Big Sand Lake

Association

Big Sand Lake stakeholders meeting—December 11, 2017

Attendees:
Pamula Toshner-- WI DNR- Spooner
Craig Roberts—WI DNR- Spooner

St Croix Environmental and Natural Resources
Jeremy Bloomquist –Water Resources Manager
Don Taylor Natural Resources Manager
Chad Songetay—Water Resource Technician

Dave Ferris--Burnett County Lakes and Streams

Dennis Loots- BSLA
Jim Anderson- BSLA
Ginni Patnaude—BSLA

A wide-ranging conversation occurred using the questions drafted by BSLA to guide the conversation. A copy of the questions is included as Appendix 1

Fish and stocking.

- The Tribe continues to take excess walleyes from their hatchery at the end of the year and put them in Big Sand Lake. In 2017, 242,205 walleye fry were added along with 1708 large fingerlings. Over the last 3 years over 1 million fry and nearly 6,000 large fingerlings have been placed.
- The last fish survey done by the DNR was 2009 and another is scheduled for 2021, a 12-year cycle. The tribe also does a fish survey every other year.
- We did confirm that the DNR will not stock walleye in BSL due to lack of spawning beds.
- Mayflies are a meaningful food source for our fish population and one of our board members has indicated concern over the mayfly hatch thinking it was much smaller than in the past. Neither the DNR or the Tribe expressed concern over the hatch noting that wind conditions can often direct the hatch to one shore leaving the opposite shore seemingly bare. Other Board members have indicated on numerous occasions that we

are seeing meaningful mayfly hatches but agreed that one year it was the north shore and the next it could be the south shore.

- We confirmed that neither the Tribe or DNR felt there was anything to gain by radio tracking northern pike.
- Don Button has suggested we consider stocking the lake with Muskie. Craig indicated he contacted Ken Simonson (need correct name) and that WI was not going to introduce Muskie to any more lakes. Both the Tribe and DNR felt the lake did not have enough food stock to feed a meaningful Muskie population. If the goal was to reduce bass population it should be done by encouraging people to keep and eat more bass.

Water quality:

- The DNR did do a Zebra Mussel suitability test on Big Sand in 2017. Results are not back yet which is good indicator that we do not have veligers (baby Zebra mussel), as the lab generally calls the DNR with results if negative. Big Sand will again be monitored in 2018. We were given a map of area lakes that are being monitored and is Appendix 3
- It was noted that the calcium level in our lake water has not been measured and that BSLA might consider hiring Northern Lakes laboratory to perform this test. Both the DNR and Tribe would like the results.
- Jeremy provided us a copy of what tests they perform on our lake water and that list is Appendix 2 to this report. These results are provided to the EPA but generally not available to others. Jeremy will provide the data upon request,
- Per the Tribe, BSL is the best of the lakes they monitor.
- Water level is high as the result of a beaver dam on the outlet. The property owner will not allow the Tribe or others to destroy the dam, which the property owners legal right.
- The tribe is aware of cyanobacteria and the potential for blue green algae, but they do not have a concern for it on Big Sand. Dave agreed that Big Sand does not have a problem with it.
- Tom Selbin had been providing Secchi data to the DNR but that stopped in 2016. I was successful in reaching Tom and he indicated the reading were taken and reported to the DNR even though they are not showing up on the website. Tom has reached out to his contact to see where the glitch might be occurring.

What future activities are planned for Big Sand Lake.

- None by the Tribe other than routine monitoring.
- A request was made of the DNR to improve the boat ramp at the landing as there is a deep drop off at the end of the concrete ramp and that the ramp has a real slant to it making it difficult to load boats. The dock has a real list to it as well. Pam indicated the request would be made of Toby Clark, a DNR person responsible for boat landings.

Lake Threats:

- A discussion by all parties on Typhus X cattails. The cattails have not been categorized as an invasive species and neither the Tribe, DNR or Burnett County are doing anything

to restrain their growth. One suggestion was that we have a survey done of the lake to get a baseline of our cat tail beds and then periodically check the beds against the baseline. From general observation by the people present it not seem to any that the beds have expanded over the years.

- Main threat to lake is the introduction of invasive species. Pam made us aware of WI grant program for up to $4,000 to hire a boat monitoring employee at the boat landing. A requirement would be 200 volunteer hours BSLA. Everyone suggested that BSLA consider establishing a boat wash station at the landing. There would be signage and equipment to wash boat before and after it is in the lake. Equipment consists of spray cannister including a very diluted bleach and water solution (2 oz. bleach to 1 gal of water) and some long handle brushes. The boat landings on Big, Middle and lower McKenzie landings would be a good example to see. During the summer months it would require a person to refill the cannister every few days.

App 1

All questions are regarding Big Sand Lake

Questions for Jeremy
St Croix Chippewa Indians

- Fish and stocking
  - Was there any stocking of walleyes in 2017?
  - Are there any plans to stock Walleyes or other species in Big Sand Lake in 2018?
    - Have there been any positive results?
  - Confirm that the Tribe is not doing a radio tracking survey of Northern Pike
  - One of our advisors is concerned over the size of Mayfly hatches and has suggested Mayfly seeding? Does the Tribe have an opinion?
  - One lake property owner has suggested stocking the lake with Muskie, which is more of warm water fish than walleye and would eat the smaller, stunted growth fish
    - What would you expect the impact of introducing Muskies into the lake to be?
    - Would you be in favor of doing this?

- Water quality
  - What measurements do you take when you monitor Big Sand Lake?
  - What trends have you seen?
    - Is the health of BSL improving/declining or staying the same?
  - Do you monitor the cyanobacteria population in the lake? Is the population expanding or stable or of a concern?
  - Are you satisfied with the water flow created by the new culvert placed in Sand Lake Road?
  - What would be the proper way to request select lake data that you may have accumulated i.e. lake water temperature?

- What future activities are planned for Big Sand Lake?
  - If there was one thing you could do on BSL what would that be?

- Professor Button has been doing independent research on various aspects of the lake. Is this perceived as beneficial? Or, of little use to the Tribe in your lake management activities?

- Lake threats
  - Thoughts on Typhus X cattails. Invasive species?
    - Do we need to take action?
  - Are there further actions at the landing we can do to help protect the lake?
  - What do you see as the major threats to the health of Big Sand Lake.
    - How can they be addressed?

- Cooperation
  - How can the Tribe and BSLA work better together?
  - Are there things we can do to supplement any work you currently are doing?

App 1

Questions for Pamela and Craig
Wisconsin DNR

Fish and stocking

- Is it still the position of the DNR that no further stocking of walleyes will be done in Big Sand Lake?
- When is the next planned fish survey?
    - How is the schedule set and can it be changed?
- One of our advisors is concerned over the size of Mayfly hatches and has suggested Mayfly seeding? Does the DNR have an opinion on the topic?
- One lake property owner has suggested stocking the lake with Muskie, which is more of a warm water fish than walleye and they would eat many of the smaller fish.
    - What would you expect the impact of introducing Muskies into the lake to be?
    - Would you be in favor of doing this?
    - Any other species to be considered for stocking, such as perch.

Water quality

- Is the DNR involved with monitoring water or anything else on Big Sand Lake in 2018? What is measured periodically?
- What trends in area lakes have you seen?
- Are there additional activities we or they should be doing?

Lake threats

- Thoughts on Typhus X cattails. Are they an invasive species?
    - Do we need to take action?
- Are there further actions at the landing we can do to help protect the lake?
- What do you see as the major threats to the health of Big Sand Lake
- What is happening at other lakes in the area that may impact Big Sand?

Cooperation

- How can the DNR and BSLA work better together.
- If there was one thing you could do on BSL what would that be?

App 1

Questions for Dave
Burnett County

Fish and stocking

- Does Burnett County have any involvement in monitoring of fish stocks or the stocking of fish in lakes? If so, help us understand the County's role

Water quality

- Is Burnett County involved with monitoring water quality?
- What about invasive species in the lake?
- What trends in area lakes have you seen?

Lake threats

- Thoughts on Typhus X cattails. Are they an invasive species? Any County activities regarding the species
  - Do lake property owners need to act?
- Are there further actions at the landing we can do to help protect the lake?
- What do you see as the major threats to the health of Big Sand Lake
- What is happening at other lakes in the area that may impact Big Sand?

Cooperation

- How can the Burnett County and BSLA work better together?
- If there was one thing you could do for BSL what would that be?

App 2

Appendix 1. Parameters sampled by type and frequency for lakes (L) and Streams (S).

Parameters	Approximate date of Collection (Fisheries for lakes will be a spring or fall)							Remarks
	Apr	May	June	July	Aug	Sep	Oct	
Total Kjeldahl Nitrogen				All				0–0.5 meter from the surface
Alkalinity			All	All	All			
Sulfate			S	S	S			
orthophosphorous			S	S	S			
Dissolved oxygen, pH, temperature, specific conductance, turbidity, TDS	All	All	All	All	All	All	All	Vertical profiles are defined by measuring the five parameters from 2 feet below the lake surface to the bottom at 2 foot intervals on lakes 30 feet deep or less. Lakes > 30 feet deep start at 2 feet below the surface and are measured at 5 foot intervals to the bottom.
Temperature	All	All	All	All	All	All	All	Install hobos at each lake (spring to fall)
Total phosphorus and Total nitrogen			All	All	All			Combined sample from both depths 0.5 meter from surface and 0.5 meter from bottom.
Chlorophyll a			All	All	All			0 – 0.5 meter from the surface. Ch-a vertical profile.
Phytoplankton			St16, 18 & 24	St16, 18 & 24	St16, 18 & 24			Use data to compare with DNR for Clam River
Secchi depth	L	L	L	L	L	L	L	Index of clarity
Transparency tube	S	S	S	S	S	S	S	Measure of Clarity
Macroinvertebrate						S	S	
Fisheries		L	S		L	L		