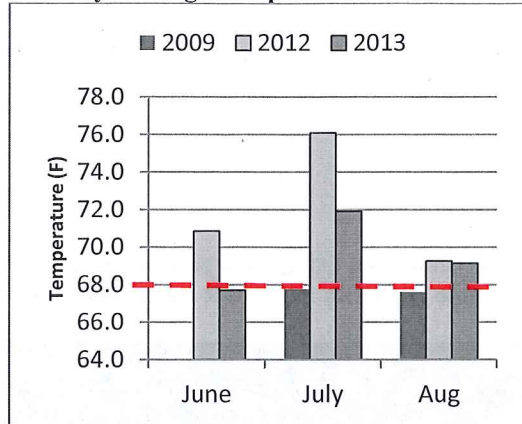
Pecore Creek (WBIC 481000) highlighted in purple. Locations of 2 templloggers (2009, 2012, 2013) in Oconto County are shown. The section of stream in Oconto County is the reach that is proposed for reclassification from Class II to Class III.

**Pecore Creek
Results**

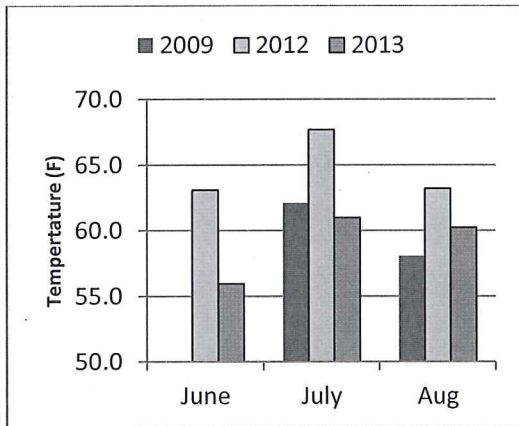
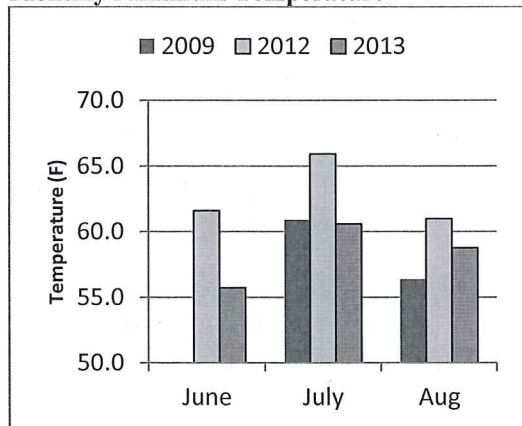
Willow Rd.

Elm Rd.

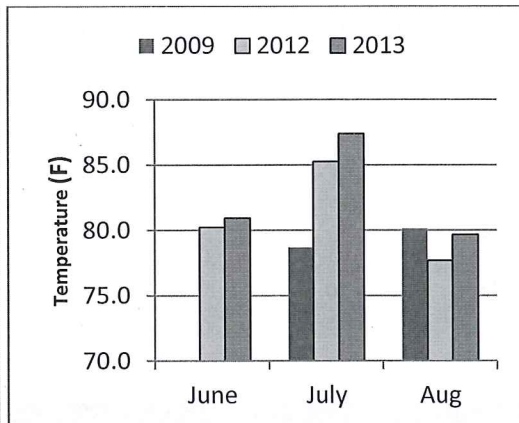
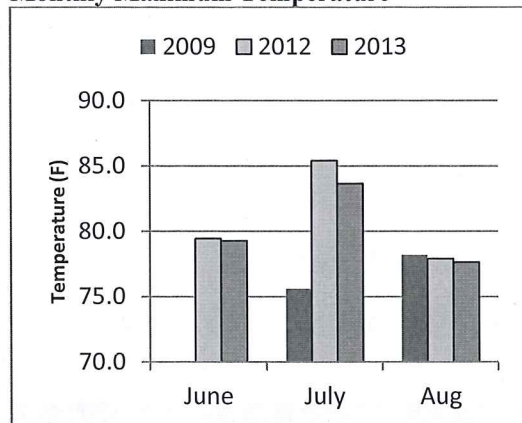
Monthly Average Temperature



Monthly Minimum Temperature



Monthly Maximum Temperature



Pecore Creek

Summer Maximum Daily Average Temperature (F)

<u>Willow Rd.</u>			<u>Elm Rd.</u>		
	<u>7 day</u>	<u>14 day</u>		<u>7 day</u>	<u>14 day</u>
2009	72.5	70.3	2009	74.4*	74.4*
2012	78.3*	77.2*	2012	79.1*	78.1*
2013	77.6*	75.7*	2013	79.1*	77.1*

*Above threshold related to trout tolerance (Wehrly et al. 2007)

Fisheries survey data collected in 2004, 2010, and 2012. All surveys conducted using a barge stream shocker by WDNR Fisheries staff from Peshtigo or Green Bay, except the June 2010 Elm Road/WR was collected by WDNR Water Resources staff using a barge stream shocker.

Species	2004	2010	2010	2010	2012	2012	2012	Grand Total
	Jul	Jun	Jul	Jul	Aug	Aug	Aug	
	Willow Rd	Elm Rd/WR	Elm Rd	Willow Rd	Elm Rd	Pecore Rd	Willow Rd	
Black Bullhead	1	1						2
Blacknose Dace					1	2		3
Blacknose Shiner	1							1
Blackside Darter	4						1	5
Blanding's Turtle							1	1
Bluegill	2		1	1	2	4	16	26
Central Mudminnow	4							4
Common Shiner	227	14	14	18	1	42	6	322
Creek Chub	62	2	4	10	2	6	14	100
Golden Shiner	2							2
Green Sunfish							1	1
Hornyhead Chub	26	54	28	11	43	28	17	207
Johnny Darter	9	3					9	21
Largemouth Bass			5		7		7	19
Longnose Dace		7	5		2	2		16
Mimic Shiner					25			25
Mottled Sculpin	1							1
Northern Hog sucker	11	2	10		14	49	8	94
Northern Pike					1		1	2
Pearl Dace	1							1
Pumpkinseed	2							2
Rock Bass	13	12	9	3	8	22	5	72
Rosyface Shiner						1		1
Rusty Crayfish							1	1
Smallmouth Bass	1	2	2	5	5	13	5	33
Western Blacknose Dace	10	8	1					19
White Sucker	15	2	6	6	1		12	42
Yellow Bullhead						2		2
Yellow Perch							2	2
Grand Total	392	107	85	54	112	171	106	1027