

Minutes Fish & Waterways Committee meeting May 28, 2021

Present – on Phone call in -

In Office – Larry Raymer, John Purdin, Linda & Steve Flickinger, Tracy Lofstrom, Gary Williams 1st hour, Rudd Turner 2nd hour.

The meeting was called to order at 1:05 pm

Agenda for F&W meeting Friday May 28 1pm

1. Blue Green Algae BGA

Steve detailed the timeline of the water sampling of Seabreeze Lake. Per protocol of the WA Freshwater Algae Control Program, photos were sent to the Director of the Program; she recommended that a water sample be sent in. A water sample was sent 4-28-21 to WA Dept. of Ecology. Test results came back 5-5-21 positive for toxic bloom Blue Green Algae. Cyanobacteria microcystin (Genus variety) was found to be very high: the recreational guide is 8 ppb (parts per billion), this sample had 276 ppb. There was also a minimal amount of Cyanobacteria saxitoxin 0.024 ppb, with a recreational guide of 75 ppb. Results were forwarded 5-5-21 to Larry Raymer, Tracy Lofstrom, and Rudd Turner.

WA ECY forwarded their results to WA DOH and WDFW; they wanted to find out the species of bacteria of the microcystin variety...to determine the level of severity – severe, moderate, or mild. A representative of WDFW based here in Nahcotta, with title of Coastal Harmful Algal Bloom Specialist (Razor Clams, Oysters, etc.) took a water sample from Seabreeze Lake 5-10-21.

She reported preliminary results 5-14-21 with 3 photo slides as possibly species Dolichospermum/Anabaena.

Rudd reported to the Board of Trustees at their monthly meeting 5-15-21 that Blue Green Algae was confirmed in Seabreeze Lake.

Upon receipt of the slide photos from WDFW, John Purdin reviewed them and keyed out the species as Anabaena circinalis. On 5-26-21 WDFW results were species Dolichospermum/Anabaena circinale; their results concurred with John's findings.

This is the first time that toxic BGA Blue Green Algae bloom has been confirmed in Seabreeze Lake / or any body of water in Surfside.

Cyanobacteria, BGA, is always present in the water, year around. Depending on conditions is when a toxic bloom BGA may occur – warm water, calm water, generally water not circulating. The toxic bloom can come and go several times a season. Generally statewide toxic bloom BGA appears in the summer – July to October. It is surprising we had such an early in the season toxic bloom occur, April 28 & 29, and May 8 – 10; April we had very little rain and very warm temperatures for a few days in mid April.

John Purdin spoke for about a half hour. Throughout that time attendees asked questions. John is very knowledgeable about water health. We all learned a lot from him. John has a degree from UW in Oceanography. His career was doing quality water analysis in New York state, and directing a Lab in Florida. During his career he analyzed water from around the globe.

John stated that when he first heard about the blue green algae bloom in Sea Breeze Lake he was skeptical, however when he saw the slides and the testing results he was concerned. He told the attendees that this was a bad one. He spoke of the nature of the specific algae. This

type is nitrogen fixing, which increases the difficulty to find effective controls. It has a protective sheath that also makes mediation difficult. According to John it is a neurotoxin which can cause brain lesions. John also mentioned the recently released scientific research article that solved the mystery of eagle die offs in the 1990s in the Carolinas. The study linked toxic blue green algae bloom and the food chain with the deaths. In the study it was shown that they used a chemical herbicide to kill off the BGA bloom. This herbicide stripped off the protective sheath of the algae which resulted in die off of the bloom. Unfortunately the study found that the death of the bloom released a massive influx of toxin into the environment. This toxin entered the food chain. So although this was not an immediate die off of the Eagles, over time the toxin made its way up the food chain and decimated the eagle population. Here are a couple links to articles on recent studies that talk about the mysterious Bald Eagle die offs in the 1990's.

<https://academictimes.com/neurotoxin-is-the-culprit-behind-decades-of-mysterious-bald-eagle-deaths>

<https://www.sciencenews.org/article/bald-eagle-mysterious-die-offs-chemical-toxin-found>

Although the Algae referenced in the papers is not the exact same type of toxic BGA found in Seabreeze Lake, it has similar characteristics. Being aware of the dangers mentioned in the study will be important as we move forward with a plan to address the toxic BGA in our waters. John stressed that this research further supports that prevention is the only safe approach, as opposed to immediate kill off of BGA – which would result in massive toxin release.

John did elaborate on the nitrogen fixing issue. Culturally we will need to look at reducing phosphates to possibly reduce the bloom.

Knowing that, we need to acknowledge that there is a strong possibility that the heavy flooding this winter of the homes in the north and west end of Surfside which resulted in many septic being under water may have been a factor in the early springtime toxic bloom. There was discussion regarding the loss of vegetation and trees over 2019 and 2020 which resulted in excess runoff.

Discussion then turned to what can be done. It was noted that caution signage is up at all public access points on Seabreeze Lake. WDFW gave Surfside warning signs from the Department of Health. There was no cost involved.

Steve suggested that we should inform all members via the Weekender. Gary Williams responded that not many members read the Weekender.

Steve then mentioned that all members who reside on the lake should be mailed a notice. Gary agreed that this was something to consider, however he thought a door hanger could be an option. Members of the committee mentioned that perhaps members along all bodies of water in Surfside should be made aware. Notifying them would allow them to be alert for possible algae bloom in other bodies of water so the committee would be able to follow up.

Then talk turned to treatment options. The committee members wanted to make the trustees aware that this is not a one and done solution. This problem will likely be a long process involving a plan that will implement more than one element. The committee committed to further investigation and will advise the board as information is gathered.

The committee advised that the only immediate action that can be taken is cultural. We need to inform all members to maintain their septic systems, to limit chemical treatments of properties (fertilizers ,herbicides, pesticides). Improvement in the development of vegetation along the water's edge will decrease runoff and shade the waters. We need to inform

members to enlist their assistance in reversing this deterioration of the health of our waters. Members of the committee noted that these ideas were part of the information that Kathleen Sayce and Kim Patten reported to the Surfside HOA in 2007/2008. It was stressed that we needed to protect the riparian area - removing invasive and noxious weeds (yellow flag iris was mentioned specifically by the committee- it only is eradicated by persistent mechanical means) and planting stripped waterside properties.

During this discussion, the report "Health Study of Bodies of Water in Surfside" which was submitted to the board via the F&W July 2020 minutes also was referenced.

Steve handed out copies of correspondence with Washington Department of Ecology which included some recommendations.

1. Stop stocking fish
2. The grass carp should be removed
3. Consider controlling only invasive aquatic plants, not all plants including native plants which help to absorb the nitrate and phosphate nutrients.

This discussion will continue and the committee is committed to pursuing a plan to improve the health of all Surfside waters. Larry pointed out that he would like to see a study done by professionals regarding the overall health of the bodies of water here in Surfside. Rudd encouraged members of the committee to put together a budget request for such a study to be considered.

2. Fish

With the date of the July 3, 2021 kids Fishing Derby fast approaching, Tracy urged the committee to make a decision about the planting of fish that is typically done a month before the derby.

In light of the information we have from the WA Dept of Ecology and Dept of Fish and Wildlife, the committee was unsure about planting in Seabreeze Lake. After much discussion it was decided to stock fewer than normal in Seabreeze Lake, and to divide those among the Canal, Twin Lakes, and Deer Lake.

During the lively discussion Rudd pressed for a county response on the toxic BGA. Larry was recently at a County Flood Control Advisory meeting, with County officials and he said when the topic came up the response was that the Surfside waters are Surfside's responsibilities. They are not interested in involvement.

The committee is thrilled to have a Fishing Derby this year. As a precaution we requested that the flyer from Oregon F&W regarding fishing and eating fish from waters with toxic bloom BGA be distributed. It was agreed among attendees that the flyer would be included in the registration packet.

John brought up the promotion of catch and release. There was some positive discussion about this. Rudd mentioned it might be doable in future Fishing Derbies with different prize levels for catch and release during the event.

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3. Bank Erosion

Larry led this discussion. He informed the committee of the detrimental effect of the current practice of cutting vegetation down to and close to the waters edge. This has caused loss of bank soil along the water. Sometimes this loss over the years has been not in inches, but in feet! Some areas have had a 4-6 feet of bank loss. As a consequence, the CARL 25' buffer from waters edge has moved inland. Vegetation replanting per the CARL ordinance is recommended.

Larry explained the difference in the Canal and Seabreeze Lake; the Canal is deeper with steeper banks, and Seabreeze is a more gradual slope and shallower. Managing the water release from these lakes is also a factor in erosion. Larry has had and will continue to have interaction with Gill to watch the water levels to try to reduce the effect on erosion.

4. Larry's meeting with the County

Larry is one of 5 seats on the Pacific County Flood Advisory Board; they have quarterly meetings and had one in the last week. Larry revisited the County's discussion of the Outfalls. There is a new idea from the County regarding the north/350th outfall. The idea is to extend the outfall beyond the dunes on county land south and west of the outfall – by angling from the outfall to the southwest, and then directly west. This should reduce the erosion at the outfall and reduce if not eliminate the number of times in the winter to “clean out” the county has to do. At present this idea is only in the talking phase – no timeline for the actual project.

5. CARL – Pacific County Ordinance No. 180

Steve wrote to Zane Johnson, Pacific County Planner, asking if there was language regarding clearing vegetation and cutting trees down to the ground in the 25' Buffer/Riparian Protected zone inland from waters edge. Steve handed out Zane's response. Steve also printed out and highlighted the areas of CARL that applied to Surfside. Our Organization has not been consistent in compliance and it is important that we be better educated on this ordinance to assure both compliance and consistency guide all of SHOA.

Tracy let the attendees know that she is working with the County to create a series of workshops that will hopefully begin in August to help get all of SHOA “on the same page” and clarify our responsibilities. The committee members expressed their appreciation to Tracy. We are eager to get this information clarified and pass the info to our members to create an enthusiastic alliance to protect and improve our waterways for recreation and the ecosystems they support.

The next F&W meeting will be Friday June 25th 1:00pm.

The meeting was adjourned at 3:10pm.