



September 2018

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Twin Cities Walleyes Unlimited Monthly Newsletter



President's Letter:

Happy Autumn.....Again!!

My goodness, where does the time go? It's been a really weird spring/summer, and now, fall is here. It seems like I was just shoveling snow, then it was 100 degrees, and now it is fall on the calendar. What the heck?

I want to say a big thank you to last month's, speakers, Dr. James Burnham and Mr. John Arms. I am still thinking about the provocative presentation they gave us. I am hoping that we can continue this discussion and assist their cause as best we can. Please let us know if you have any ideas on this matter as we now have a bit of voice in this matter. We can make a difference.

I hope that all of my TCWU mates are still out there chasing our friend Wally. I was out this morning, and I scored a giant 15"er!!

Please send us your pictures to the TCWU email or Facebook page so we can put you on the board.

I am sad that we missed out on the opportunity to have our fishing outing last weekend. I talked to several board members and we must try harder to plan these things farther ahead of



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**Next Meeting:
Thursday, October 4th**

Steve Pennaz

time. Please hang in there with us as we are learning and growing, as we go. We can make this happen.

I am very excited for the October meeting. Mr. Steve Pennaz is our speaker and we all have watched him for years on his on-air shows. I look forward to meeting him and welcoming him to our TCWU club.

Thanks all, and looking forward to seeing you on October 4!!

Jim Wood
President of Twin Cities Walleyes Unlimited



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2018/2019
Upcoming
Meetings**

TCWU Community News

Congratulations to the TCWU sponsored Youth team!

They took home the first place trophy for the second year running, in the Lake Minnetonka fishing Club.

*Looking cool in those jersey's.
Where do I get one?*



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Learning About Thermoclines

With Autumn well on its way, we thought it might be a good idea to learn a thing or two about the Thermocline phenomenon.

Thermoclines are common in our Minnesota lakes. They are for the most part invisible but they create a unique edge, that impacts fish location. Understanding how they are formed and how to detect them, will give you an edge on locating fish relating to this unseen structure.

Thermocline and the stratification of water

A thermocline is the transition layer between warmer water at the lake's surface and the cooler deep water below it.

Stratification refers to a change in the temperature of water at different depths.

Lakes in colder climates are often stratified into three separate sections; Epilimnion, Metalimnion, and Hypolimnion. The relationship between water temperature and the density of water create the layering. Cold water is denser than warm water, and forms the bottom layer in summer. The other two layers are warmer, less dense and thus create the upper two layers. Below is a brief description of each layer and the elements that impact them.

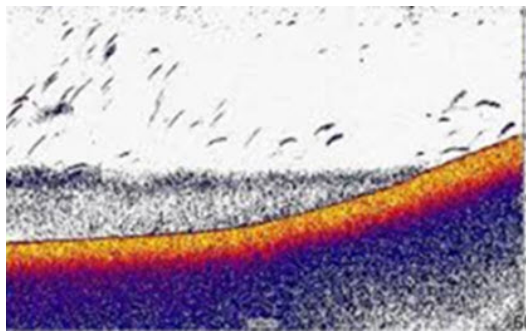
- ***The warm surface layer (technically called the Epilimnion)*** is impacted by wind, waves, and sunlight. They interact together to mix this section of water and distribute the warmth throughout the layer.
- ***The cold deep layer (technically called the Hypolimnion)*** is the coldest layer of a lake in summer, and the warmest layer during winter. This layer is isolated from surface layer mixing during summer, and usually receives insufficient light for photosynthesis to occur. As summer wears on, oxygen is depleted by plankton and organisms, which eliminates fish activity in this section.
- ***The thermocline layer (technically called the Metalimnion)*** is the transition layer between the surface layer and deep cold layer. This layer is where the mixing of surface water ends causing the water temperature to drop throughout the layer. This layer will vary in depth throughout the soft water season due to fluctuations in temperature and density.

There are a few lake types and devices you can use to identify where the thermocline is located.

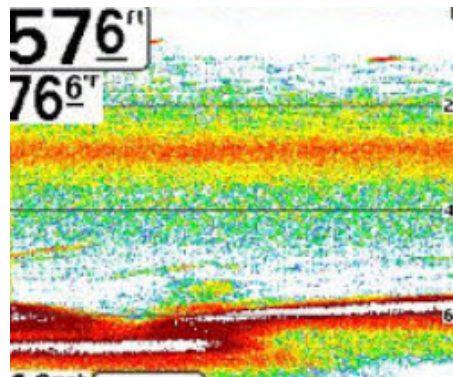
- Shallow lakes are unlikely to have a thermocline.
- Lakes that get down to 40 and 50 can be patterned prior to fishing by looking at the structure of the lake. They will usually begin in lower basins of the lake, typically after the second sharp break line.
- Deep lakes will definitely have a thermocline. There can be a significant drop in temp in a short amount of depth. Sometimes 10 degrees in only 10 feet or less.
- A water temperature gauge is the most accurate device to determine where the thermocline layer starts. They attach quickly to a fishing line and measure temps every five feet as they travel downward.

Electronics are able to hone into the thermocline in a couple of ways.

Bait fish stage just above the thermocline due to the oxygen depletion that occurs below it. When you see them lined up on your graph at a specific depth, its key indicator of the thermocline edge.



Another technique is to crank up the sensitivity on your sonar. This will highlight the thermocline as a band across your screen. Use the graph to determine the depth and the width of the band.



How do fish relate to the thermocline? Babe Winkelman called out the importance of edges and shared the concept of a **thermal edge** that the fish stage along at our March meeting.

- Oxygen depletion below the thermocline forces plankton and organisms up onto and above this edge, which attracts bait fish and our fish friend the Walleye.
- The fish will relate to these edges as if they are the lake bottom.
- Once you've located the depth of the thermocline, begin searching out humps, and banks that align with that depth. When you find the right structure at that depth, you will narrow down the prime locations where the walleyes are staging.

Lake Turnover

As we head into fall, air temperatures begin to cool, along with the surface water. As it cools, it becomes denser and eventually become colder than the water below it. At this point it will sink to the bottom of the lake causing the turnover.

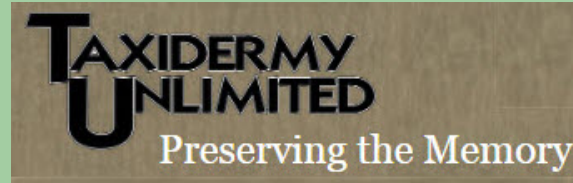
Then the cold deep water of the **Hypolimnion layer** that was at the bottom of the lake all summer will rotate to the surface. The rotation brings decaying matter and bottom gases up to the surface as well, along with their stinky smells.

- These smells are one way to tell when a lake is turning over.
- Another option is to pull out your temperature gauge and check the water column. When the warmer layer is nearing the same temp as the lower, you can expect it to occur shortly.
- You can also identify turnover by measuring water clarity with a Secchi Disk. Start by taking a reading in September as a base line and when you begin measuring a clarity reduction you will be on top of the turnover.
- You will know when the turnover is complete when the surface temperature reaches 39 degrees. Water is at its highest density at this temp, so if the surface is 39 degrees, the entire water column will be as well.
- Water clarity readings should also be deeper than they have been all summer,

Most Minnesota lakes begin turning over in mid-October and the turnover is actually good for the lakes and fish. It redistributes nutrients from the lower levels to the upper levels and brings oxygen back to the lower levels. However it may be a challenge to catch fish due to this disruption. Now that the lake is completely oxygenated, the bait fish are free to relocate in any part of the lake, which can spread out the concentrated schools of walleye. The process can take a few days to a few weeks to complete depending on the lake size and location.

The turnover cycle happens again during the spring when the hard water begins to melt and warm up. We will take a look at this change next spring when we are gearing up for opener.

Thank You *LUNKER* Sponsors!



Guest Speaker Re-cap Dr James Burnham and John Arms

Our Great Outdoors - Adapting in the Millennial Age

September's guest speakers Dr. James Burnham from the Minnesota DNR, who leads the R3 program and John Arms who is an outdoorsman and conservationist who has been active in the study and support of the R3 community.

The program is focused on recruitment, retention and reactivation (R3), of people to outdoor activity, due to the declining number of participants we are experiencing. Their goal is to connect the next generations to these activities by helping them find the information and learn the skills needed to enjoy and participate in everything Minnesota has to offer.

Who are the Next Generation?

The Millennial generation population is approximately 80 million strong. They grew up in and lead a digital life. Their library is Google, their store is Amazon, they hang out with their friends on Facebook, they pick up their smart phone 45 times a day.

Why are they so important to the R3 program?

Minnesota and the entire nation are losing Hunters and Anglers in massive numbers. The Boomers are aging and the Millennial's are not filling the gap.

Inside the Numbers

Hunting and fishing numbers peaked in the 80's at around 18 million participants. Hunters and Anglers have been on the decline nationally, since that peak.

- Projections for 2025 are 12 million participants down 6 million from the 18 million in 1980.
- Small game is down from 7.3 million to 3.5 million.
- An Angler's average fishing days have decreased to 13 from 17 since 2011.

Four states are seeing an increase (per capita) - Alabama, Mississippi, North Dakota and Oklahoma

Minnesota has experienced flat license sales since the 90's but per capita it's measure is

down. We are not tapping into the growing population.

Impacts:

- Youth participation rates are down over the past 10 years.
- DNR will have to cut funding due to lack of youth participation in Duck and Pheasant Hunting.
- 94% of revenue comes from License Sales.
- Land maintenance and purchasing is funded by 35 million from the federal Government and excise tax on sporting equipment sales.

Initiatives, R3 - Recruitment, Retention, and Reactivation.

Decreases are not due to a lack of trying at the MN DNR.

- They initiated a 20 year planning project.
- Are reaching out to the community to get them more involved.
- Removing barriers for new participants who don't have Gear, Skills or Access.
- Targeting the expected 700,000 population increase in the metro area.
- Women segment is strong with an increase of 20,000 since 2015.
- Mothers who hunt or fish increase the likely hood of their children hunting or fishing.

What can we do?

- Introduce someone new to share our experience.
- Help them get started with Gear, Skills and Access.
- Evaluate what you are doing , how can you become a sponsor to someone new.

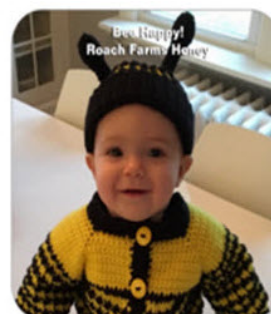
Dale Meinders

Board Member of Twin Cities Walleyes Unlimited

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Conservation Corner

Ever since they were first found in the Duluth/ Superior harbor in 1989, Zebra Mussels have been one of Minnesota's most prevalent aquatic invasive species (AIS). Female zebra mussels can lay 100,000-500,000 eggs in a single year and consume tiny food particles in the water through filter feeding. The absence of these particles make it difficult for smaller species to find food and can cause significant damage to a body of water's food chain. Zebra Mussels not only harm other lake species but humans as well. By attaching to hulls and motors, zebra mussels can reduce efficiency and performance in boats and can also clog irrigation intakes and other pipes. Swimmers can also cut themselves on the razor shells of these mussels when they attach to rocks, ladders, and swim rafts. To prevent the spread of Zebra Mussels, be sure to follow safe use-techniques, including the following:

- **Clean any weeds, debris, or visibly attached zebra mussels from your boat or trailer.**
- **Drain your livewells and baitwells and keep drain plugs out while traveling -Dispose of any unwanted bait in trash.**
- **Dry docks, lifts and other equipment for at least 21 days before putting it into another body of water.**

Will Roach
Board Member of Twin Cities Walleyes Unlimited

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