

BASS LAKE REHABILITATION DISTRICT
ST. CROIX COUNTY, WISCONSIN
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MINUTES OF THE BOARD OF COMMISSIONERS

Wednesday, September 11, 2019 6:00pm
St. Joseph Town Hall – 1337 County Road V

Commissioners Present: Bill Holmberg, Chair
Cecil Chally, Treasurer
Fred Young, Secretary
Tim Riemenschneider
Lynnae Thompson-Koats

Commissioners Absent: Rick Colbeth, Town of St. Joseph Representative (Steve Bohl
in attendance for Rick Colbeth)
Jim Endle, St. Croix County Board Representative

Residents in attendance: Jim Rouleau, Heidi Eckstrom, Terra Bastolich, Bill Lawson,
Regina Rippel, John Reling, Penny Chally, Len Fricke, Tom
Spaniol, Richard Koats, Hans Holmberg, Eric Golberg, Mark
Johnson, Cindy Johnson

1. Call to Order

Bill Holmberg called the Board of Commissioners Meeting to order at 6:02 PM. **Roll Call:** All Commissioners present, except for Commissioners Rick Colbeth and Jim Endle, who were absent [Steve Bohl arrived shortly after Call to Order in place of Rick Colbeth]. Pledge of Allegiance was recited. **A Motion** was made by Tim Riemenschneider to approve and adopt Agenda, which was seconded by Lynnae Thompson-Koats. Bill Holmberg noted that there was a request by a resident to have an item added to the Agenda, but the request was made after the Agenda had gone out for mailing, but it could still be addressed under Item 9 of the Agenda – Public Comment/Resident Concerns. **Motion passed.**

2. Secretary's Report

Copies of the unapproved draft minutes of the July 10, Commissioner's Meeting, Agenda for the September 11, 2019 Commissioners Meeting were previously distributed. Young noted that the mailing list was again reviewed for any updates per the process recommended by County office staff. **Motion** was made by Thompson-Koats to approve last month's minutes and Secretary's Report and seconded by Riemenschneider. **Motion passed.**

3. Treasurer's Report

Treasurer Cecil Chally reported that the checking account balance was \$16,379.83. Cecil Chally noted that there were still bills to be paid from Chad, one of the CBCW boat landing inspectors, for roughly \$2,000.00, as well as \$2,000.00 for the ILIDS camera operation. Chally also reported that there was a check from the Town of St.

Joseph in the amount of \$5,051.80 and another from Somerset in the amount of \$78.03. Chally mentioned that the bank contacted him when the patrol boat officer was cashing two checks that were due to him. There was also comment that attempts have been made to obtain a final bill from one of the boat landing inspectors. It was noted that a submittal has been made for a grant reimbursement of approximately \$3,000.00, and that there was no line of credit balance. **A Motion** to accept the Treasurer's Report was made by Riemenschneider and seconded by Young. **Motion Passed.**

4. Guest Presentation by Dan Funk of Informational Alternative Bass Lake Model with lake level projections by Dan Funk (not BLRD) per modeled climate forecasts, and Discussion.

Holmberg turned the floor over to Dan Funk for a presentation. Dan Funk discussed that he lives near Twin Lakes, that Twin Lakes is ten feet up from 1974, and there is discussion regarding potentially 18" of pumping – he noted that one property owner by Twin Lakes is pumping water out of her basement. Dan Funk presented that Bass Lake appears to be a seepage lake with no outlet, and that Bass Lake is quite a bit deeper than Twin Lakes.

Dan Funk noted his background is in electrical engineering.

Dan Funk explained that he had reviewed a United States Geological Survey that was done back in 2009 of the St. Croix area, and highlighted some of the information related to Twin Lakes in that USGS survey. He also indicated that he has worked at trying to come up with a lake level prediction model for Twin Lakes.

Dan Funk indicated that he attempted to calculate water that was being added to Twin Lakes (e.g. through precipitation, presumed ground water flow, waste water from a local treatment plant, etc) and water that was leaving the lake (ie. evaporation, seepage, etc.), and what relative impact those factors might have (as a percentage of total inflow or total outflow) and how that might lead to a prediction of total lake level increase or decrease, considering data obtained from various sources for the period between 1974-2018.

He noted that a case study published in Groundwater, Rinaldo-Lee 1980 concludes that Mounds Pond at the south end of Bass Lake does not affect the level of Bass Lake. A resident in attendance indicated agreement with that conclusion. Dan Funk indicated he was not in agreement with the case study in that regard.

Dan Funk indicated that in his effort to similarly prepare a lake level prediction model for Bass Lake he used many of the same presumptions that were made with regard to Twin Lakes.

Dan Funk also noted that in working on a Twin Lakes lake level prediction model, he obtained precipitation data from the Roberts, WI treatment plant for the period beginning Feb 2007 to present. He noted that prior to 2007, it was his understanding that there was no weather station data from Roberts; so, he used weather station data that was further out in Baldwin, WI. Dan Funk indicated he obtained evaporation data

from the St. Paul campus for the Twin Lakes model, and that in order to estimate evaporation from the lake, he multiplied the “pan evaporation rate” by .75.

There was brief discussion that pan evaporation data is a measure of the evaporation rate of water sitting in a pan during a given day at a given location, and that lake evaporation is often estimated by multiplying the “pan evaporation rate” by .75 [*Ed.* *Funk subsequently changed the multiplier to .77]. There was a notation that pan evaporation rate data for the model that Dan Funk prepared for Bass Lake came from the St. Paul campus.

Dan Funk discussed precipitation rates – with attention to various years as precipitation may impact lake level as reflected in his model. He indicated that it appears that from 1974-2018, the average rate of rainfall may be on an upward trend of 1” (i.e. an average of 32” of rain/yr may be trending toward an average 33” of rain/yr), and that the evaporation rate is slowing down– and that there may be a trend that 5” less water is evaporating in an “average year” (based on evaporation rate data from a six month period each year) than at the start of the 1974 to present timespan.

Dan Funk explained that the model that he has been working on estimates a seepage rate (outflow from a lake) based on hydraulic pressure increasing as a lake fills with water (presumably causing the lake level to fall back down due to the presumed increased pressure).

Dan Funk indicated that based on information obtained from the National Weather Service, which the NWS Service Coordination Hydrologist provided (with a notation that it was unclear whether the data is QC’d), Dan Funk explained that data suggests that the ground started to freeze in November last year, that the ground was fully thawed by April 1, and that with a snow pack having a liquid equivalent of 4” at the time of the thaw, the impact of the thaw of that snow pack might be concluded to act as a 4” hard rain on saturated soil, and that it may be further extrapolated that the thawing of that snow pack and the lake level measurement at that time suggests that the drainage area of Twin Lakes is similar to the size of the acreage of Twin Lakes (approximately somewhere between 458 to 523 acres, excluding the lake itself), not 2,800+ acres of drainage area as estimated in a 1995 DNR report. [*Ed.* *Per Funk, Twin Lakes watershed at 225 acres would result in 4.3 feet of increased lake level with assumed 4.1 inches of water run-off from the snowpack.]

Dan Funk noted that he estimated in his model that the drainage basin of Bass Lake is about the same size as Bass Lake – specifically that the that drainage basin is 300 acres. Cecil Chally noted that according to Land Management that 341 acres is reported basin.

Dan Funk noted that in preparing his model of Bass Lake, he presumed that two feet of water was pumped out of the lake when the pump was last turned on years ago. There was discussion that it seemed more likely that only 6” of water was pumped out of the lake when the pump was last turned on years ago (Lawson noted that he estimated that the pump was run 6 months and reduced the lake level by .25”/week in

that timeframe), so the lake level prediction model would be off by 1.2 feet, as prepared [Ed. *Dan Funk subsequently revised the model to account for only 6” of pumping – see additional ed. note below on predicted levels with revised model]. Dan Funk indicated that given this new information, he would be inclined to potentially adjust the seepage rate in the model of Bass Lake in order to account for the 1.5 feet discrepancy between what the model projects is the current lake level, as compared to the actual, current level of Bass Lake.

There was also discussion as to whether the model took into account a more rapid seepage rate when the lake level had been above the original high-water mark in the 1990s. There was also discussion that there appeared to be no calculation for run-off in the model.

Dan Funk also noted that 1998 presented data that was particularly puzzling, because prior to 1998, the official level of Bass Lake was much higher than what his model suggested that it should be. He noted that he came across DNR document that said that dam on Mounds Pond was removed in 1998, which may indicate a connection between Mounds Pond and the lake level of Bass Lake. There was discussion that the model prepared by Dan Funk predicts that the lake would reach the ordinary high-water mark in 2024 [Ed. *the model has since been revised and predicts a lake level of 884.0 in 2025 and 886.0 in 2030 assuming polynomial (x) trendline from 1972 to 2019; as of October 2019, the model predicted level of 883.6 ... the actual observed level in reality was in October 2019 was 884.8], and that it projects ever-slowing evaporation rates.

There was additional discussion that: humidity levels for time periods which there is no data, days of the year during which the lake is covered by ice (or precipitation/melt on top of the ice sheet), rainfall data following periods of drought, etc. are all variables that make an attempt to create a lake level prediction model very challenging – particularly given that variables occur concurrently. There was comment that there were 45 months prior to 1990 where precipitation was less than normal because children were able to play sand volleyball on beachfront that is typically covered by water because the lake level had dropped so low.

Bill Lawson explained his understanding that Bass Lake is on a huge pile of sand and it tilts to the SW. Bill Lawson noted that when bought his home in 1993, the lake went up 2 feet. Lawson explained that he felt that it was quite problematic to obtain accurate data for Bass Lake, noting that his rain gauge at home does not correlate with Baldwin, WI precipitation data.

John Reiling noted that he felt that public radio has done good work on evaluating Minnesota weather data trends, and that if you look at the last 20 years and assumed that 24” of rainfall would result in a corresponding lake level rise of the same rate, one may be mistaken as the lake has only come up 12” in those circumstances. There was further discussion that Bass Lake can have very localized precipitation events with a huge impact, which may not be reflected in any way in official weather station data.

There was discussion that there’s estimated to be 26-30 feet of clay below Twin Lakes.

There was additional discussion that the model does not account for ice-on/ice-off, and that the pan evaporation data is for only a 6 month period – so, the evaporation rate for the other 6 months of the year is not taken into account.

There was comment that it seems like the weather data suggests we are experiencing wet summers and a little more precipitation in recent years. It was noted that there are different methods to obtaining evaporation rates.

Thanks was offered to Dan Funk for his presentation, and it was discussed that this was a model that could have different presumptions (i.e. precip data, seepage rates, groundwater, drainage basin run-off etc) placed into it, and that different hypotheticals could be run, and that it was a way of attempting to try to create projections without having the benefit of actual data measurements from Bass Lake that would impact lake level.

5. **BLRD Lake Quality Planning and Grants**

Clean Boats, Clean Waters (CBCW) Grant: Holmberg reported CBCW is done for the season, that Chad finished up the week of Labor Day and is back attending the fall semester of coursework at River Falls, and reminded everyone that the other inspector went back early to college. Holmberg reported that he is still working to get his data into the website and a final invoice from Chad. Holmberg also reported that it appears that there have been enough volunteer hours contributed to satisfy the DNR grant (with Chad's time) – just over 200 hours. Holmberg noted that he is still waiting to get the other landing inspector's time logged.

LPT Grant: Holmberg noted that Thompson-Koats' costs were submitted for shoreline restoration project, and Holmberg will pursue cost reimbursement (apprx. \$500) for his shoreline restoration project. For any other qualifying, approved projects, assuming funding is available, and if work is completed before December 2020, and assuming all appropriate requirements are satisfied, the current LPT grant would potentially cover such projects. Thompson-Koats noted Engelhart's put their project on hold, because they wouldn't be able to complete it until next summer and there was discussion as to whether they may be aware that the grant has been extended. It was mentioned that the Van Dyk property didn't commence this year.

John Reiling noted that there was the large Coyle project, which it was discussed has been done for some time.

Tom will contact DNR about whether they will contact Schmitt Timber to determine whether logs are available for a crib build this winter. It was discussed that the intention would be to try to get cribs in as early as possible (conditions on ice, weather and volunteer efforts).

Lake Pumping Feasibility: Holmberg reminded everyone that biggest issue remains is the challenge of getting DNR permission for water pumping. Holmberg noted that zebra mussel veligers have not been present in the samples that have been recently

taken, and that phosphorus levels have also been measured and recorded. Holmberg also will endeavor to speak with DNR about what specific phosphorus level would be acceptable to pump. Holmberg noted that attempts are being made to measure these levels at the pump intake. There was discussion that there was a rope that was fairly long that came up, near the pump that was presumably from the anchor of a boat. There was comment from a resident that it feels like pumping efforts would be “spinning our wheels.” Holmberg noted that if pumping can only occur 5-6 months of the year, it would be unlikely that the pumping with the current pump and DNR restriction of 1,000,000 gallons/day could outpace natural lake level rise – if the model regarding lake level prepared by Dan Funk without any modifications to that model is to be believed. Holmberg noted that he felt it would make sense to potentially look into FEMA grants that would potentially be allowable. Tom Spaniol noted that Bass Lake is already in the FEMA book – meaning FEMA has noted that Bass Lake has a propensity to flood.

There was an inquiry as to how decision would be made regarding pumping. Holmberg noted that if the BLRD were to get DNR approval to pump, the pumping would occur when the lake level is at 886.1 ft – assuming, of course, that the BLRD were to make that decision. There was discussion that, ideally, this would be a decision at an Annual Meeting of the residents of the BLRD, and Bill Lawson noted that the last time the pump was turned on years ago, it was his recollection that the matter was voted upon at an annual meeting. Holmberg opined that perhaps it could be negotiated with the DNR whether pumping might occur at a lower level than 886.1 feet.

6. Ordinance Enforcement, Landing/Signage, Fisheries

Riemenschneider noted that enforcement is over for the season with 49 slow, no-wake contacts. Riemenschneider also reported that there were 112 hours of service this year, that there were no reported slow, no-wake violations after August 9th, and that over this year, five contacts were made about lights and equip. Riemenschneider indicated that the patrol boat officer noted that total number of citations issued was zero, and the patrol boat officer was quick to point out that he never had any repeat offenders.

Riemenschneider reported that the patrol boat officer noted concerns in providing citations for 1st time violations occurring just 5 minutes after 8p.m., but indicated the patrol boat officer would likely take a harder stance next year assuming his services were again needed. Riemenschneider thanked Tom Spaniol for his help with patrol boat. There was discussion that although the BLRD residents at the Annual Meeting approved \$6,000 for the patrol officer service hours, only approximately \$2,800 was spent. There was discussion that the patrol boat operator could do more mornings and weekdays, but he pretty much did as much as he could on the weekends in the evenings. Riemenschneider expressed that he thought the patrol boat operator did a great job and Spaniol noted that he was prompt with communication and accurate on his hours. There was comment that there was a concern with zero tickets being issued in light of some blatant violators.

ILIDS/Landing and Signage: Holmberg noted that an invoice for the ILIDS camera came through and that he and John Haag would plan to remove the ILIDS camera in

October. It was noted that the County typically removes the docks in Sept, but the docks are still there presently. Holmberg explained he has been having conversations going back to enforcement of parking along the shoulders of the road at the boat landing.

No updates on fisheries other than crib builds that will occur later this year or early this year (weather, ice and volunteer conditions permitting). Holmberg reminded all that this was not a year for fish stocking.

It was noted that audio on the ILIDS camera appears to be poor and that the service provider of the ILIDS camera had reviewed and sent along a suspected violation of a boat/trailer leaving the landing. Thompson-Koats expressed some interest in reviewing additional ILIDS video footage.

7. County Updates, Town Updates

Jim Endle not present for County – no County updates. Supervisor Steve Bohl attended since Supervisor Rick Colbeth was not able to attend. Bohl reported that Town continues to be considering getting out of the County zoning and managing the zoning within the Town. He noted that it was likely that most of the lake property zoning wouldn't change, since that would fall under shoreland zoning managed by the County. He anticipated that earliest that County might vote on zoning ordinances would likely be October, and that the Town would then have 1 year to decide whether to opt out of the County zoning or create the Town's own zoning ordinance. Bohl noted that feeder roads around Bass Lake are an issue being worked on and recapped some road works.

8. News, Updates and Plans

Nothing additional.

9. Public Comment/Resident Concerns.

Holmberg noted that there have been different resident concerns/public comments, and that one thing that was asked to be addressed was boats. Holmberg explained that he spoke with Wisconsin Lakes organization and DNR, and that he was informed that lake districts and organizations are not entities that should be creating local ordinances to create restrictions for different boats and activities, and those should be left to the Town and County, where those entities can address such concerns, in the area as a whole, rather than individual lake districts. Holmberg noted that there was a serious concern about lake districts singling out individuals that would be attendant to any such ordinance and that there was the extreme difficulty of enforcement. Holmberg noted that the State is already working on issues relating to boats and related activities.

Holmberg also noted that there has been a suggestion to create a petition, but that the BLRD Board of Commissioners have heard more opposition to any potential petition that support for that. Bohl inquired about surfing vs. boarding, and Holmberg noted that there had been discussions in the past about water skiing and how far away from

shore that activity should take place. Holmberg also explained that more groomed shorelines may be susceptible to erosion than those that are more natural, and John Reiling suggested that people with shoreline concerns should consider changing their shorelines. Holmberg noted that there were grant monies likely available under the LPT grant for qualifying, approved projects.

Regina Rippel stated that she wasn't trying to single out any types of sports, and inquired about lowering the highwater mark, noting that she understood that it would not be easy to do that. Holmberg noted that the highwater mark is based on a study by the DNR and was discussed at the Annual Meeting earlier this year. Holmberg inquired whether Regina Rippel was proposing looking at changing slow, no-wake 24/7 occurrence to a water elevation lower than the ordinary highwater mark. There was additional comment regarding shoreline concerns with boat waves. Holmberg explained to Regina Rippel that she can, of course, circulate a petition and try to obtain signatures, and noted that even if that were to occur, a public hearing on the petition would be required. Additionally, Holmberg noted that even if such a change were to proceed forward, the DNR would also need to approve of such an ordinance modification. Regina Rippel indicated that she was not interested in pursuing this further this year, but that she may consider it next year.

Reimenschneider offered that residents should do what they can to get approved physical protections to their shoreline if they have concerns. There was comment that with higher water, there storage of equipment/docks/lifts may be challenging and a renewed comment by Regina Rippel that there as a concern with boating activities. Holmberg explained that while there has been discussion about different waves and activities, only three people that have come with concerns, and that over fifteen people have very recently communicated that they don't want any new or additional restrictions beyond those in place. Holmberg encouraged folks to consider becoming members of WI lakes organization, noting that there is good educational material that they provide.

Holmberg noted that pumping would still be discussed, and that the intention was to continue looking at options regarding concerns related to the lake level.

There was final comment by Holmberg that various residents had expressed that the BLRD picnic was much appreciated and that the Keatings did a nice job hosting the picnic this summer.

10. Review of Building Plans/Shoreline Restoration and other Plans

No update on any building plans/shoreline restoration or other plans.

11. Discussion for Next Meeting Schedule/Finalize Agenda

- **Next Board of Commissioner's Meeting will be November 13, 2019 at 6:00p.m., St. Joseph Town Hall**

12. Adjournment

Motion to adjourn was made by Chally and seconded by Lynnae Thompson-Koats.

Motion passed. Meeting adjourned at 7:59 PM.

Recorded by:

Fred Young, Secretary