

ROUGH DRAFT

Full Reserve Study Questions for Lake Advocates

Preface: The care and maintenance of our lakes is a very complex issue. Reading your past reports, attending your December zoom meeting with the Lake Dam Committee and attending the field trip to Cranberry Lake earlier this summer has definitely helped to develop a better understanding.

The LLCC BOD is looking at a 30 year Reserve Study attempting to approximate the costs of significant expenditures (not normal operational expenses) that will be needed to maintain all of our assets. Presently we are looking specifically at Lake Limerick, Lake Leprechaun and the Bird Sanctuary. Costs such as annual aquatic plant survey, aquatic herbicide treatment, water quality monitoring, geese mitigation, etc. are considered normal operational expense costs and therefore not in the purview of the Reserve Study.

In the past the significant expenditures regarding our two lakes have been primarily costs associated with dredging. While future alternatives are being discussed and investigated these questions are focused on helping us better understand future costs associated with what we have been doing up to this point, basically dredging. We appreciate your assistance in helping us establish a more informed Reserve Study estimate of long term (30 year) frequencies and significant expense costs for our lakes.

BOD QUESTIONS FOR LAKE ADVOCATES

1. The Reserve Study done for Lake Limerick by Association Reserves in 2021, was done with input from committee members which included members of the Lake Dam Committee. It showed a 5 year useful dredging life for Limerick (#270), Leprechaun (#272) and Sanctuary (#274) at \$780,000 (\$4,680,00 for 30 years). The update recently done by Association Reserves uses extrapolated data from your (Lake Advocates) June 26, 2022 report with figures (using a three quarter mark of your spread) showing a useful life of 10 years with a cost of \$6,250,000 (\$18,750,000 for 30 years). Question - not considering other actions (such as possible sedimentation pond development) does the \$18,750,000 seem to be a reasonable reserve estimate for anticipated dredging needs for Lake Limerick, Lake

- Leprechaun and the Bird Sanctuary? Is it reasonable to believe that this 10 year frequency and cost of dredging for 30 years will maintain our two lakes?
2. Do we know if generally the creation/maintenance of sedimentation retention ponds have an effect for our type of lakes/reservoirs? We know that it does not completely eliminate the need for dredging . . . correct? Per your November, 2021 email response to Pat Paradise I believe you are saying our situation is very unique and although your firm has had significant experience in this area you outline a number of specific issues that need “ . . . to be addressed in the feasibility and pre-design phase before alternative characteristics of this facility can be developed or visualized.” This sounds very costly and time consuming. Can you give us an estimate of how much time and cost gets us to the point where we can make a reasonable cost/benefit evaluation of this alternative to our unique situation? Do you believe this work is worth the time and money it will take to get us to the point where we can make cost/benefit estimate comparisons to determine the best option for this 30 year period . . . comparing having sedimentation pond(s) with less dredging versus no sedimentation pond(s) with more dredging? With our two lake/reservoirs presently in “senior citizen” status and considering the distribution of funds necessary to care for all LLCC assets is it best to just stick with regularly scheduled dredging for the next 30 years. Your thoughts?
 3. In the Lake Limerick Integrated Aquatic Plant Management Plan, September, 1996 Maribeth Gibbons reported that Washington State prefers Integrated Approach Treatment options and listed . . . herbicide applications, mechanical dredging, sterile grass carp introduction, mechanical harvesting, hand removal and diver assisted suction dredging (in smaller areas). Is that still Washington’s position?
 4. I have heard that the approximate “life” of a reservoir like ours is 100 years. Is that correct? If not, what is it?
 5. You have informed us that our two lakes/reservoirs are senior citizens in human years (10/19 presentation, Limerick 60-70 and Leprechaun 70-80) and it seems that Mother Nature is fighting us harder each year wanting to revert back. Using the latest Reserve Study projected frequency and costs of dredging Lake Limerick, Lake Leprechaun and

Bird Sanctuary, what is your best approximation of how many years of life are left for each lake/reservoir? Again, just based on the frequency and cost figures used in your June, 2022 report and not considering frequencies and costs that would be more often and more expensive.

6. Would limiting some of our uses, such as use of motorized boats on the lake, lengthen the life and reduce costs and if so by how much?
7. Recently I heard L/D members discussing what the right level of the lake should be. Some have said that the lake is 6 inches higher than historic levels which is a major factor in beach erosion. Is that true? Being a reservoir is there such a thing as a natural level?
8. Many L/D members when asked if the concentrations of plant/algae growth at certain locations on the lake are related primarily to septic and lawn fertilizers used for homes on the lake say no that those mapped concentrations are located at the multiple creek entrances where there is runoff from the entire community and beyond. Is that true? If so, what is your best guestimate of what the percentage is from LLCC homes away from the lake? Besides Cranberry Creek and Kings Cove, are there flow concerns from other areas such as from the Mason Lake direction?
9. Status of Lake Leprechaun. Believe you reported that the weed/plant problem is being well taken care of and that the latest core samples indicate no need for dredging. Is that understanding correct?
10. Have we determined whether the lakes are better, worse or the same since the 2016 dredging? If not, how soon will that information be available?
11. Some feedback recently received from L/D states that the dredging of Lake Leprechaun and the Bird Sanctuary is “critical”. Is that true?

Harry and Rob thank you for all your hard work in helping our LLCC association care for and maintain our lakes. We look forward to receiving your responses to the above before moving forward. We are hopeful that your answers to the above questions will be sufficient, but may request a zoom meeting with you if more information is needed.