

Statement by Joe Jarecki representing the Pigeon River Country Association at the April 14<sup>th</sup> Public Hearing about the Golden Lotus dam removal permit application, File # 11-69-0001-P.

A joint comment from Michigan TU and the Pigeon River Country Association has already been submitted during the public comment period before this public hearing. It contains extensive expert testimony about some of the problems that are not dealt with adequately in the Golden Lotus dam removal permit application. The Association urges you to carefully consider the scientific evidence presented there. At this time, we would like to address as concerned citizens some of the issues raised by the proposed dam removal process.

A hundred years ago during the lumbering era, dams were breached every year with the spring floods. This allowed sand and organic debris to be flushed out regularly. But the Song of the Morning Ranch dam, formerly the Lansing Club dam, has only been partially flushed out by the 1957, 1984, and 2008 breaches in the last century. According to the Golden Lotus engineers this has allowed a buildup of organic sediment and sand that, when the drawdown process is finished, will result in 143,177 cubic yards of organic sediment and 7427 cubic yards of sand having passed through the spillway (Table 1 in the application). If piled one foot high, the organic sediment would cover 65 football fields and the sand would cover 3 3/8 football fields! At least one half of these deposits have occurred while the dam was owned by Golden Lotus. These amounts require extreme care while removing the dam.

We are specifically concerned about the inadequacy of the parts of the proposal dealing with removal of sand, flow of sediment, stability of the re-established river banks in the pond area, and contingency plans.

The proposal calls for Golden Lotus to be responsible for removal of a maximum of 2000 cubic yards of sand and that removal will be done on a case-by-case basis with a backhoe that has a maximum reach of 16 feet and two dump trucks capable of hauling 6 to 10 cubic yards of material each. 2000 cubic yards is not even 1/3 of the sand buildup during the past 100 years and so is woefully short of what should be required. Moreover even removing 2000 cubic yards with the suggested equipment would mean taking a couple of hours to fill a truck with the small bucket on such a backhoe (that can't even reach entirely across the area behind the stoplogs) and making 200 to 350 trips with their trucks, requiring a daily emptying if the drawdown takes place in only one year.

A build up of 7427 cubic yards of sand over about 100 years suggests an annual deposit of roughly 75 cubic yards per year. Doubling that to 150 cubic yards per year since Golden Lotus was responsible for only one half of the buildup suggests that a significant sand trap should be established and, once sand from the delta created by the pond begins to fill the sand trap, sand should be removed regularly until the sand flow approximates 150 cubic yards per year. The best way to do this would be to build a sizeable sand trap, 200 to 300 feet long, somewhere well above the dam, perhaps near the boathouse, which would be closer to the source of the delta and therefore able to remove the excess sand more rapidly. Initially this would have to be emptied more frequently, perhaps twice a year for the first couple of years, and then less frequently until the quantity of deposited sand falls to 150 cubic yards per year

when it can be left alone. We cannot leave the Pigeon River alone to deal with a century's accumulation of sand in a few months!

There is a staggering amount of organic sediment that will pass thru the spillway during the drawdown. It has the potential for depleting enough dissolved oxygen in the Pigeon to produce a significant fish kill. Clearly this is something to be avoided. In addition to the scientific evidence in the earlier written comments from TU and the Association, we would like to emphasize here the potential problems caused by such a large discharge during the summer and fall months when the water level is often low and the stream velocity required for moving organic sediment downstream to Mullet Lake is reduced. Accordingly the possibility of completing the drawdown in less than five months that is in the proposal should be changed to a longer period of time with a drawdown regime that safely transports the organic sediments without the likely hood of causing another fish kill.

Once four or five stoplogs have been removed, the organic sediments and silt will be exposed to the air and a river channel will begin to be formed. As more stoplogs are removed the velocity of the water in the channel will increase. While most of these sediments are water, as water drains out and banks are formed, this increase will tend to undercut the banks. We are concerned that the failure to do any bank grading will result in additional organic material collapsing into the Pigeon once the drawdown process is complete. We recommend that bank grading in the former pond area be required. Given the likely nature of the borders of the Pigeon for at least 0.6 mile upstream from the spillway, some thought should go into how, if steep undercutting appears, action can be taken, what that action should be, and who decides to authorize that action.

Finally, we are concerned about the lack of contingency planning for such things as a major rainstorm during the drawdown process. While there are repeated references to consulting with DNRE personnel and even having them, implicitly, make decisions in a couple of instances, there is very little discussion of what could be done in the event that the drawdown plans do not work as expected and who would be responsible for changes in the plans. Given the size and nature of the 100 year backlog of material that has been prevented from naturally flowing through the Song of the Morning Ranch dam, we recommend that clear lines of authority and contingency plans be built into the permit.

We appreciate Golden Lotus's willingness to draw down their pond, but, as we have indicated, we are concerned about the potential impact on the Pigeon River of the 100 year backup of sand and organic sediment and the rather casual approach to contingency planning in the application. Until these items are dealt with effectively we do not believe that a dam removal permit should be issued.

Thank you for the opportunity to comment.