

**Beecher and Upper Lakes Public Inland Lake Protection and  
Rehabilitation District Board of Commissioners Fall Meeting  
(10/24/2020), Via Zoom Conference**

**Attendees:**

Lindi Magnuson, Board of Commissioners Chair Person (via Zoom)  
 Jim Johnson, Board of Commissioners Secretary (via Zoom)  
 David Paulson, Supervisor – Town of Beecher Representative (via Zoom)  
 Cary (Clancy) Whiting, Marinette County Board Representative (via Zoom)

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AGENDA	
9:00	1. Call to Order
9:00-9:05	2. Approval of Agenda
9:05– 9:20	3. Approval of Minutes
9:20-9:50	4. Commissioner Reports <ul style="list-style-type: none"> <li>• Chairperson Report</li> <li>• Secretary Report</li> <li>• Treasurers Report</li> <li>• Beecher Town Board Representative</li> <li>• Marinette County Supervisor Representative</li> </ul>
9:50-10:10	5. Committee Reports <ul style="list-style-type: none"> <li>• Aquatic Plant Committee</li> <li>• Boundaries Committee</li> <li>• Communication Committee</li> <li>• Shoreline Protection Committee</li> <li>• Fish Habitat Committee</li> </ul>
10:10	6. Unfinished business: <ul style="list-style-type: none"> <li>• Audit results</li> </ul>
10:10-10:30	7. New business: <ul style="list-style-type: none"> <li>• Insurance payment approval</li> </ul>
	8. Announcements
10:30	9. Adjournment
10:30	10. Open Forum – District Property Owners

**Call to Order:**

Meeting was called to order by Lindi Magnuson at 9:02 AM

**Approval of Agenda:**

A motion to approve the Agenda was made by Jim Johnson and seconded by Amy Koomis. Motion approved - unanimously.

**Approval of Minutes:**

A motion to approve the minutes of the July 17<sup>th</sup>, 2020 (as sent to BOC members via email) came from Amy Koomis and was seconded by Lindi Magnuson. Motion approved – unanimously

### **Commissioners Reports:**

*Chairperson Report* – Lindi mentioned that she is still working on getting a plaque for John Keeley to accompany the memorial tree the board donated to the town of Beecher. Efforts to get new checks for the District that have two signatures are ongoing with our banking institution. Lindi also reported that she had been in contact with the Town of Beecher Clerk to discuss the tax payments for last year. She mentioned that there were still 4 properties that needed to pay and would probably be double billed this coming year.

*Secretary Report* – Jim Johnson reported that he had sent in the insurance forms for the Ansay and Associates so we could get billed for our next year's coverage.

*Treasurers Report* – Amy Koomis shared with the group the October 2020 balance sheet. The report showed **Current Funds on Hand** to be **\$48,660** which matches the current bank statement. Net profits from the Annual Picnic and auction were \$1,780. Amy mentioned that last year's insurance bill was \$917. A motion was made by Amy Koomis to pay the invoice when it arrived if it were within 10% of last year's figure. The motion was seconded by Jim Johnson and was approved – unanimously.

*Beecher Town Board Representative* – David Paulson reported that there will be a new Town of Beecher website which will look very much like that of Middle Inlet or Wausaukee's in the near future.

*Marinette County Supervisor Representative* - Cary (Clancy) Whiting reported on changes in personnel at Marinette County that could impact the departments the District deals with.

### **Committee Reports:**

*Aquatic Plant Committee* – Joe Siudzinski (via Zoom) reported that there was no more work related to the Grant. His full written report can be seen in Appendix I and II. The committee recommends going to a 12 inch pipe rather than the 10 inch that was in the original estimate of \$50,000. This will add an additional \$5,600 to the project. Lindi Magnuson then made the motion to approve funding for the 12 inch pipe as long as the project costs don't exceed 5% in overruns. Amy Koomis seconded the motion and it passed unanimously. The Board recommended that Joe Siudzinski give a presentation to the Town of Beecher regarding the proposed second valve in the dam.

*Boundaries Committee* - No Report at this time.

*Communications Committee* - No Report at this time.

*Shoreline Protection Committee - No Report at this time.*

*Fish Habitat Committee – No Report at this time.*

**Unfinished Business:**

Glenn Schilling dropped off the results of the 2020 yearly audit to Lindi Magnuson. He certified that all of the financials are in good order. The 2021 audit will be conducted at the time of the Open Forum so results can be presented to the property owners.

**New Business:**

Board of Commissioners confirmed the following positions for the 2021 term;  
Chairperson (Lindi Magnuson), starting third year of a three year term  
Treasurer (Amy Koomis), starting first year of a three year term  
Secretary (Jim Johnson), starting second year of a three year term

**Announcements:**

Lindi Magnuson announced that the next BOC meeting would be Jan 16<sup>th</sup>, 2021. Due to continue Covid-19 concerns the meeting will be conducted via zoom.

**Adjournment:**

Lindi Magnuson made a motion to adjourn the meeting. Amy Koomis seconded the motion. Motion approved unanimously.

**Open Forum – District Property Owners:**

No property owners that were not committee chairpersons were present at this time on the Zoom call.

**Appendix I**

**Aquatic Plant Committee Update – 10 inch vs 12 inch pipe  
(Board Update)**

Hello All-

Here is the analysis; Chuck did on the 12 inch pipe versus a 10 inch pipe. I may have sent in a prior e-mail, apologize for the duplication. The suggestion that was brought up at the Annual Meeting. We also have a cost increase estimate of \$5,600 from David Tenor of DTC, Inc. to go to 12 inch versus 10 inch.

I also have a couple emails into to Miles Winkler at the WDNR asking for his initial opinion on the 12 inch pipe proposal, whether he would support

If we chose to go that route. I attached that information, note the process we would like to use opening

and closing the valves that was included.

We also met with David Paulson at the spillway in September to go over the project and were successful at exercising the valves, no issues with them.

We open the valves and ran them for 24 hours and then closed them.

Grant is closed and finished, check was dropped off to Amy in September as well. Plus \$3,600 more than we expected due to volunteer labor hour payment for the entire project

I should be available if questions, around 930-10:00 if needed Not looking for any decisions tomorrow. We need some future discussion and would like to get that done at the next Board meeting, i.e. 10 versus 12 inch pipe decision. Our initial thoughts are to execute the 12 inch option but we understand the cost concerns.

Interested in Board members opinion's on the issue.

Future plan would be make a decision on 12 inch versus 10 inch by the end of the year.

Change the drawings, have Chuck's assistance in writing the NR31 permit proposal, get that submitted in January, gain WNDR approvals, and work through the process of executing the permit requirements to be ready for 2021 drawdown.

Thanks

Joe Siudzinski  
Maintenance Planner/Outage Coordinator  
Georgia Pacific -Green Bay Broadway  
920-438-2923  
920-615-7019

## **Appendix II**

### **Beecher Lake Drain Analysis**

**09/17/2020**

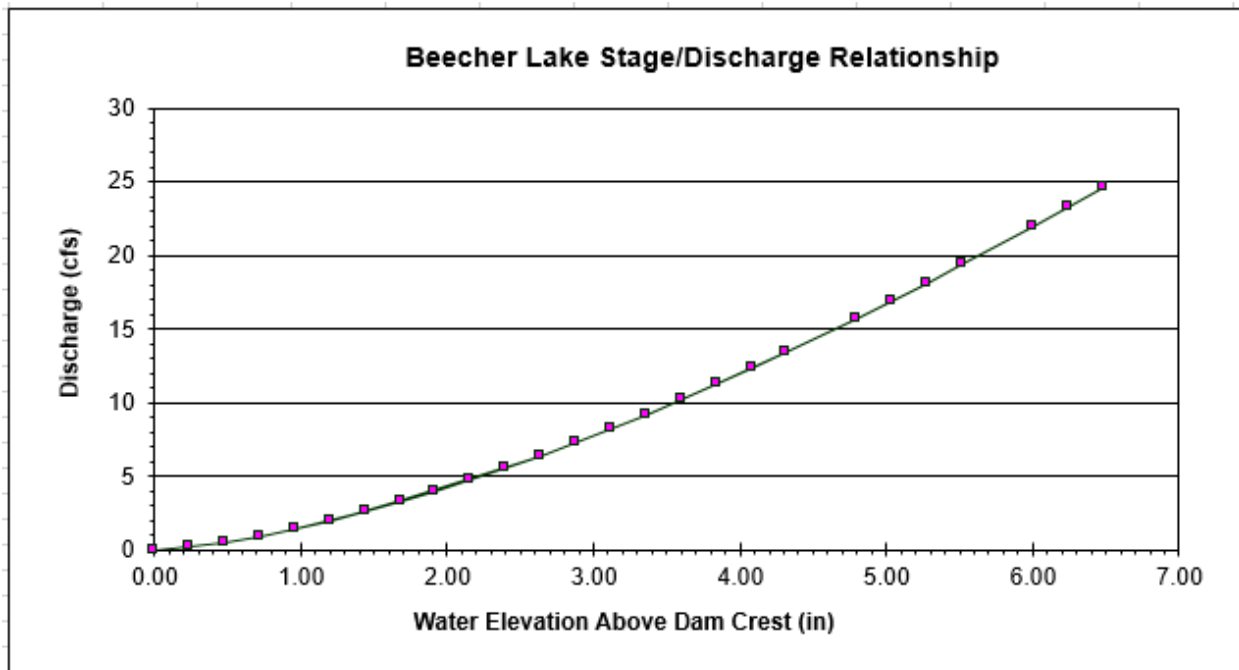
In the following spreadsheet I computed pipe flow for the existing 10" drain pipe and a potential 12" drain pipe, then computed the time to drain the lake assuming the addition of a new 10" pipe or a new 12" pipe. All calculations include "losses" due to the valves and bends in the pipe(s) so they should provide a good estimate.

Estimated Drain Discharge *													
Starting lake elevation	Hydraulic Head (ft)	Segment Volume (ac. ft)	10 inch			12 inch			10" + 10"		10" + 12"		
			Pipe flow (cfs)	Pipe flow (ac. ft/day)	Estimated days to drain**	Pipe flow (cfs)	Pipe flow (ac. ft/day)	Estimated days to drain**	Combined flow (cfs)	Estimated days to drain**	Combined flow (cfs)	Estimated days to drain**	
930.1	5.4	57.1	4.9	9.7	5.9	7.4	14.7	3.9	9.8	2.9	12.3	2.3	
929.1	4.4	51.2	4.4	8.7	5.9	6.6	13.1	3.9	8.8	2.9	11.0	2.3	
928.1	3.4	45.4	3.9	7.7	5.9	5.8	11.5	3.9	7.8	2.9	9.7	2.4	
927.1	2.4	39.6	3.2	6.3	6.2	4.9	9.7	4.1	6.4	3.1	8.1	2.5	
926.1	1.4	33.8	2.5	5.0	6.8	3.7	7.3	4.6	5.0	3.4	6.2	2.7	
925.1	0.4	30.0	1.3	2.6	11.6	2.0	4.0	7.6	2.6	5.8	3.3	4.6	
Total Days					42.3				28.0	21.2		16.8	

\* The table assumes no water flowing into the lake.

\*\* Pipe flow is used to calculate how many days it will take to drain each foot of water from the lake. As the lake level falls the drop in head pressure results in reduced outflow.

The following graph shows the relationship between lake level and discharge over the dam. This is based on weir flow equations and corrected (about 20% less than theoretical) based on actual flow measurements taken in the outlet stream. The actual is typically less than theoretical because of shallow water in the approach to the dam and vegetation in front of the spillway.



### Analysis

- Head pressure has a huge effect on discharge. The capacity of a drainpipe at full pool is 270% greater than the same pipe at low pool.
- Going from a 10" pipe to a 12" pipe increases capacity by about 50%
- When the lake level is one inch above the dam there is 1.75 cfs flowing out of the lake. Of course this means there is 1.75 cfs flowing into the lake as well. A 10 inch pipe can move about 1.3 cfs at full drawdown so it can't keep up and the water level will reach equilibrium about 6" above full drawdown. This tracks pretty well with what we saw in 2017.
- I did a rough estimate and a 3.3 inch rainfall (10-year rain event) should deliver around 90 acre-feet of water to the lake. If it was all delivered at once with the lake at maximum drawdown it

would raise the water level almost three feet. Of course the water is delivered over several days, so it would probably take a 10"+ 12" pipe combination about 14 days to drain off. The 10" + 10" combination would take about 18 days.

- Just a fun fact, when we were tracking water levels in 2013 and 2014 discharge over the dam was between 20 and 50 cfs for a few weeks during snow melt and spring rains... and it's wetter now! Re-filling the lake is not an issue.

- My recommendation? Go with the larger pipe if you can afford it. The extra 25% capacity might be the difference when base flow is high.