

Beaver and Water Level issues.

From the Minutes of July 5, 1981

There were some discussions about beavers felling trees at the shoreline. Ken Jackson reported that Natural Resources people state there is evidence of an overpopulation of beavers around our lake and they agree that trapping should be allowed. Moved by Bill Oliver, seconded by Bob Feeirer that the Executive approach Natural Resources with a request that trapping permits be issued for our lake area.

From the Minutes of July 3, 1983

It was reported that one of the beaver dams was blown last fall, in the spring another dam on Elmer Patterson's property was breached. Bruce Peddden reported that other dams in the area had been blown and no one is really sure who's responsible. Ken Jackson suggested there may be some plan on the part of the county to reduce the marsh areas and Little Silver could in effect be being used as a "sluice" way. It was agreed the local Health Inspector should be contacted regarding these incidents. Ray [sic] Hewitt was to provide the name of the Health inspector to the Secretary-Treasurer who will follow-up on the situation.

From the Minutes of July 1, 1984

The beavers are a problem again this year. Fred Sandor and son Mike broke and cleaned out one dam this spring and another group consisting of Adrian Gervais and his helpers, Clay Hiltz, and Steve and Mike Lotan cleaned out another very large dam near the big culvert on the south side road.

It was agreed that the Association should investigate the feasibility of having the beavers trapped and if necessary subsidizing the trapper. The water level got quite high in the fall and remained up until the later spring. Ken Jackson mentioned that 3 – 4 years ago there had been a beaver problem and it would be wise to reduce the beaver population now before they start to take the good trees off our properties. Mike Lotan will investigate the possibilities of having the beaver population reduced. He will look for a local trapper in the area who may be interested in the task.

From the Minutes of July 7, 1985

The beaver problem was then raised by Mike Lotan. He briefed the group on his attempt to contact and arrange for a trapper to deal with the problem.

He indicated that the County had blown a dam in spring on the west side of the county road which had washed out part of the Silvery Lane.

Water levels in the lake had been high in the previous fall and again in the spring and a group of volunteers had broken open and cleaned out the big [sic] on three successive weekends.

There seemed to be he said no permanent solution to this problem as yet he reported since it has been impossible to contact the owners of the properties where the dam is located to make arrangements for a trapper to come in and remove the animals.

It was agreed that efforts should continue on the problem and that the County would be contacted regarding the matter of blowing out beaver dams during the spring and early summer because of the effects on water quality in the lake. It was agreed that since beaver pelts are worth about \$80 it should not be necessary for the Association to pay the trapper to do the job.

From the Minutes of July 6, 1986

The problem of over-population of beavers continues and affects water height as well as threatens shoreline trees. Adrian Gervais and other have broken and cleaned the dams on the outlet creek several times. Art Theriault and Clay Hiltz contacted a trapper earlier this year to have some of the animals

removed. Ken Anderson and Adrian Gervais again broke the dam just recently. There seems to be no permanent solution, but water quality is certainly affected.

Letter from Executive: apparently Novembber, 1988

Further to the discussion during the annual meeting last July concerning lake water levels, you may have noted that during the past year the high and low levels have been extreme in comparison with the average changes in the past. The difference between the high of early June and the low of late September has been approximately 20 inches, which represents an estimated 10 percent of the lake's total volume. The construction of a large beaver dam last fall, and its rapid removal in the spring, caused a sudden and radical drop in the water level. The rush of water eroded the exit stream to an unnaturally low point. It also washed out downstream wild life and left the shoreline and spawning areas vulnerable to damage. Of equal concern is the fact that the extremely low lake level, combined with the drought, resulted in a loss of natural flushing action during the entire summer. In other words, a stagnant lake.

The Executive has discussed the problem with the Ministries of Natural Resources and Environment, the Township Council, and the Rideau Valley Conservation Authority. The general consensus is that the construction of a small adjustable control dam at the exit to the lake would provide a capability to reduce the flustuations in water level, and by allowing a slow run-off of the spring rains, would create a more consistent flushing action through the summer. It would also help in overcoming the persistent and frustrating problem of having beaver colonies dictating lake levels.

The exit creek flows first through Township shoreline property. The Township Council has delegated to the association executive the exclusive authority to control all dams within their area of jurisdiction. The creek next flows down through the property of Paul Pospisil on its way to the tay River. The Ministry of Natural Resources informs us that the removal of beaver dams on private property requires the permission of the owner involved. Col Pospisil fully supports the concept of a permanent dam and is prepared to assist through the control of beaver dams on his property.

Final approval for the construction of a dam lies with the Ministry of natural resources which is currently considering a formal application submitted by the Association in early September. in anticipation of the receipt of approval later this fall, the Executive is canvassing property owners on the lake confirm that a clear majority is in favour of the proposal. it was hoped that the project could be completed this fall to help return the lake level closer to normal, but this now seems unlikely. In preparation for an early start in the spring, it is requested that you sign the enclosed form aqnd return it at your earliest convenience. Should you have reservations we would like your comments. The executive would be glad to discuss the proposal with you. In the meantime, we request that there be no further individual action with respect to the situation of the lake level.

From the Minutes of July 2, 1989

As a follow up to the News Letters and survey mailed out last fall and winter, Joe Legari briefed the meeting on the status of negotiations with the Ministry of Natural Resources regarding control of the lake level. He reported that the Ministry approved a small temporary dam to keep the lake from dropping to a very low level experienced last summer and fall. This has provided a mid-summer level control point selected to satisfy the majority of residents and to maintain a constant flushing action. This, however, requires the almost daily removal of beaver dams built over the control site. A committee is being formed to handle this job which has been done on a random basis since the lake was first inhabited. Volunteers would be welcome. The executive has been asked to look into the possibility of removing some of the beaver population as has been done in the past.

From the Minutes of July 1, 1990

The President [Joe Legari] briefed the assembly on the actions taken following the 1988 canvas of the membership which indicated a strong majority in favour of better control of lake water levels. Meetings

with the Ministry of Natural Resources have led us to make applications for a grant to build a permanent rock and concrete spillway. Under the supervision of the Ministry this permanent spillway would eliminate further erosion of the creek bed and sidewalls. In addition the possibility of installing a pipe system to foil beavers damming the water will be studied. The Executive accepted the suggestion that the Ministry should be asked to review with us an overview of the whole watershed system rather than viewing it on a piecemeal basis.

From the Minutes of June 30, 1991

The President reported that the grant application to the Ministry of Natural Resources for funds to construct a permanent rock and concrete spillway to discourage beaver dam construction was declined by MNR. The solution remains the manual removal of the dam. In order to help control the spring water levels, attempts will be made by the executive to obtain permission to construct a system known as a **beaver baffler** which is made from 4" PVC drainage pipe placed in the creek bed. The beaver can then build a dam on top of the pipe but is unable to block the flow. The system is self regulating, once adequate drainage has been achieved. The cost was estimated at \$200/\$300. It was agreed that the executive should proceed with a beaver baffler.

From the Minutes of July 5, 1992

Paul Pospisil reported that a work crew had installed a system known as a **beaver baffler** in October, 1991. It consists of approximately 200 feet of 4" PVC drainage pipe placed in the creek bed. The beaver can then build dam on top of the pipe but is unable to block the water flow. It has required little maintenance to date. The system is self-regulating and maintains the level of the lake. Paul is getting an estimate from Paul Zammit of Lakeside Cottage Services on a system recommended by MNR.

[Appended to the Minutes is a circular from the Ministry of Agriculture and Food entitled *Common Law Aspects of Water*, by R.W. Irwin, School of Engineering, University of Guelph.]

From the Minutes of July 4, 1993

Dave [Van Luven] reported that the beaver baffler system installed in October 1991 had been destroyed by the beavers and he would arrange a crew to install a culvert pipe in an attempt to regulate the lake level.

From the Minutes of July 3, 1994

Since the beaver population has apparently increased and the water level is quite high due to the dams they are building, Denton Wilson was authorized to spend up to \$300.00 to purchase corrugated steel to be installed over the existing barriers to further assist in keeping the water levels more normal. The President [Adrien Gervais] was given the approval to approach the Ministry of Natural Resources to enquire if any trappers would be interested in trapping the beavers.

From the Minutes of July 2, 1995

At last year's meeting it was agreed that money would be spent on a Beaver Baffle. Denton Wilson was to have the work carried out. At this year's meeting, Denton, who said he had a change of heart, provided photocopies of an article on beavers supplied by the Ministry of Natural Resources and suggested that we contact the MNR in search of a trapper in the area who might be interested in trapping on Little Silver Lake.

It was also agreed at that time that a work crew get together about the third week in September to clean out the area around the beaver dam.

From the Minutes of July 12, 1998

The issue of beaver dams arose relating directly to submerged obstacles which were previously visible. An attempt has been made to remove the dams located at both extremes of the lakes. The dams may be the cause of potential water stagnation in both lakes. It was recommended and agreed that the Lake Steward would form a body to determine and act upon desired lake levels. Denton Wilson, Ron Powers and Adrian Gervais volunteered to assist Jim Humphrey in this matter. It was further suggested that taking out the dams at the outlet may cause water to decrease drastically and possibly cause flooding of adjacent properties.

From the Minutes of July 11, 1999

Lois Matte stated that permission has been given to trap from landowners around the beaver pond and action will be taken in the Fall.

From the Minutes of July 9, 2000

Beavers -- Mr. Filby stated that a number of Association members removed debris and beaver cuttings from the exit point of the lake and culvert under Little Silver Lake Road. Lake water is now flowing at a normal level. Letters had been written to Mr. Leroux and Mr. Pospisil requesting their assistance in removing the dam on their property. Word is that Mr. Leroux removed a portion of the dam that resides on his property. The lake system seems to be flushing normally.

Leland Creaser stated that Mr. Randy Coda trapped four beavers over the winter at the southwest end of the lake and that he will be approached to do so again this winter. Walter Downs asked if he would look at Rainbow Lake as well. It was stated that Mr. Coda also trapped on Rainbow Lake.

From the Minutes of July 8, 2001

Terry [Matte] indicated he had met with county officials and discussed the opening of dams close to County Road 36 that flow into Rainbow and eventually into Little Silver. In particular, the opening of the dam(s) just to the south of Rainbow Lake in May of this year caused a sudden surge of water that carried debris and pollution. The authorities were unaware of the impact caused by their actions and indicated a willingness to work jointly with the Lake Association to produce more controlled releases. (The releases are needed to prevent the road bed from deteriorating.)

Action : Moved, seconded, and all agreed that the President should send a letter to county authorities requesting consideration of other control methods, and should dam removal be necessary, to do this in a controlled, more gradual manner so as to lessen impact.

Because of the continuing problems with beaver dams near the outflow from Little Silver Lake to the Tay, the Executive presented the following resolution: *“With the intent to ensure the continuous natural flow from Little Silver Lake to the Tay River, the LSLPOA Directors will investigate long range solutions to achieve this goal. These solutions will include discussions with the Ministry of Natural Resources and affected property owners. In the interim it is recommended that no unilateral action, with regard to removal of dams on private property be undertaken by individuals (whether LSLPOA members or others),”*

Ed Barbeau moved that this resolution be adopted, seconded by Adrien Gervais, and approved unanimously.

Action : Executive to follow up as directed.

From the Minutes of July 6, 2008

Beaver dams. Bruce McKeigan asked why no action had been taken on the beaver dam at the culvert at the end of the lake. Walter Downs explained that the Association had backed away from action on the beaver dam at the culvert because of vandals and getting blamed every time the dam was opened. The MNR policy is to put in beaver baffles as the most satisfactory way of controlling water flow. The intent is to keep an even water flow. A baffle was installed but did not work well and was removed. There is money

set aside to repair the baffle to improved MNR specifications. Ed Filby suggested re-establishing the Beaver committee to look at baffle replacement. Paul Pospisil installed a baffle on his own property and it has worked well for many years.

Don DuBreuil indicated that Rainbow had a different and equally serious problem. Last Wednesday (July 2), a county road crew broke through the beaver dam on the creek on the west side of County road 36 causing lots of water to drain into Rainbow Lake. He asked if there was any way from stopping the road crew from opening the dams up suddenly and without warning. Susan Freeman indicated she would raise the issue with the county.

Adair Heuchan moved that the new executive examine the issue of baffle replacement and county road maintenance with regard to dams affecting the lakes; seconded by Ron Powers. Carried.

From the Minutes of July 12, 2009

Frank Sammut [Lake Steward] began his report with the remedy to the beaver problem. After conferring with Paul Pospisil, who had used beaver bafflers on his own property successfully for five years, and with Jeff McNaughton, a beaver specialist employed by the Ministry of Natural resources, as well as Jeff Ward, stewardship coordinator for the Ministry of Natural Resources, he obtained permission from the Ministry and from Tay Valley Township to install a baffle at the outlet creek running from Little Silver Lake under Little Silver Lake Road. Jeff Ward suggested that the baffle be installed in the autumn before the winter freeze-up. Armed with plans from MNR, he organized a work crew consisting of Brad Bell, three generations of McKeigans and Steve Gemmill. One weekend in September, 2008, they carefully removed the beaver dam from the culvert with the permission of Paul Pospisil and put fencing in front of it. They installed a baffle upstream of the culvert; the beaver returned and built atop the baffle pipes in the fall and again in the spring. This is good as beavers can have their dam and water continues to flow through. In June, 2009, a second pipe was put in place by himself, Ron Powers and Ed Filby to allow for additional flow of water. The Lake Steward presented a chart to show that the water level variation was similar this year to that of previous years.

Frank Sammut then presented a slide show that illustrated the beaver situation and the building of the baffle at the Little Silver Lake outlet, the water testing done by Rideau Valley Conservation Authority, wildlife around the lakes, fishing (bass and black crappie) and negative effects of phosphates in encouraging too much algae and weed growth.

Ed Filby rose to compliment the Lake Steward, but expressed his concerns about unforeseen consequences of the baffle installation, particularly if there were a lot of rain before freeze-up. He provided the Secretary with a copy of his questions for the Lake Steward:

As it is not clear if all Association members could be held accountable for adverse effects resulting from possible fluctuations in water and/or ice level, when will written documentation from the Ministry of Natural Resources and the Rideau Valley Conservation Authority regarding their recommendations and/or approval of the present Little Silver Lake baffle [*sic!*] system be available for inclusion in the Association's official records?

The Lake Steward assured members that he will provide documentation. He said that the baffle is constantly monitored and urged members with concerns to get in touch with him. Anita McKeigan pointed out that the lake is currently 18" below high water level and that no one would blame the executive. Adair Heuchan thanked the Lake Steward for handling an incredibly difficult job; she noted that the Association had been served well by a succession of incumbents. Karin Cameron said that the MNR Extension Notes (governing bafflers) can be seen on the website.

Moved (Jean Hollebhone, Don DuBreuil) that thanks be extended to the Lake Steward and team that installed the baffle system. Carried. There was applause.

Ron Powers said that he had received comments that the water level on Little Silver Lake is too high.

From the Minutes of July 11, 2010

The beaver dam and baffler. In discussing this issue, the President emphasized how important it was to move ahead, and invited the Lake Steward, Frank Sammut, to make a presentation. He reported that the current baffler system was functioning all the time (24/7, 365 days a year). The lake level drops 3 mm/day in the absence of rain, according to measurements by Dr. Frank Johnson. However, there was an exceptional amount of rain last summer and fall, and so far this year there has been more rain than usual. Removing the beaver dam, as was done on May 15, in one fell swoop and during the fish spawning season, is in violation of the RVCA restriction demanding no in-water work prior to July 1 and in violation of the Canada Fisheries Act. The beavers will quickly rebuild using new wood rather than old wood from the original dam, causing more destruction of trees and shoreline. Accordingly, for the purpose of discussion, he presented a proposal with two options to extend the baffler system; this was displayed on a screen (see Appendix 2). It called for the addition of a second barrel and three 6-inch diameter pipes, which should drop the lake level by 6 inches per month in the absence of rain. The approximate cost would be \$1300. The second option would be to install only two 6-inch diameter pipes, for a cost of about \$1000. However, it would be troublesome to add a third pipe later if needed. This was the most that we could do; anything larger than three pipes is not within our expertise and would require the involvement of RVCA and MNR.

In the discussion following this presentation, the President said that she wanted to hear from those who were not on the Board of Directors; afterwards members of the Board could contribute to the discussion.

John Tarzwell predicted that the clandestine removal of the beaver dam would continue unless we take action; he supported adding three pipes. Jim Humphrey confirmed that three 6-inch pipes would be appropriate, and that he would prefer them to be laid horizontally across the stream rather than have one on top of another. Frank Sammut agreed that the three pipes would be laid horizontally, side by side, on the creek bottom; however, when they enter the barrel, one pipe should be above the others so that they could all fit in the barrel. One problem that would have to be solved is how to join the pipes that meet at an angle in order to get around curves in the creek. Corrugated Big O wrapped in chicken wire could be considered.

Jim Humphrey said that while chicken wire would keep animals away from the joints, it might be better to find something solid and smooth. Crains of Kingston should be able to provide joints for different angles, although it would be more expensive. Denton Wilson suggested that Rideau Pipes may have flexible aluminum piping, probably corrugated. He suggested that a local contractor, Harry VanAlstine, may have suggestions. Brian Hicks felt that it was better to make the investment in three pipes right away.

Steve Hiltz wondered what was the purpose of the barrel. Frank Sammut replied that it was to stop the beavers from plugging the upstream end of the pipe. At the downstream end, farm-wire fencing would keep the beavers away. This is in accordance with the recommendations from MNR. Steve Hiltz noted that in theory we could have more bafflers along the bottom with perhaps a third barrel to maximize the flow. Frank Sammut noted that this would be complicated; there was a limited amount of room and one needed to have the upstream end of the pipe higher than the other end to keep the flow.

Bob Irwin presumed that we needed to go to the Township. The President confirmed this, but said that we were suggesting a course of action to encourage the Township Council to act quickly. He also wondered about the cost, but the Treasurer assured him that the Association could afford it. Frank Johnson praised the Lake Steward for his work, and this was met with a round of applause from the assembly.

Ed Mills expressed concern about the lake level becoming too low in a dry period and therefore favoured the staggered pipes, one on top of the others. We would at least double the flow even if only two pipes are in the bottom layer. It was necessary to maintain flow throughout the season so that the lake did not stagnate. This is as big a concern as the effects of high water level. Anita McKeigan said that the baffler was to maintain flow; we are not allowed to alter the level of the lake. If we do not get rain, then there is no problem. The lake has been a lot higher in the past. We have a water flow, not a water level problem.

Frank Sammut responded that the water will go down only to the level of the pipes. His own preference is for two pipes side-by-side in the barrel and a third one that would sit on top of the other two. This

triangular design allows the pipes to fit more easily into the barrel. All three pipes would be placed as low as possible in the barrel while still allowing a good grade from in-flow to out-flow.

Denton Wilson pointed out that he had an engineering degree and had worked for a water authority. He calculated that if there was one inch of rain, the water would flow at 2 feet per second through the pipes, so that it would take 22 days to lower the lake one inch through one 6-inch pipe. He consulted the Weather Network and found that the average monthly rainfall between April and November over the last 30 years was 3 inches. Of course, it was not just the rain falling on the lakes, but also on the catchment area which includes streams and other bodies of water. The problem is hard, and we just have to try our best. He had called Patrick Larson of RVCA, who visited the site on June 28 and measured the flow through the pipe at 0.014 cubic metres per second; this would lower the level one inch in 17.5 days. We need three 6-inch pipes to handle the flow; this would be a good starting point, but the system is really a work in progress. It is a big job to install the pipes, and we might as well do all three and we could block one if too much water is flowing out.

Frank Sammut noted that we would not be allowed by MNR to block a pipe once installed as this would be an attempt to control the water level.

Dr. Frank Johnson, who maintains a weather station at his cottage, said that we had to look at measurements rather than make estimates; the lake level is decreasing at a rate of 3 millimetres per day. His own measurements with a flow meter were consistent with those of Patrick Larson. The issue is complicated, and he is monitoring the rainfall and lake level in tandem. It should be noted that the beaver dam itself allows some flow; the pipes account for about half and the rest goes through the dam. One inch of rain would be cleared in about a week. To be on the safe side, we should put in three pipes.

Moved (Ed Mills, Mary Ann Jackson) that it be recommended that the proposal for a new barrel with three six-inch pipes be adopted, that the permission of Tay Valley Township be obtained for the work, that the approval for the project of RVCA and MNR be obtained, that downstream owners be consulted, and then the work be proceeded with.

To the suggestion that the motion should deal with the configuration of the pipes, Jean Hollebhone said that it was better to give the installers the flexibility to make the final decision. Bruce McKeigan wondered whether this solution might create problems downstream. Frank Sammut said that, for downstream property owners, maintaining a regular flow would be better than pulling the dam; he will certainly consult with the downstream property owners. Steve Hiltz would not want to see the downstream owners exercise a veto. Frank Sammut did not foresee difficulty; he has already conferred with Paul Pospisil, who has recently extended his own baffler system and will continue to do so.

Anita McKeigan said that this was not a decision of the board. The President said that this indeed was a decision of the Annual General Meeting and cannot be overturned by the Board. Ed Mills said that he was concerned about people removing the dam: would everyone leave it alone? Lynn Tarzwell suggested putting a notice on the website and signs at the site. Ed Barbeau thought it would be best for those present to speak to their neighbours.

The President determined that no one else wished to speak and asked for the vote. She asked for a show of hands by those who approved, those who opposed and those who abstained. No one opposed nor abstained, so the motion was carried unanimously.

Ed Mills invited volunteers to help instal the baffler after all the necessary approvals were in place.

Appendix 2: Baffler proposal. Possible options for Beaver Baffler Expansion:

(1) Leave existing baffler in place with its three (90' long) 4" diameter pipes. Add a second complete baffler system alongside the original one consisting of

- a new barrel
- three sets of 6" PVC pipe approximately 90' long, with very short flexible sections of non-perforated 6" big O at the centre joints only, in order to get around the approximate 120 degree curve in the creek.

This Big O can be protected with chicken wire or metal lathing to prevent animals from chewing it.

- twelve concrete cinder blocks and galvanized wire to weigh the pipes and barrel down on the creek bed, without excavating.

The entire system will be placed with as much of a grade as possible to allow maximum water flow, as is the existing baffler system.

The approximate cost of this will be \$1300.

(2) Same as above but with only two complete 6" PVC pipes instead of three. Approximate cost would be \$1000.

Appendix 3: Ron Powers' Area Representative Report

Road Representative Report/Discussion points WATER LEVELS.

Greetings

After several years as area representative on Silvery Lane I have decided to let the position go to a new person. Over this period we have had major achievements by the Association and its executives. I wish to highlight a few.

[Then follows a description of the collection of records, networking, newsletters and the website.]

I submit the following views and statements which represent discussions, emails and conversations, individually and in groups, with a significant number of present property owners over the last few months. It definitely is not all inclusive or statistically correct.

What have we learned?

1. The existing baffle [sic] system is inadequate.
2. The recent sudden increase in outflow, on May 15th, did not cause catastrophic damage to properties below our lake nor to the railway embankment.
3. Something has to be done soon so we do not have a repeat of unusual high water levels during most of last season, this past winter and spring.
4. Our association has apparently not changed its position: Concerned property owners are advised to contact the township directly.
5. Regarding the Township: Council reacts to the number of votes involved. We do not represent an effective number of votes. Council also responds to finances. Again, money spent on our lake would be a dangerous precedent as other localities would make similar demands. So effectively we are on our own.

Some basic assumptions/premises:

1. Before any development, lake water levels depended solely on the outflow in the creek. This was "NATURAL".
2. Silvery Lane was developed about 40 years ago as a cottage community and individual facilities/shoreline structures were based around water levels at that time. The creek would be cleared (as required) of all obstructions in an effort to ensure appropriate water flow & prevent damages from high ice/water levels.
3. Then followed the development on Little Silver Lake road. The placement of the culvert under that road was to handle the lake outflow. This became the new "NATURAL" flow pattern with its seasonal variations. It is reasonable to assume that the creek was to be unencumbered from the culvert to the lake. It is also reasonable that property owners above and below the culvert were expected to use their land respecting that the "NATURAL" flow would have wide seasonal variations.
4. The need to maintain water flow through and out of the lake has been recognized for years is "to prevent stagnation of the lake". A secondary effect is adjustment of the water level.

5. Over the years various other attempts have been tried, including trapping of beavers and a beaver dam baffle system. However, as the initial baffle was made of corrugated pipe, it was easily destroyed by ice and rodents (easy to chew on). We are told that trapping is not practical due to low fur prices and other reasons.

6. And not necessarily last in importance: Great amount of bad feelings exist around the lake, too much of it in a destructive personal nature.

Some CONCLUSIONS and suggestions

1. All pretty well agree that an EFFICIENT baffle system is the best approach.

2. A serious NEW review of the parameters of the lake area, watershed area and dynamic outflow must be made. This expertise does exist among our members.

3. An effort must be made, preferably by the Association, to find and consult with these persons who have previous experience with bafflers and/or lake level adjustments. Striking a special committee or convening special meetings may be worth trying.

Since this will be my last aqs Silvery road rep let me thank the executive for past co-operation. And to the owners I've had contact with: many thanks for your support and friendship. Keep in touch.

Ron Powers June, 2010

From the Minutes of July 10, 2011

The Lake Steward began by praising the leadership of the President; this was applauded by the assembly. He noted that the water quality on both lakes was much better; nitrogen, phosphate and e-coli levels are down and Secchi disc readings up. RVCA is still providing free testing, andis visiting both lakes four times over the summer. he thanked the volunteers who constructed the extension of the baffle system last fall; slides were shown of them working. The system is working well, with a steady flow of water. The beavers are not particularly active, and it appears that their dam regularly breaks up in the fall. A great deal of rain last fall coupled with the beaver dam breach on CR36 were responsible for high water levels; the lake level has fallen about 12 inches in recent weeks. The range of variation each year seems to be about 13 inches. The baffle system will be clean and maintained over the next couple of weeks; however, the installation is solid. Mary Ann Jackson reminded the assembly that Little Silver Lake has a long turnover period of about 13 months. In response to a query, the Lake Steward described the operation of the baffle system. The President mentioned that the results from Frank Johnson's measuring station were again available online; Frank Johnson would appreciate information from users about its reception. Ros Creaser rose to thank the Lake Steward for his work over the last three years and offer best wishes for his retirement; this was met with warm applause.

From the Minutes of July 8, 2012

Lake Steward: Members were referred to report [sic] in the June newsletter. It was noted that phosphate readings for Rainbow Lake was higher this year and that owners should be careful to maintain a buffer zone, use appropriate products and keep their septic tanks pumped out.

Four photographs showing shoreline erosion on Little Silver Lake supplied by Ed Filby were mounted on a notice board at the meeting. The President said that literature on erosion control was available at the meeting and recommended a book issued by RVCA.

From the Minutes of July 14, 2013

Lake Steward: Frank Johnson was unable to attend so Pat Mills summarized his report (see Appendix 3). In short he thinks the shorelines of our lakes are well naturalized, there is lots of wildlife, and we seem to have coped well with last year's low water levels. So far, we have avoided colonization by zebra mussels

– he advises continued vigilance, *i.e.* washing boats and motors, making visitors aware of the situation as well. On the whole, boaters have been “watching their wake” well at the south end of Little Silver and the narrows by the island. However, in an update via e-mail, Frank noted an “infraction”, *i.e.* a visiting sea-doo has considerably exceeded the 10 kph speed limit in the past week. This is the sort of situation which the *Handbook* may help alleviate by getting the word out to cottagers and visitors about the damage the wake can cause to the shoreline and wildlife on our lake.

Appendix 3: Comments from the Lake Steward: Paddling around the lake the other day I was struck by the way in which stewardship of the lake is a combined effort: everyone is doing their bit to keep the lake in good shape, and the “Lake Steward” has a pleasant task to report on how well we are doing and pass on the official reports. It is very noticeable, for example, how everyone takes to heart the concept of the “riparian strip” of wild plants near the water edge to prevent rain washout from the property. Looking along the lake shore in most places you might be forgiven for thinking you have stepped back into the bush. Our wildlife enthusiasts report a good number of heron, otters, beaver, fish, turtles and loons that also consider things to be in good shape (just possibly the fish would like less otters and heron and turtles would prefer fewer raccoons that eat their eggs, but these are other stories).

We are also helped in this by the efforts of the Rideau Valley Conservation Authority who analyze water samples for us each year and send over technicians on a regular basis to monitor the water quality. Last year was a challenge for all water supplies in the region with very low rainfall. As a result the levels of phosphate climbed to just short of the warning level in Rainbow Lake. Calcium too is just at the borderline for zebra mussel colonization given the pH of the water, although vigilance there seems to be paying off thus far (keep washing those boats please).

We are maintaining the beaver baffle system at the end of the lake – there should be no need to clear out the dam. If you suspect a problem with the outflow, please let me or one of the committee know and we will be pleased to attend to it, and in this way prevent the beaver from making more damage to surrounding trees. The outflow is running well and seems to be coping with high rainfall, but level remains above normal. The flow in the stream is quite impressive, and we compare notes with the Pospisils who are downstream on the Beaver Pond estates before making any change to ensure that flooding is not caused there by an abrupt change.

It has been noticeable that boat wakes are generally kept to a minimum, especially in the south section. Compliments to everyone who has shown restraint on this and made the lake that much more friendly for the swimmers, small boat enthusiasts and the lake shore during times of high water.

If you have any questions or suggestions at all, please feel free to send a line to the committee. Otherwise, relax, enjoy the lake, and hope for some warmer weather for the rest of the summer.

From the Minutes of July 13, 2014

President: The primary goal of the Association is to improve lake quality. One way is by monitoring the shore buffer zone, which Pat encouraged. Septic inspections are voluntary for our lakes. We wish to make them mandatory. This will be on the Agenda for next year’s AGM.

Lake Steward: Frank Johnson proposed that the residents of Rainbow Lake look at the figures for water quality (see Appendix 2). Perhaps a committee needs to be struck to look into the integrity of the septic systems on Rainbow and the depth and quality of the buffer zones around the lake shore. Nitrogen is trending high, as is calcium, which is necessary to shellfish propagation. Although we have managed to avoid a zebra mussel invasion so far residents are reminded to advise any visitors to thoroughly clear their boats and engines before putting them in the lake. Frank Sammut mentioned that when he was asked if he would like calcium stone put on the roads to keep dust down, he refused for just this reason. Anything that goes on the roads or our property of course ends up in the lake.

The beaver bafflers were an issue over the winter – Frank and Ed Mills went into the freezing water in January with chimney-rods – in essence, an 85-foot bottle brush – to clear them out and repair the damage the beavers had wrought. The bafflers need to be kept clean regularly and Frank would appreciate volunteers

to help him out with this. Pat noted that the township has inspected the bafflers and are happy with how they're working overall.

Frank would be happy to help with a lake management plan, particularly if we want to have it recognized in the township's Official Plan. You can contact Frank at fjohnson@iee.org re: helping with the bafflers or lake management plans.

Appendix 2 gave figures for e-coli, TKN, TP, Ca, Sechi depth for the years 2011, 2012, 2013 as well as the totals for the period 2001, 2006-2013.

From the Minutes of July 9, 2015

Our President represented **Lake Steward Frank Johnson** and read his report to the audience. She then gave a visual show using Lego and straws to explain how the beaver baffler works, what is entailed in the upkeep, and at the same time thanked the volunteers who have been doing the work.

Pat [President] asked for questions from the audience and a discussion ensued re lake levels being too high or too low, beavers being too plentiful and too active, dam removal not illegal but no dynamite allowed, how long trees can survive in water, tree [sic] falling down and a request "why can't we just leave it all alone and let Mom Nature do her thing for at least one year".

Request was made to have a special meeting with Frank Johnson regarding some of the above. It should be mentioned that Frank is also looking for volunteers for an Ad Hoc committee on lake stewardship (a great opportunity to become involved in the health and safety of our two lakes).

From the Minutes of July 10, 2016

Frank Johnson, Lake Steward presented a slide show which pointed out the ever evolving and busy Lake Steward jog. He spoke in detail about the various aspects and his involvement. {His report can be seen on the Association website by clicking www.littlesilverandrainbowlakes.com/sidebar/lake-steward-notes/ }.

He presented three Resolutions:

- A. Whereas there are few offers to help with the LSP and whereas the Lake Plan needs to represent all opinions, this meeting resolves that Executive [Board] shall be instructed to:**
- 1. Publish the full survey results, duly edited for data protection;**
 - 2. Outline a plan structure and identify key areas;**
 - 3. Invite or recognise a representative set of writers to produce draft section[s];**
 - 4. Review and circulate these on the website;**
 - 5. Endeavour to have a first draft by July 2017.**

Frank mentioned that we need discussion and input from more property owners so that what is produced is representative of the whole.

Comments from the floor:

- A suggestion to keep the information within the Association and not display the results on the website
- A question as to what is the point of doing this? The response was that development and land use is a cooperative effort with the Township. It was suggested that property owners review local lake plans by links on our website {www.littlesilverandrainbowlakes.com/environmental/ }.

Resolution **approved**.

B. Whereas Tay Valley Township has enacted a schedule of mandatory re-inspections of septic systems, this meeting resolves that the Executive [Board] of LSRLPOA be instructed to request Tay Valley Township to include our lakes in their mandatory sewage system maintenance re-inspection program for all waterfront properties in accord with TVT by-law 2012-009 schedule

“C”.

Questions from the floor:

- If with mandatory inspection is the owner obliged to fix if faults are found? Mark Burnham replied YES. He added that faults need to be fixed within 6-12 months.
- Is there a cost to the inspection itself? NO

Resolution **approved** by majority (2 votes against)

C. Whereas the Lake Steward suggests that Beaver baffler requires some attention, this meeting resolves to request that the Executive [Board] shall ensure the following actions:

- **Remove surplus pipes and straighten barrels;**
- **Monitor levels at the lowest property [sic];**
- **Monitor adjacent property damage;**
- **Monitor lake and stream levels;**
- **Provide monthly reports on the website.**

After discussion Resolution **approved**.

There was a big round of applause for Frank Johnson for all his work and excellent (and funny) presentation.

New Business: Discussion of the speed limit on Little Silver Lake. Concern was expressed and more signage re speed limit was requested. However, it was agreed that one sign at boat slip should suffice rather than too much signage. It was recommended that property owners contact OPP with documented complaints (photo, boat #s, *etc.*) but for the sake of good will to contact the cottagers first.

From the Minutes of July 9, 2017

Beaver baffler. Andrew [Kendrick] described the current situation; some pictures were displayed. To show everyone, he brought a “cage”, a configuration of black pipes, which might be used in the future. He will be preparing a document outlining options for beaver management which will be posted on the website within two weeks for all to comment on. Andrew stressed that input is essential from as many people as possible so that a consensus of property owners can be developed. With the posting will be contact information for those wishing to give comments. The full Lake Steward’s report will be given later in the meeting.

Lake Stewardship Plan. Frank [Johnson] pointed out that now on the website are the following drafts of sections: Summary of the History; Environment; Respect and Safe Recreation; Water Flow and Level. The Development draft will be given to Noelle for her input before it is posted. He encouraged members to review these drafts and to comment on them via the dedicated address given on the LSP page. A property owner mentioned that the Plan should include a long term strategy for beaver management. Frank pointed out that the involvement of many is crucial for the development of such a plan. The proposed timetable is to have a completed document posted next year and thence to have a vote on its adoption at the AGM 2018. A member noted that he was aware of the other lake associations having an open meeting to discuss the plan and he asked if one would be planned. Frank said that one was not at the present time and reiterated his request to members for ongoing input via the lsp email.

Lake Steward’s Report. Some members expressed concern about the unauthorized interference with the baffler and dam. It was suggested that positioning surveillance cameras and alerting the police be considered. One property owner, who had been coming to the lake for over 40 years was particularly concerned about the high water this year. There had been erosion of his property before but it was as much as 3 ft this year and more rain is forecast. Various attempts to mitigate this over the years with different baffler designs had not been successful. A member pondered if adding fill would alleviate matters but someone else added that this would be illegal. It was pointed out that it is illegal also for associations to manipulate water level; that is within the purview of MNR. This is a complex problem, involving many jurisdictions. The **Options**

document (referred to earlier) will be posted shortly and with input from many members will provide a basis for decision making on how to proceed regarding the beaver baffle and dam. Concern was expressed over erosion and the loss of trees from the high water level and from the effect of wakes. Boats have been speeding contrary to the regulations. It was pointed out that some years ago the Association purchased some signs, “Watch Your Wake”, for posting at key spots on the shore. Maybe some were stored somewhere and if not could more be purchased was suggested. Eileen [Barbeau] offered to look into this. Recently, there have been instances of speeding generally and irresponsible behaviour of boaters which have caused concern and members wondered if there was anything that could be done to address this.

Andrew [Kendrick] mentioned that the data from the recent RVCA water quality sampling on both lakes are posted on the lake website.

From the Minutes of July 7, 2018

Lake Stewardship Plan (LSP). Frank [Johnson] introduced the topic by pointing out the chronology of its production: first the survey and identification of main areas of expressed concern (water level; environment; development; safety and recreation); then the Board decision to work towards a Plan with these chapter headings together with one on an historical review; production of drafts of each section which would be posted on the website as they were ready; receipt of comments and suggestions; development of subsequent drafts in response to comments and suggestions received; new draft posted; more comments received; final draft of entire document (June 4, 2018) posted and all informed that this would be taken to the AGM; members informed of the Motions which would be presented at the AGM. He mentioned that the Board had planned to have a public meeting in April and that ABC Hall was booked, but only two people had responded by the cut off date so the meeting was cancelled.

Those present were asked if there were any comments on the final posted draft. As there were none, the motions were presented.

A. Approval of the Plan. Approved unanimously.

B. That the Plan be submitted to Tay Valley Township for inclusion in the Official Plan. Approved unanimously.

Bob Irwin, Silvery Lane, expressed thanks to those who had worked in producing such an excellent Plan.

Lake Steward's Report. Andrew [Kendrick] presented latest information on water quality from RVCA measurements and by ongoing observations. Both LS and Rainbow Lakes are in the “fair” classification used by RVCA, but the trends in quality have been positive in recent years, probably linked to septic upgrades and to reduced use of fertilizers and pesticides. The water samples show low levels of e.coli and show that the water is safe for swimming.

The history of water levels over the last year has shown again that the weather controls much of what happens on the lakes. The high levels of 2017 persisted through much of the summer and fall. More modifications were made to the LSL baffle, and a model of how rainfall affects the lake levels has been developed and tested. The current baffle system is expected to work well to maintain the flow and limit level fluctuations in “normal” conditions but the Board has also developed a plan for skimming the beaver dam in the event of very high levels. Andrew thanked those who have helped with cleaning the bafflers and noted that new volunteers are always welcome.

A final note to the report was to encourage members and their guests to respect the lake speed, and to steer clear of birds and other fauna particularly during the breeding season.

Ed Mills, Little Silver Lake Road, noted that swimmers should take care to ensure that they are visible, or that they are accompanied by safety boats.

From the Minutes of July 13, 2019

Lake Steward's Report. Andrew [Kendrick] reiterated the importance of the Lake Stewardship Plan

being regarded as a living document and, as was pointed out by the President's remarks, the Board hopes to develop follow-up plans with input from the membership. Volunteers are welcome.

No expenses were shown for beaver baffler purchases in the financial report because there was a donation; thanks to Steve Hiltz for wire used in the cages. There was much less beaver activity recently and concern was expressed that there could have been some human intervention. If so, this was out of control of the Association. If anyone could shed any light on the situation, it would be appreciated (even anonymously).

There are certainly more weeds in the water, especially in Little Silver Lake. Contrary to popular opinion, the diet of beavers does not only include trees, weeds are consumed. Interfering with the ecosystem leads to knock-on effects. Andrew reminded property owners that in attempting to control some weeds care must be taken not to disturb the bottom.

He noted that the temperature of the surface water in May was up, 18 degrees, and there had been a high level of ice this year affecting some docks.

RVCA has published the 10 year update on the watershed. We wish to have a meeting to discuss their data and to have a further understanding of the health of our two lakes. When this has been arranged, we will inform the membership of the date and time so that anyone interested and available could attend.

Andrew asked if there were any questions/comments.

— Steve Hiltz asked when it was planned to clear out the baffler and Andrew mentioned that this would happen within a couple of weeks; Steve was concerned because material was building up. Andrew mentioned that the lake level was alright.

— Janet Conlin was concerned that there was more algae. Andrew agreed that there seemed to be more than normal, no idea of cause.